State Conservation Commission Meeting

September 10, 2019

Pa Department of Agriculture, Harrisburg PA

'Draft' Agenda

Briefing Session – September 10, 2019 – 10:00 AM (Room 309)

- Review of Business Agenda
- Pa Farm Bill Update/CEG Program Update and Discussion

Business Session – September 10, 2019 – 1:00 PM (Room 309)

A. Opportunity for Public Comment

B. Business and Information Items

1. Approval of Minutes
   a. July 17, 2019 (A)
   b. August 20, 2019 (A)
2. Nutrient & Odor Management Program
   a. Act 38 Nutrient Management Planning Tool, Version 7.0 - Frank Schneider, SCC (A)
   b. Act 38 Nutrient Balance Sheet Planning Tool, Version 5.0 - Frank Schneider, SCC (A)
3. Jay Stoltzfus, Nutrient Management Plan, Northumberland County - Michael Walker, SCC (A)
4. Proposed Revisions to the FY2019-20 REAP Guidelines and Application: Joel Semke, SCC (A)
5. Proposed Policy for Removal of a Conservation District Director for Misfeasance or Malfeasance and Comment Response Summary; Karl Brown, SCC (A)
6. Proposed MOU between the State Conservation Commission, Department of Agriculture and Department of Environmental Protection, – Karl G. Brown, SCC (A)
7. Chesapeake Bay Program Update – Veronica Kasi, DEP (NA)

C. Written Reports

1. Program Reports
   a. Act 38 Nutrient and Odor Management Program Measurables Report
   b. Act 38 Facility Odor Management Program & Status Report on Plan Reviews
2. Ombudsman Program Reports – Southern Allegheny Region (Blair County Conservation District) and Lancaster County Conservation District.

D. Cooperating Agency Reports

Adjournment

Next Public Meetings October 8, 2019 Conference Call
November 12, 2019 Public Meeting

STATE CONSERVATION COMMISSION
MEETING

Genetti Hotel, Williamsport, PA

Wednesday, July 17, 2019 2:15 p.m.

Draft Minutes

Members Present: Deputy Secretary Greg Hostetter for Secretary Russell Redding, PDA; Deputy Secretary Aneca Atkinson for Secretary Patrick McDonnell, DEP; Mike Flinchbaugh; Donald Koontz; Ross Orner; Ron Rohall; Ron Kopp; Denise Coleman, NRCS; Rachel Reyna, DCNR for Secretary Cindy Adams Dunn; Adam Walters, DCED; Chris Houser, PSU for Dr. Richard Roush; Chuck Duritsa, PACD.

Executive Session: Commission members held an Executive Session to consider legal matters related to pending Nutrient Management enforcement cases.

A. Public Input

There were no public comments presented.

B. Business and Information Items

1. a. Approval of Minutes – May 14, 2019 - Public Meeting.

   b. Approval of Minutes – June 11, 2019 – Conference Call.

Don Koontz moved to approve the May 14, 2019 public meeting minutes and the June 11, 2019 conference call minutes. Motion seconded by Ron Rohall. Motion carried.

2. Nutrient and Odor Management Program

a. Act 38 Nutrient Management Technical Manual, Version 11.0. Frank Schneider, SCC, reported that the current version of the Nutrient Management Program Technical Manual was released in October 2017. Beginning in August 2018, program staff began the process of updating the technical manual by soliciting recommended changes from users through an open comment period. These suggested changes were reviewed and evaluated by the NM Program Technical Manual Workgroup (SCC, PSU, DEP, and NRCS). A total of 109 suggested changes and updates were submitted, and 57 are being presented for Commission approval. Frank Schneider reviewed these changes with the Commission.

Ross Orner made a motion to approve the proposed changes to the Nutrient Management Program Technical Manual. Motion seconded by Don Koontz. Motion carried.

b. Nutrient Management/Manure Management Program Administrative Manual,Version 5.0. Frank Schneider, SCC, reported that the current version of the Nutrient Management Program Administrative Manual was released in October

2017. Beginning in August 2018, program staff began the process of updating the administrative manual by soliciting recommended changes from users through an open comment period. These suggested changes were reviewed and evaluated by SCC and DEP staff. A total of 53 suggested changes and updates were submitted, and 24 are being presented for commission approval. Frank Schneider reviewed these changes with the Commission.

Ron Rohall moved to approve the proposed changes to the Nutrient Management Program Administrative Manual. Motion seconded by Ron Kopp. Motion carried.

c. Dean James – Cotner Farms, LLC, Nutrient Management Plan Amendment, Northumberland County. Michael Walker, SCC, reported that Cotner Farms, LLC, is a crop and chicken egg farm in Northumberland County just south of Riverside, PA. The headquarters is a modern egg production facility with five barns, each housing 119,880 birds, including a belt system to remove the manure and a dry storage unit attached to each building. The operation is a CAO and CAFO. The Northumberland Conservation District does not have a Nutrient Management Program delegation agreement; therefore, the plan is before the Commission for consideration and approval. Staff has reviewed the plan and finds that it meets Act 38 requirements.

Ross Orner moved to approve the Cotner Farms, LLC Nutrient Management Plan. Motion seconded by Don Koontz. Motion carried.

3. Conservation District Fund Allocation Program

a. Conservation District Fund and Unconventional Gas Well Fund 'Proposed' FY 2019-20 CDFAP Allocations – Karen Books, DEP; Karl Brown, SCC. Annual Conservation District Fund Allocations provided to conservation districts include line item appropriations from both DEP and PDA, as well as Unconventional Gas Well Funds designated in the state budget for transfer to conservation districts. A total of $7,323,625 is available to be allocated for FY 2019-20. Two different allocation concepts have been prepared for the Commission's consideration. Karen Books presented these concepts to the Commission for their consideration. Concept 1 – Distribution of 'line item' appropriations under the enacted FY 2019-20 state budget and 'well-count' allocations based on a 5-year well-count average. Concept 2 – Distribution of 'line item' appropriations under the enacted FY 2019-20 state budget and 'well-count' allocations based on a 15-year average (Lycoming Concept). Karen made note that Concept 2 (15-year average) would provide 'well-count allocation' to more conservation districts than Concept 1 (5-year average)

Ron Rohall made a motion to approve Concept 2 for the FY 2019-20 CDFAP allocation. Motion seconded by Don Koontz. Motion carried.

b. Proposed FY 2019-20 Leadership Development Program Budget. Johan Berger, SCC, reported that the Building for Tomorrow Leadership Development Program is a collaborative effort of Pennsylvania's Conservation Partnership. This professional development program for conservation districts was created over 30 years ago with a collective goal of providing training to conservation district directors and staff to better equip them to develop and manage conservation district programs. The Leadership Development Budget Proposal includes funding up to

$175,000 for the following initiatives:

1. Full-time Leadership Development Coordinator.
2. District Management Summit and staff training conference.
3. Strategic planning grants.
4. Director training and support.
5. Management training initiative.
6. Regional trainings for district directors.
7. District transition support.

Ron Rohall made a motion to approve the proposed FY 2019-20 Building for Tomorrow Leadership Development Budget of $175,000 and corresponding work plan. Motion seconded by Ross Orner. Motion carried.

4. Dirt, Gravel, and Low Volume Road Program 'Proposed' FY 2019-20 Allocations to Conservation Districts – Roy Richardson, SCC; Steve Bloser, Center for DGLVR Studies. Each year, the Commission allocates funding to participating conservation districts for the Dirt, Gravel, and Low Volume Road Program. This year, allocations are being made in July (versus May) to accommodate the close out of the 5-year funding agreements with districts which was extended from 2018 to 2019. In March 2019, the Commission adopted policy regarding the close out of these funding agreements, requiring funds to be committed by conservation districts by May 24, 2019 and spent by June 30, 2019. FY 2019-20 program allocations to districts that did not meet these deadlines will be reduced or withheld. All districts worked extremely hard to meet these spending commitments. Roy Richardson and Steve Bloser presented a recommendation for FY 2019-20 DGLVR funding allocations. These recommendations resulted in the following impacts for each program component: Low Volume Roads allocations:

- Minimal updates to base data for formula (0-3% change per county)
- SCC approved LVR allocation to Delaware at May SCC meeting ($84K reduced in total from other 65 counties)
- Money withheld goes to eligible counties
- Most counties increased allocation 1-4% from last year

Ross Orner moved to approve the Proposed FY 2019-20 Low Volume Road Funding allocations. Motion seconded by Ron Rohall. Motion carried.

Dirt and Gravel Road allocations:

- Districts who did significant assessment work saw significant funding increases
- Districts who did no assessment work generally saw a 4-7% decrease in allocations
- Money withheld goes to eligible counties ($179K in funding redistributed to other 59 counties)
- Most districts and counties (without assessment work) decreased allocation 2-8% from last year

Ron Kopp moved to approve the Proposed FY 2019-20 Dirt and Gravel Funding allocations. Motion seconded by Don Koontz. Motion carried.

5. Draft Policy for Removal of a Conservation District Director for Misfeasance or Malfeasance. Karl Brown, SCC, reported that Commission and agency staff have been working with legal counsel to begin developing a draft policy on the dismissal of a

conservation district director for purposes of misfeasance or malfeasance in office. As per Conservation District Law, the Commission is to establish "policy" to guide this process. The draft policy was circulated to conservation districts for review and comment. Six different districts provided comments on the draft. Staff summarized and reviewed the comments received and the proposed changes to the draft policy with the Commission. Staff is recommending that this revised draft be provided to the County Commissioners Association for review prior to final adoption.

Ron Kopp make a motion to circulate the revised draft of the Policy for Removal of a Conservation District Director for Misfeasance or Malfeasance to the County Commissioners Association for review and comment by their legal counsel prior to final adoption. Motion seconded by Ron Rohall. Motion carried. Matter will be tabled until the September 10, 2019 Commission meeting.

6. 'Building for Tomorrow' Leadership Development Program Update – Matthew Miller, Leadership Development Program Coordinator, PACD. Matt reported on all of the Leadership Development Training opportunities that took place in FY 2018-19. He gave an overview of opportunities that will be available in FY 2019-20. The 2019 Management Summit will take place on September 4-5, 2019, at the Wyndham Garden, State College, PA. Matt also gave an overview of the upgraded Building for Tomorrow website. There are training modules and resources for everyone's benefit. Full roll-out of the website is planned for September 2019.

   Action: No action required.

7. Spotted Lanternfly Education and Control Activities Update – Ruth Welliver, Bureau of Plant Industry. During the past year, eight conservation districts within the Spotted Lanternfly (SLF) Quarantine Zone have worked with PDA and other partners to perform outreach, education and control measures for the SLF. For a complete response to the SLF invasion, several programmatic areas need to be active: outreach; statewide monitoring/survey with immediate control of any new infestations; Quarantine Zone Action—regulatory compliance, and treatment and control; and research. The following institutions are participating in SLF research: Penn State University, Cornell University, Delaware Valley University, Rutgers University, Temple University, Virginia Tech, University of Kentucky, University of Maryland, University of California Davis, United States Department of Agriculture, and Kutztown University. Sticky tree wraps are now being used as one of the methods to capture the SLF primarily during the instar stages. Ailanthus tree removal and herbicide treatments are also taking place to remove the host species for SLF from the environment..

   Action: No action required.

8. PA Integrated Water Quality and Assessment Report (Section 303(d) & 305(b)) Gary Walters, Environmental Program Manager, Water Quality Division, DEP, reported that the PA Integrated Water Quality and Assessment Report is a requirement of the Federal Clean Water Act Sections 303(d) and 305(b). Section 303(d) is the list of waters that require the development of a Total Maximum Daily Load (TMDL) and Section 305(b) is the report of the water quality condition of all surface waters of the Commonwealth, either meeting (attaining) or not meeting (impaired) the applicable water quality standards and protected uses. This report is the thirteenth in a series of reports prepared for Federal Clean Water Act (CWA) Section 303(d) listing, and Section 305 (b) reporting. This

listing and report are compiled and submitted to the United States Environmental Protection Agency (EPA) once every two years. Unlike the 305(b) report, EPA must approve or disapprove the 303(d) list. Gary Walters presented a detailed description of this report and the interactive website for the report

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Action: No action required.

C. Written Reports – Self Explanatory

1. Program Reports
    a. Act 38 Nutrient and Odor Management Programs Report
    b. Act 38 Nutrient Management and Manure Management Program CD Evaluations
    c. Certification and Education Programs Accomplishment Report
    d. Act 38 Facility Odor Management Program – Status Report on Plan Reviews
    e. REAP Accomplishment Report

2. Ombudsman Program Reports – Southern Allegheny Region (Blair County Conservation District and Lancaster County Conservation District)

D. Cooperating Agency Reports – DCNR, PDA, Penn State, DCED, DEP, NRCS, PACD

DCNR – Rachel Reyna reported that DCNR received a GGO (General Government Operations) increase in the enacted FY2019-20 budget and now has funding for twelve new positions. DCNR is partnering with PennVest for multi-functional buffer grants (need to be pre-qualified). The application period for C2P (Community Conservation Partnership Program) buffer grants is January through April 2020. Riparian buffer technicians are available to help people. DCNR is going through two planning processes: Bureau of Strategic Planning and Forest Action Plan. The gypsy moth population has crashed.

PDA – Deputy Secretary Greg Hostetter reported that the legislative elements of the Pennsylvania Farm Bill, which started development at Ag Progress 2018, passed and were signed into law by the Governor in June 2019. Agriculture received a GGO increase of 4.4% for FY 2019. There was an overall increase of 12.8% in programming. $3.5M will go towards the Conservation Excellence Grant Program, including Agrilink and REAP. Fair season is in full swing. On August 3, 2019, there will be a ram, lamb, and buck sale at the Livestock Evaluation Center. All are encouraged to continue to promote the good work that Conservation Districts and their staff do on a daily basis.

PSU – Chris Houser reported that there will be a workshop on August 7 and 8, 2019 focusing on the whole farm perspective for conservation planning with an emphasis on manure management plans and Agriculture Erosion and Sediment Control plans. There will be a leadership change at the Extension. Jeff Hyde is leaving as Acting Director for Cooperative Extension, and Dr. Brent Hales will start on September 13, 2019 as the Director for Cooperative Extension.

DCED – no report.

DEP – Deputy Secretary Aneca Atkinson reported that there is state funding in FY 2019, which will support PA OneStop, Practice Keeper initiatives, and the Ag Inspection Program.

NRCS – Denise Coleman thanked DEP, Secretary McDonnell, Fred Fiscus, and Karen Books for their help with the Strategic Water Action Team Supplement. There were six winners of NACD grants. There is also a lot of work going on with EWP, which is Emergency Watershed Protection Program, a federal emergency recovery program that helps local communities recover after a natural disaster strikes. Denise also thanked the NRCS staff and field offices for their assistance in EWP. Berks County was acknowledged for their help with the recent Hispanic outreach event. Denise also thanked Karl Brown and Secretary Redding for their help with roadblocks in agricultural permitting.

PACD – no report.

Adjournment: Meeting adjourned at 4:36 p.m.

Next Public Meeting: August 20, 2019 – Conference Call
September 10, 2019 – Public Meeting, PDA Building 309, Harrisburg

STATE CONSERVATION COMMISSION CONFERENCE CALL
PA Department of Agriculture, Room 405
Tuesday, August 20, 2019 @ 8:30 am

DRAFT MINUTES

Members Present: Secretary Russell Redding, PDA; Deputy Secretary Aneca Atkinson for Secretary Patrick McDonnell, DEP; Drew Gilchrist for Secretary Cindy Adams-Dunn, DCNR; Denise Coleman, NRCS; Chris Houser for Dr. Richard Roush, Penn State; Ross Orner; Ron Kopp; Ron Rohall; Don Koontz; Mike Flinchbaugh; and Brenda Shambaugh, PACD.

A. Public Input: Bill Neilson, Pennsylvania Farm Bureau, noted that the Farm Bureau is spreading awareness regarding the Spotted Lanternfly.

B. Agency/Organization Updates

1. DCNR – Drew Gilchrist

   Drew reported that DCNR/PennVest multi-functional Riparian Buffer Grant applications are due to DCNR on August 31, 2019. Smokey the Bear celebrated his 75th birthday this month!

2. PACD – Brenda Shambaugh

   Brenda reported that the Leadership Development Managers' Summit will take place on September 4 and 5, 2019 in State College. Close to seventy people are already registered. This Summit is funded by the State Conservation Commission. Policy issues will be discussed at the upcoming Fall PACD Regional meetings. In September, PACD will be giving presentations to boroughs throughout Pennsylvania.

3. Pennsylvania Department of Agriculture – Secretary Russell Redding

   Secretary Redding reported that he is pleased that the Pennsylvania Farm Bill was included in the 2019-20 budget. Significant conservation components include: AgriLink, Conservation Excellence, and REAP. The Senate passed "Farming First" to support the agriculture bill. The "Farming First" package is designed to build on the longstanding efforts of Senate Republicans to support Pennsylvania's farm families and maintain agriculture's status as the state's top industry. Secretary Redding recently met with Secretary Sonny Perdue to talk about the dairy industry. Cosmo Servidio, EPA Administrator, was at Ag Progress Days to present an award to NRCS. The WIP Steering Committee completed its work last week (week of August 12, 2019). Work with Penn State is currently being done

to look at Phase 2 of non-cost share practices. Deputy Secretary, Greg Hostetter, reported that with the passing of the Pennsylvania Farm Bill, Urban Ag Grants and Small Meat Processing Grants are now available. Special thanks to Penn State for hosting Ag Progress Days. Deputy Secretary Hostetter expressed the importance of continuing the practice of biosecurity to prevent the spread of foreign animal diseases. With the passing of the new budget, there was a 4.4% increase in GGO funding and an 12.8% increase overall. Katie McLaughlin is the new Executive Assistant to Greg Hostetter, Cheryl Cook, and Fred Strathmeyer. Karl Brown reported that there is a new Conservation Program Specialist position posted to help with REAP and Farm Bill responsibilities.

4. Penn State – Chris Houser

Chris Houser reported that 120-150 educators are working together to complete a mapping project with the Tree of Heaven as part of the Spotted Lanternfly control effort. Penn State is providing hemp education -- there were recently 400 people at an event in Lancaster. There is also a webinar available for hemp education. Interviews will take place during the week of August 26, 2019 for a faculty extension appointment for two agronomy positions. Starting in September, Brent Hales will be the new director of the Penn State Extension.

5. DEP – Karen Books

Karen Books reported that the State Conservation Commission's standard chart of accounts workgroup met in July. The goal of the chart of accounts workgroup is to develop a standard chart of accounts for conservation districts. They circulated a survey to assess the districts' knowledge of accounting programs. This group consists of a mix of district managers and administrative staff.

6. NRCS – Denise Coleman

Denise Coleman reported that NRCS is closing their fiscal year on September 30, 2019. Beginning October 1, new Farm Bill programs will be included.

7. DCED – no report.

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C. Information and Discussion Items

1. **Nutrient and Odor Management Program**

a. **Act 38 Nutrient Management Program, Nutrient Balance Sheet Planning Tool Version 5.0** – Frank Schneider reported that Commission and Penn State staff have been working to update the Nutrient Balance Sheet (NBS) planning tool. The current version of the NBS planning tool was approved by the Commission in October 2017. Based on comments received by users and the

recommendation of the program staff, a major version change will be presented to the Commission in September 2019 for their consideration. Frank Schneider provided an overview of the proposed changes.

b. **Act 38 Nutrient Management Program, Nutrient Management Planning Tool Version 7.0** – Frank Schneider reported that Commission and Penn State staff have been working on updates to the Nutrient Management Planning Tool. The current version (6.0) was approved by the Commission in October 2017 and has had three minor updates. Staff is recommending a major modification based on comments by users of this tool. Frank Schneider provided an overview of the proposed changes.

2. **REAP Guidelines Update**

Joel Semke reported that recent changes to the Pennsylvania Tax Code amended a number of the current provisions of the REAP Tax Credit Program. These changes were a part of the Pennsylvania Farm Bill initiative. Commission staff is actively working to update the FY 2019-20 REAP Program Guidelines that were previously approved by the Commission in May 2019. Staff recently met with Department of Revenue (DOR) staff to discuss the legislative changes to the program, as well as ways to improve coordination between SCC and DOR. Staff would like to open the FY 2019-20 REAP application period in mid to late September at the latest. Joel Semke updated the Commission on the proposed changes to the REAP FY 2019-20 Guidelines that will be presented to the Commission in September for their consideration and approval.

3. **Conservation Excellence Grant (CEG) Program (grants, tax credits, and or low interest loans)**

Commission staff continues to work with representatives of Lancaster and York Counties (conservation districts, planning commission, Farm Credit, etc.) to explore opportunities for a CEG pilot in Lancaster and York Counties. Commission staff have met with these county representatives twice and are scheduled to meet again on August 23, 2019. These discussions are focused on developing recommendations for the initial two-year pilot, defining county and state roles, developing basic parameter recommendations for the program components (grant, loan, and tax credits), and exploring potential interaction with other state and federal funding opportunities that exist within these counties. County representatives have expressed the greatest interest in and have the greatest experience with the administration of grants at the local level. They have less experience in the administration of tax credits and loans at the local level. Commission staff continues to explore concepts where grants, loans, and tax credits can be co-mingled or bundled in order to create a funding package for conservation BMPs. Karl Brown shared a copy of the "CEG $100K BMP Project Example." One important component of this bundling opportunity will be to

define what the REAP 90% tax credit will cover (BMPs) and where it will be implemented.

4. **AgriLink Low Interest Loans**

Commission staff have had several discussions with private sector lenders regarding the potential use of AgriLink Low Interest Loans. To date, the greatest interest in the program has been expressed by Farm Credit representatives. This is consistent with past experiences with the AgriLink Loan Program when Farm Credit was the predominant lender offering AgriLink Loans. Commission staff have reached out to the Treasury Department to initiate discussion regarding the steps necessary to reinvigorating this program.

5. **105 Program Agriculture Conservation (Dirt, Gravel, and Low Volume Road Program (DGLVRP) Permitting Workgroup Continues Work**

The 105 Program Agricultural Conservation (DGLVRP) Permitting Workgroup has met several times over the past six months (April 12, May 23) to discuss issues and concerns. In addition, two subgroups (Agriculture, Dirt, Gravel, and Low Volume Roads) have conducted field visits and follow-up discussions (June 14, 21, and July 26). Workgroup members look forward to potential changes that may be recommended by DEP staff.

6. **Communications Work Group – Karl Brown**

Commission and agency staff met with a work group comprised of district staff, a district director, and PACD staff to discuss how to improve communications among districts, the Commission, and state agencies. A meeting was held on August 1, 2019 to follow up on discussions initiated in April regarding existing and new opportunities to enhance communications and the structure and purpose of the workgroup going forward. A follow-up meeting of the workgroup will be held in October.

7. **Next Meeting – September 10, 2019 at the PA Department of Agriculture, Room 309**

8. **Adjournment** - The meeting was adjourned at 9:43 a.m.

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: August 27, 2019

TO: Members
State Conservation Commission

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

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

RE: Act-38 Nutrient Management Program
Nutrient Management Planning Tool Version 7.0

Action Requested

State Conservation Commission (SCC or Commission) staff are asking for approval of the Nutrient Management Planning Tool Version 7.0 (Excel and Word).

Background

SCC staff and The Pennsylvania State University Cooperative Extension (Penn State) staff has been working on updates to the Nutrient Management Planning Tool. The current version of the planning tool, Version 6.0, which was approved by the Commission, was released in October 2017. That version was updated with minor revisions three times for the most current Version 6.3.

Based on the proposed changes, staff is seeking a major version change versus a revision change. This updated version will become Version 7.0 and all nutrient management plans written for the 2021 crop year and beyond will need to use this updated version.

The following list is a summary of the changes made to NMP Version 7.0.

1. Poultry manure production values for layer, broiler, and turkey hens were updated to reflect the updates in the 2019-2020 Agronomy Guide Table 1.2-13.
2. The following guidance was added to the whole farm note in the NMP Summary:
   "Fall manure applications require at least 25% cover unless the crop management unit is planted to a cover crop in time to allow for appropriate growth to control runoff until the next growing season, or the manure is injected or mechanically incorporated within 5 days using minimal soil disturbance techniques consistent with no-till farming practices."

3. Hemp for seed and fiber production was added to the crop list with Penn State AASL soil fertility recommendations.
4. Custom ribbon tabs were developed to navigate the planning tool. With this new feature planners are never two clicks away from any worksheet and only ever one click away from the index.

In addition to the updated version of NMP planning tool 7.0 (both Excel and Word portions), SCC and Penn State have developed User Guides for the planning tools. In the past, User Guide types of information were contained in the Technical Manual and could only be updated when a new edition of the Technical Manual was released. SCC and Penn State staff thought it was best to have stand-alone User Guides that could be updated as needed, so those guides will be updated as well

Summary

SCC staff is asking for approval of the Nutrient Management Planning Tool Version 7.0 (Excel and Word), which if approved will become effect for crop year 2021 NMPs and beyond.

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: August 27, 2019

TO: Members
State Conservation Commission

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

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

RE: Act-38 Nutrient Management Program
Nutrient Balance Sheet Planning Tool Version 5.0

Action Requested

State Conservation Commission (SCC or Commission) staff are asking for approval of the Nutrient Balance Sheet (NBS) Planning Tool Version 5.0 (Excel and Word).

Background

SCC staff and The Pennsylvania State University Cooperative Extension (Penn State) staff has been working on updates to the Nutrient Balance Sheet (NBS) Planning Tool.

The current version of the planning tool, Version 4.0, which was approved by the Commission, was released in October 2017. That version was updated with minor revisions three times to the current version 4.3.

Based on the proposed changes, staff is seeking a major version change versus a revision change. This updated version will become Version 5.0 and all nutrient balance sheets for the Act 38 and Act 49 programs written for the 2021 crop year and beyond will need to use this updated version.

The following list is a summary of the changes made to NBS Version 5.0:

1. Elimination of phosphorous banking for two or three years when phosphorous removal planning is used. This was previously approved by the Commission.
2. Added the ability to group P Index Part B fields. A separate input sheet was added to complete P Index Part B fields on a field by field basis. The completed Part B fields and field notes are then grouped by crop, P Index ranking and other crop management criteria that affect nutrient balances.
3. NBS Cover Page:
    a. Importing County of Application was added.

   b. Check boxes and text lines were added to clarify the intended use of the Nutrient Balance Sheets. The selections are:
      i. Pennsylvania Act 38 of 2005 and is an importer associated with the following Nutrient Management Plan.
      ii. Pennsylvania Act 49 of 2004 and is submitted by/on behalf of:
4. NMP Summary:
   a. Changed the First Column Header from CMU/Field Id to Crop Group.
   b. The following guidance was added to the whole farm note: "Fall manure applications require at least 25% cover unless the crop management unit is planted to a cover crop in time to allow for appropriate growth to control runoff until the next growing season, or the manure is injected or mechanically incorporated within 5 days using minimal soil disturbance techniques consistent with no-till farming practices."
   c. Part B P index fields will be shown on the NMP Summary based on crop groups that apply to multiple fields. This is a significant change from the previous version where each Part B field appeared as an individual row on the Summary table. This change is expected to significantly simplify and shorten the Summary table.
5. Added "Mixed Vegetables" recommendations to the Crop List, that were approved as part of the Technical Manual update

In addition to the updated version of NBS planning tool 5.0, SCC and Penn State have developed User Guides for the planning tools. In the past, User Guide type of information were contained in the Technical Manual and could only be updated when a new edition of the Technical Manual was released. SCC and Penn State staff thought it was best to have stand-alone User Guides that could be updated as needed, so those guides will be updated as well

Summary

SCC staff is asking for approval of the Nutrient Balance Sheet Version 5.0 (Excel and Word), which if approved will become effect for crop year 2021 NMPs and beyond.

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: August 27, 2019

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)
Northumberland County, Pennsylvania

Action Requested

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

1. Jay Stoltzfus, 32 Fairview Road, Lititz, PA 17543 (crop years 2020, 2021 & 2022)

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 August 26, 2019. As of that date, the plan was considered to be in its final form. The operation, located in Northumberland 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 Northumberland County Conservation District is not delegated administration authority under the Act 38 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

Jay Stoltzfus NMP, Northumberland County – Jay Stoltzfus is proposing a new animal operation on lands he recently purchased in Northumberland County. Stoltzfus proposed operation is to consists of 25.5 acres of cropland, 7.9 acres of pasture and 7.3 acres of farmstead. The importer of the manure generated at Stoltzfus operation is planned to farm the 25.5 acres of cropland on the operation. Animals planned to be raised on Stoltzfus operation include the following – 4400 swine nursery animals, 14 ewe sheep, 1 ram sheep, 28 lamb sheep, 14 doe goats, 1 buck goat, 28 kid goats, 1 milk cow, 4 beef calves, 50 ducks, 15 brown egg layers and 15 guinea hens. The nursery swine animals will be totally confined to the new nursery swine barn. The proposed nursery swine barn will have an under-barn concrete manure storage. The swine manure will be handled as a liquid and will be exported to neighboring operator for cropland application. Cattle, sheep and goats will be housed together in an existing barn on the operation and have access to two pastures from April to October planned for on the operation. All collected manure from the cattle, sheep and goats, that accumulates in the barn will be will he handled as a solid and exported spring and fall to a known importer for cropland application. The ducks, layers and guineas hens will have free range to the farmstead and all manure will be uncollected. All collected manure is exported to the known farmer that is renting the cropland owned by Stoltzfus. Mortalities are planned to be incinerated on the operation and the ash from the incineration process will be added to the liquid swine manure and exported from the operation.

The combined animal equivalent units on Jay Stoltzfus proposed animal operation are planned at 145.95. The animal equivalent units per acre for the proposed Jay Stoltzfus animal operation equals 18.47, classifying the operation as a concentrated animal operation under Act 38 of 2005.

Approximately 681,296 gallons of liquid swine manure, 75 tons of sheep and goat manure, 60 tons of cattle manure and 7 tons of ducks, layers and guinea manure will be generated at the Jay Stoltzfus proposed animal operation. Approximately 60 tons of the manure is land applied to the pasture on Stoltzfus animal operation and the remaining 681,296 gallons of swine manure and 82 tons of solid manure is exported off this operation to one known importer. The proposed NMP has a signed agreement and associated nutrient balance sheets for the known importer for 337 crop acres. The importer farms approximately 1000 crop acres.

BMPs listed to be implemented on the proposed Jay Stoltzfus animal operation include: Access Road, Critical Area Planting, Diversion, Fencing, Forage and Biomass Planting, Lined Outlet, Roof Runoff Structure, Structure for Water Control, Underground Outlet, Waste Storage Facility, Water & Sediment Control Basin and Watering Facilities. These proposed BMPs are needed on Stoltzfus proposed animal operation to protect water quality.

Based on my review, the NMP developed for Jay Stoltzfus proposed animal operation meets the requirements of the PA Nutrient and Odor Management Act and Regulations, and I therefore recommend Commission approval.

NON-FINAL FORM
Version 1.0
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
July 5, 2019
Month, Day and Year

Nutrient Management Plan

For Crop Year(s)

2020 2021 2022

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Jay Stoltzfus, 32 Fairview Road, Lititz, PA 17543, 570-250-7992

Operation's Location Address (if different than above)

865 Schwaben Creek Road, Dornsife, PA 17823

NON-FINAL FORM
Version 2.0
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
August 26, 2019
Month, Day and Year

Site Name (CAFOs)

N/A

Prepared By

Nutrient Management Specialist's Name, Address, Telephone Number(s)

Todd C. Rush, TeamAg, Inc., 120 Lake Street, Ephrata, PA 17522
570-764-7003

Nutrient Management Specialist's Program Certification Number

#988-NMC

Administratively Complete Date

Plan Approval Date

Plan Update Submission Date(s)

(updates to the approved plan not requiring board action)

TeamAg Incorporated

FINAL FORM
This version of the plan will be considered for action by the Conservation District Board at their September 10, 2019 meeting
August 26, 2019
MONTH, DAY AND YEAR

Nutrient Management Plan

For Crop Year(s)

2020 2021 2022

Prepared For

Operator's Name, Mailing Address, Telephone Number(s)

Jay Stoltzfus, 32 Fairview Road, Lititz, PA 17543, 570-250-7992

Operation's Location Address (if different than above)

865 Schwaben Creek Road, Dornsife, PA 17823

Site Name (CAFOs)

N/A

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Table of Contents

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 7.9 **Crop Year(s)** 2020

Whole Farm Note: **None**

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.

Operation Acres:

Total Acres: 54.9 **Total Acres Available For Nutrient Application Under Operator's Control: Owned:** 7.9 **Rented:** 0

Animal Equivalent Units: 145.95 **Animal Equivalent Units Per Acre:** 18.47

								Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
P1	4.3	Planting Pasture (without legume)	Ewe Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
P1	4.3	Planting Pasture (without legume)	Ram Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
P1	4.3	Planting Pasture (without legume)	Lamb Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
P1	4.3	Planting Pasture (without legume)	Doe Goat Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
P1	4.3	Planting Pasture (without legume)	Buck Goat Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
P1	4.3	Planting Pasture (without legume)	Kid Goat Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						

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

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

CMU/Field ID	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
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P1	4.3	Planting Pasture (without legume)	Calf Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0	68	0	19	0	-41	0
P2	3.6	Planting Pasture (without legume)	Ewe Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
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[1] See rate calibration table (Nutrient Management Plan Summary Notes).

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NMP Summary Notes

Crop Years 2020

CMU/Field ID	Notes
P1	
P1	
P1	
P1	
P1	
P1	
P1	
P1	This field is managed as permanent pasture. An average of 14 ewes, 1 ram, 28 lambs, 14 doe goats, 1 buck goat, 28 kid goats, 1 milk cow and 4 calves will graze this field for an average of 18 hours per day from April through October or equivalent time. Water is provided in the pasture. Supplemental feed is provided in the barn.
P2	
P2	
P2	
P2	
P2	
P2	
P2	
P2	This field is managed as permanent pasture. An average of 14 ewes, 1 ram, 28 lambs, 14 doe goats, 1 buck goat, 28 kid goats, 1 milk cow and 4 calves will graze this field for an average of 18 hours per day from April through October or equivalent time. Water is provided in the pasture. Supplemental feed is provided in the barn.

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

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

Manure Spreader Calibration Notes

1

Crop Years 2020

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
This Appendix is not relevant to this farm situation because no manure is mechanically applied at this operation.	N/A	N/A	N/A	N/A

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 7.9 **Crop Year(s)** 2021

Whole Farm Note: **None**

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.

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P1	4.3	Established Pasture (without legume)	Ewe Fall - Uncollected	Grazing	Grazing anytime with nutrient uptake during growing season	Grazing	See Notes	0	0	0						
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NMP Summary Notes

Crop Years 2021

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P2	
P2	
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P2	
P2	This field is managed as permanent pasture. An average of 14 ewes, 1 ram, 28 lambs, 14 doe goats, 1 buck goat, 28 kid goats, 1 milk cow and 4 calves will graze this field for an average of 18 hours per day from April through October or equivalent time. Water is provided in the pasture. Supplemental feed is provided in the barn.

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

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Manure Spreader Calibration Notes

1

Crop Years 2021

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
This Appendix is not relevant to this farm situation because no manure is mechanically applied at this operation.	N/A	N/A	N/A	N/A

Nutrient Management Plan Summary

Total acres reported in NMP Summary: 7.9 **Crop Year(s)** 2022

Whole Farm Note: **None**

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.

Operation Acres:

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NMP Summary Notes

Crop Years 2022

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P2	
P2	
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P2	
P2	This field is managed as permanent pasture. An average of 14 ewes, 1 ram, 28 lambs, 14 doe goats, 1 buck goat, 28 kid goats, 1 milk cow and 4 calves will graze this field for an average of 18 hours per day from April through October or equivalent time. Water is provided in the pasture. Supplemental feed is provided in the barn.

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Manure Spreader Calibration Notes

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Crop Years 2022

Manure Application Rate	Manure Spreader Used	Spreader Settings	Tractor Used (if applicable)	Tractor Settings (speed, gear, rpm, pto, etc.)
This Appendix is not relevant to this farm situation because no manure is mechanically applied at this operation.	N/A	N/A	N/A	N/A

Additional Nutrient Management Plan Requirements

Manure Management and Stormwater BMP Implementation Summary

Best Management Practice	NRCS Practice Code [1]	BMP Location	Implementation Season & Year
Access Road	560	Access to swine barn	Spring / 2020
Animal Mortality Facility	316	East of swine barn	Spring / 2020
Critical Area Planting	342	Areas disturbed by construction activities	Summer / 2020
Diversion	362	Upslope of swine barn	Fall / 2019
Fence	382	Proposed pasture fields P1 & P2	Spring / 2021
Forage & Biomass Planting	512	Proposed pasture fields P1 & P2	Spring / 2021
Lined Outlet	468	Underground outlet pipe outlets	Fall / 2019
Livestock Pipeline	516	Proposed pasture fields P1 & P2	Summer / 2021
Roof Runoff Structure	558	Existing cattle barn	Spring / 2021
Structure for Water Control	587	Swale inlet pipes	Fall / 2019
Underground Outlet	620	Swales to stormwater basin	Fall / 2019
Underground Outlet	620	Proposed roof gutters to outlet	Spring / 2021
Waste Storage Facility	313	Swine barn	Spring / 2020
Water & Sediment Control Basin	638	Southwest of swine barn	Fall / 2019
Watering Facility	614	Proposed pasture fields P1 & P2	Summer / 2021

1 If applicable, enter USDA-NRCS Practice Code. For other non-technical BMPs, leave blank.

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.

This operation does not field stack manure.

Additional CAFO Requirements

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

This operation is not a CAFO.

Proposed Manure Storage Description

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

A 78’ x 201’ x 7.5’ deep (76.66’ x 199.66’ x 7.5’ interior dimensions) concrete under-barn manure storage will be built under the proposed nursery swine barn. This structure will have a usable storage depth of 7 feet after the required 6” freeboard. The calculated useable storage capacity for this facility is 801,419 gallons.

Description of Planned Alternative Manure Technology Practices

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

There are no alternative manure technology practices planned for this operation.

Exported Manure Summary

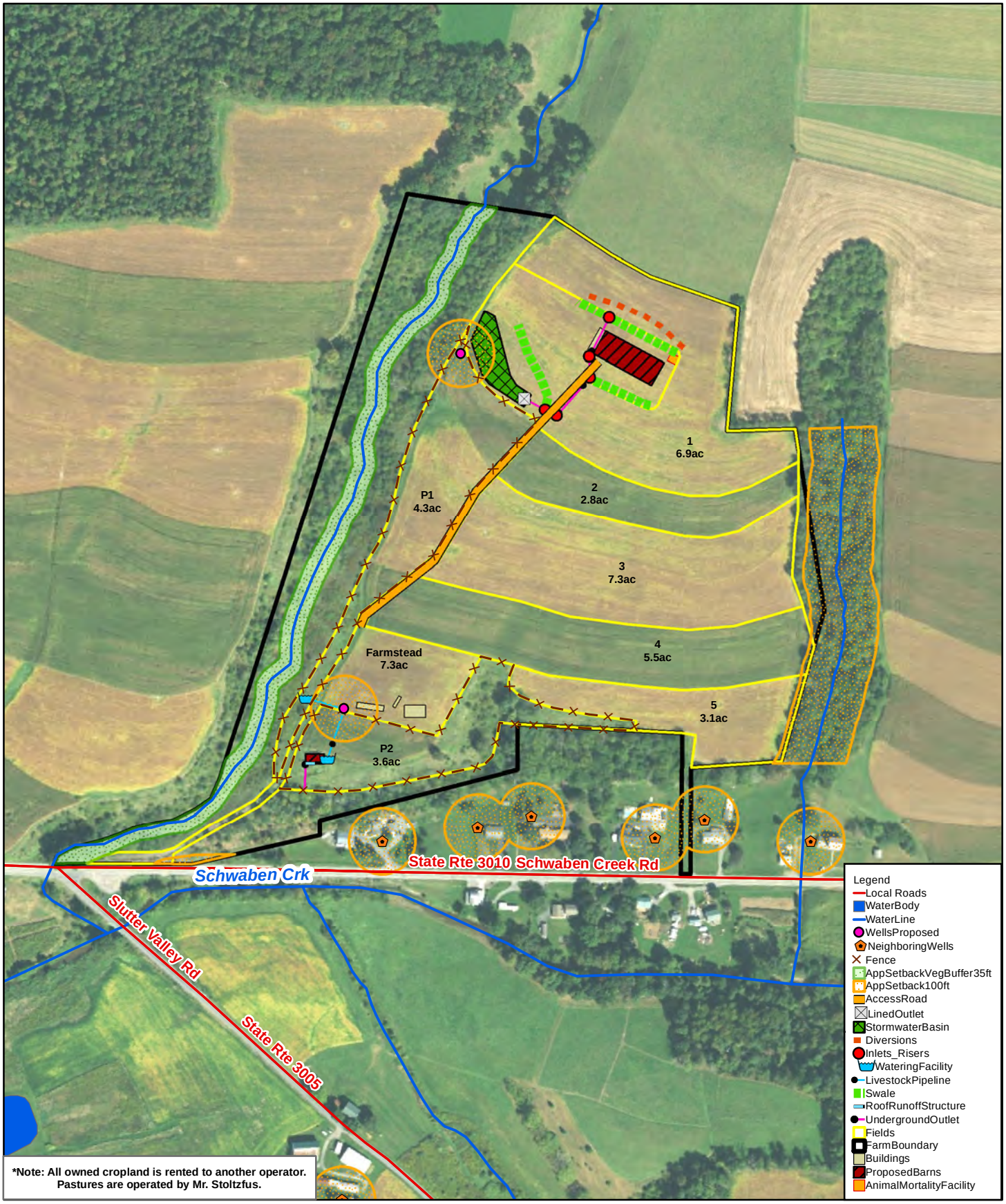
Summarize in a short paragraph the arrangements proposed for the manure to be exported from the operation. This information is described in more detail in Appendix 8 of this plan.

All collected manure is exported to known manure importers for application on cropland. See Appendix 8 for details.

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.

Jay Stoltzfus Operator Management Map



*Note: All owned cropland is rented to another operator. Pastures are operated by Mr. Stoltzfus.

TeamAg Incorporated

0 200 400 800 1,200 Feet

N W E S

Field verification of application setbacks and buffers is required prior to land application of manure.

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:

X	Pennsylvania Act 38 of 2005	X	CAO		VAO (check one)
	Pennsylvania CAFO (Concentrated Animal Feeding Operation) program				
	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 record keeping 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)
X	3-Year Plan for Crop Years	2020	2021	2022	

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:

X	Verification of Ag E&S Plan
X	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.

	Owners Notified	X	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; that this plan has been developed in accordance with the criteria established for the program(s) indicated above; and that I have presented the final complete plan to the operator and discussed the content and implementation of this plan with the operator, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Specialist Signature 

Date 06/25/19

Operator Signature

I understand and agree 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 agree 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. 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; and that, if this plan was completed by a nutrient management specialist, I have reviewed the final completed plan and the specialist has discussed the content and implementation of this plan with me, subject to the penalties of 18 Pa.C.S.A. § 4904, relating to unsworn falsification to authorities.

Operator Signature _____

Operator Title Owner

Date 6-26-19

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.

Jay Stoltzfus is proposing to raise nursery swine at his farm in Northumberland County, PA. The farm consists of 25.5 acres of cropland, 0 acres of hayland, 7.9 acres of pasture, 7.3 acres of farmstead and 14.2 acres of associated agricultural land. All cropland acres are rented to another farmer who utilizes them to raise corn grain and soybeans. A winter small grain cover crop is planted after corn and soybean harvest. All crops are established using no-till planting methods. The proposed nursery swine operation will average a total of 4,400 nursery swine housed in one barn. Nursery swine will be 100% confined to the barn and will not have access to pasture. Nursery swine manure will be handled as a liquid and stored in an under-barn concrete manure storage structure. Manure will be removed from the storage twice per year and exported directly to a known importer for application on cropland. Export will typically take place in the spring and fall. No bedding will be used in the nursery swine barn. Mr. Stoltzfus will also have and average 14 ewes, 1 ram, 28 lambs, 14 doe goats, 1 buck goat, 28 kid goats, 1 milk cow, 4 calves, 50 ducks, 15 brown egg layers and 15 guinea hens on the operation. Cattle, sheep and goats will be housed together in an existing building on the operation. This group of livestock will also have access to pasture fields P1 and P2 from April through October. Cattle, sheep and goat manure will accumulate in the barn, be handled as a solid and exported directly to a known importer for application on cropland in the spring and fall. Straw and waste hay will be used as bedding. The ducks, layers and guinea hens are shown as a small quantity manure group in this plan. Manure generated from the small quantity manure group is uncollected and deposited around the farmstead by the poultry. Exported manure generated by this operation is imported by the farmer currently renting and operating Mr. Stoltzfus' owned crop ground and land applied to these fields, as well as, other fields outlined in Appendix 8. Moralities are planned to be incinerated on the operation in an incinerator. Ashes from the incinerator will be added to the liquid swine manure in the under-barn concrete manure storage.

County(s)

Northumberland County / Washington Township

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

Schwaben Creek – TSF, Unnamed Tributary to Schwaben Creek – TSF

Notation of Special Protection Waters

None

Operation Acres

Total Acres: 54.9 acres

Total Acres Available for Nutrient Application Under Operator's Control

Owned: 7.9 acres

Rented: 0 acres

Names & Addresses of Owners of Rented or Leased Land

None

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.

There are no manure storage structures existing on this operation.

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. If applicable, name and Act 49 certification number of custom applicator.

This section is not relevant to this farm situation since manure is not mechanically applied on the fields operated by Mr. Stoltzfus.

Appendix 3 Manure Group Information Crop Yrs. 2020	Nursery Swine		Sheep & Goat Manure Fall		Sheep & Goat Manure Spring		Cattle Manure Fall		Cattle Manure Spring	
Manure Report Date (note if averaging several reports)	Book Value		Book Value		Book Value		Book Value		Book Value	
Laboratory Name	Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide	
Manure Type	Swine		Other		Other		Other		Other	
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	19.00		23.00		23.00		10.00		10.00	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	Complete NH4-N		Complete NH4-N		Complete NH4-N		Complete NH4-N		Complete NH4-N	
Total Organic N (lbs/ton or 1000 gal)	Check N values in Manure Avg Input	Go to NMP Index	Check N values in Manure Avg Input		Check N values in Manure Avg Input		Check N values in Manure Avg Input		Check N values in Manure Avg Input	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.00	Go to Appendix 3 Input	8.00		8.00		4.00		4.00	
Total Potash (K_2O) (lbs/ton or 1000 gal)	14.00	Go to Manure Avg Input	20.00		20.00		8.00		8.00	
Percent Solids	1.50	Grazing Calculator	25.00		25.00		12.00		12.00	
PSC Value (analytical or book value)	1.00		1.00		1.00		0.80		0.80	
Percent Moisture	98.50		75.00		75.00		88.00		88.00	
Manure Group AEU's	133.33		5.30		3.74		1.84		1.29	
Description: Site & Season Applied	Under-Barn Storage	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export
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	Nursery Swine		Sheep & Goat Manure Fall	Sheep & Goat Manure Fall - uncollected	Sheep & Goat Manure Spring		Cattle Manure Fall	Cattle Manure Fall - uncollected	Cattle Manure Spring	
CALCULATED: Total Manure Collected Per Manure Group	681,296.0		9.7	29.0	36.3		7.9	23.7	28.3	
Units	gallons		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	0.0	0.0	0.0	28.8	0.0	0.0	0.0	23.6	0.0	0.0
Units	Gallons		Tons	Tons	Tons		Tons	Tons	Tons	
Manure Exported	681,296.0		9.7		36.3		7.9		28.3	
Units	gallons		tons		tons		tons		tons	
Manure Allocation Balance	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
Units	Gallons		Tons	Tons	Tons		Tons	Tons	Tons	
Manure Balance as a Percent of Total Manure Collected	0.0%		-0.3%		0.0%		0.0%		0.0%	
Total Rainfall and Runoff	0		0		0		0		0	
	gallons		tons		tons		tons		tons	

Appendix 3 Manure Group Information Crop Yrs. 2020	Nursery Swine		Sheep & Goat Manure Fall		Sheep & Goat Manure Spring		Cattle Manure Fall		Cattle Manure Spring	
	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	Nursery Swine		Ewe Fall	Ewe Fall - uncollected	Ewe Spring		Dairy Cow Fall	Dairy Cow Fall - uncollected	Dairy Cow Spring	
Animal Type	Nursery pig: 3–10 wk.		Medium Breed Ewe	Total Nitrogen (N) lbs/ton	Medium Breed Ewe		Holstein Lactating Cow	Total Nitrogen (N) lbs/ton	Holstein Lactating Cow	
Animal Number	4,400		14	23.00	14		1	ton	1	
Animal Weight	35		175	Total Phosphate (P2O5) lbs/ton	175		1450	Total Phosphate (P2O5) lbs/ton	1450	
Animal Group AUs	154.00		2.45	8.00	2.45		1.45	111.00	1.45	
Animal Group AEUs	133.33		1.44	Total Potash (K2O) lbs/ton	1.01		0.85	Total Potash (K2O) lbs/ton	0.60	
Daily Manure Production per AU	14.0		40.0	20.00	40.0		111.0	10.00	111.0	
Total Days Manure Produced	316		214	PSC Value	151		214	PSC Value	151	
Total Manure Produced	681,296		10	0.80	7		17	4.00	12	
Days On Pasture	0		214		0		214		0	
Hours Per Day On Pasture	0		18		0		18		0	
Total Bedding	0		0	Grazing Calculator	2		0		3	
Total Washwater	0		0		0		0		0	
CALCULATED - Total Uncollected Manure Per Animal Group			7.9	8 - Tons			12.9	13 - Tons		
CALCULATED-Total Manure Collected Per Animal Group	681,296	App 3 Input	3		9		4		15	

Animal Group 2			Ram Fall	Ram Fall - uncollected	Ram Spring		Calf Fall	Calf Fall - uncollected	Calf Spring	
Animal Type			Medium Breed Ram	Total Nitrogen (N) lbs/ton	Medium Breed Ram		Holstein Calf: 0–1 yr.	Total Nitrogen (N) lbs/ton	Holstein Calf: 0–1 yr.	
Animal Number			1	23.00	1		4	10.00	4	
Animal Weight			225	Total Phosphate (P2O5) lbs/ton	225		420	Total Phosphate (P2O5) lbs/ton	420	
Animal Group AUs			0.23	8.00	0.23		1.68	3.00	1.68	
Animal Group AEUs			0.13	Total Potash (K2O) lbs/ton	0.09		0.98	Total Potash (K2O) lbs/ton	0.70	
Daily Manure Production per AU			40.0	20.00	40.0		80.0	4.00	80.0	
Total Days Manure Produced			214	PSC Value	151		214	PSC Value	151	
Total Manure Produced			1	0.80	1		14	0.80	10	
Days On Pasture			214		0		214		0	
Hours Per Day On Pasture			18		0		18		0	
Total Bedding			0		2		0		3	
Total Washwater			0		0		0		0	
CALCULATED - Total Uncollected Manure Per Animal Group			0.7	1 - Tons			10.8	11 - Tons		
CALCULATED-Total Manure Collected Per Animal Group		App 3 Input	0		2		4		13	

Appendix 3 Manure Group Information Crop Yrs. 2020	Nursery Swine		Sheep & Goat Manure Fall		Sheep & Goat Manure Spring		Cattle Manure Fall		Cattle Manure Spring	
	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 3			Lamb Fall	Lamb Fall - uncollected	Lamb Spring					
Animal Type			Medium Breed Lamb: 0–1 yr.	Total Nitrogen (N) lbs/ton	Medium Breed Lamb: 0–1 yr.					
Animal Number			28	23.00	28					
Animal Weight			80	Total Phosphate (P2O5) lbs/ton	80					
Animal Group AUs			2.24	8.00	2.24					
Animal Group AEUs			1.31	Total Potash (K2O) lbs/ton	0.93					
Daily Manure Production per AU			40.0	20.00	40.0					
Total Days Manure Produced			214	PSC Value	151					
Total Manure Produced			10	0.80	7					
Days On Pasture			214		0					
Hours Per Day On Pasture			18		0					
Total Bedding			0		2					
Total Washwater			0		0					
CALCULATED - Total Uncollected Manure Per Animal Group			7.2	7 - Tons						
CALCULATED-Total Manure Collected Per Animal Group		App 3 Input	2		8					

Animal Group 4			Doe Goat Fall	Doe Goat Fall - uncollected	Doe Goat Spring					
Animal Type			Meat Goat Doe	Total Nitrogen (N) lbs/ton	Meat Goat Doe					
Animal Number			14	23.00	14					
Animal Weight			150	Total Phosphate (P2O5) lbs/ton	150					
Animal Group AUs			2.10	8.00	2.10					
Animal Group AEUs			1.23	Total Potash (K2O) lbs/ton	0.87					
Daily Manure Production per AU			40.0	20.00	40.0					
Total Days Manure Produced			214	PSC Value	151					
Total Manure Produced			9	0.80	6					
Days On Pasture			214		0					
Hours Per Day On Pasture			18		0					
Total Bedding			0		2					
Total Washwater			0		0					
CALCULATED - Total Uncollected Manure Per Animal Group			6.7	7 - Tons						
CALCULATED-Total Manure Collected Per Animal Group		App 3 Input	2		8					

Appendix 3 Manure Group Information Crop Yrs. 2020	Nursery Swine		Sheep & Goat Manure Fall		Sheep & Goat Manure Spring		Cattle Manure Fall		Cattle Manure Spring	
	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 5			Buck Goat Fall	Buck Goat Fall - uncollected	Buck Goat Spring					
Animal Type			Meat Goat Buck	Total Nitrogen (N) lbs/ton	Meat Goat Buck					
Animal Number			1	23.00	1					
Animal Weight			200	Total Phosphate (P2O5) lbs/ton	200					
Animal Group AUs			0.20	8.00	0.20					
Animal Group AEUs			0.12	Total Potash (K2O) lbs/ton	0.08					
Daily Manure Production per AU			40.0	20.00	40.0					
Total Days Manure Produced			214	PSC Value	151					
Total Manure Produced			1	0.80	1					
Days On Pasture			214		0					
Hours Per Day On Pasture			18		0					
Total Bedding			0		2					
Total Washwater			0		0					
CALCULATED - Total Uncollected Manure Per Animal Group			0.6	1 - Tons						
CALCULATED-Total Manure Collected Per Animal Group		App 3 Input	0		2					

Animal Group 6			Kid Goat Fall	Kid Goat Fall - uncollected	Kid Goat Spring					
Animal Type			Meat Goat Kid: 0–1 yr.	Total Nitrogen (N) lbs/ton	Meat Goat Kid: 0–1 yr.					
Animal Number			28	23.00	28					
Animal Weight			65	Total Phosphate (P2O5) lbs/ton	65					
Animal Group AUs			1.82	8.00	1.82					
Animal Group AEUs			1.07	Total Potash (K2O) lbs/ton	0.75					
Daily Manure Production per AU			40.0	20.00	40.0					
Total Days Manure Produced			214	PSC Value	151					
Total Manure Produced			8	0.80	5					
Days On Pasture			214		0					
Hours Per Day On Pasture			18		0					
Total Bedding			0		2					
Total Washwater			0		0					
CALCULATED - Total Uncollected Manure Per Animal Group			5.8	6 - Tons						
CALCULATED-Total Manure Collected Per Animal Group		App 3 Input	2		7					

Appendix 3 Manure Group Information Crop Yrs. 2020	Small Quantity Manure Group	
Manure Report Date (note if averaging several reports)	N/A	
Laboratory Name	N/A	
Manure Type	Other	
Manure Unit (lbs/ton or 1000 gal)	lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	Complete N	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	Complete NH4-N	
Total Organic N (lbs/ton or 1000 gal)	Check N values in Manure Avg Input	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	Complete P2O5	
Total Potash (K_2O) (lbs/ton or 1000 gal)	Complete K2O	
Percent Solids	Complete percent solids	
PSC Value (analytical or book value)	Complete PSC Value	
Percent Moisture	Check Percent Solids	
Manure Group AEU's	0.46	
Description: Site & Season Applied	Farmstead	Free Range Year Round
Inventory Method	Calculated	
	Collected Calc.	Uncollected Calc.
Manure Group Identification	Small Quantity Manure Group	Small Quantity Manure Group - uncollected
CALCULATED: Total Manure Collected Per Manure Group	0.0	7.1
Units	Tons	Tons
RECORDS: Total Manure Collected Per Manure Group		
Unit		
	Collected	Uncollected
Manure Used On-Farm	0.0	0.0
Units	Tons	Tons
Manure Exported	0.0	
Units	tons	
Manure Allocation Balance	0.0	7.1
Units	Tons	Tons
Manure Balance as a Percent of Total Manure Collected		
Total Rainfall and Runoff	0	
	tons	

Appendix 3 Manure Group Information Crop Yrs. 2020	Small Quantity Manure Group	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 1	Duck	Duck - uncollected
Animal Type	Duck, layer	Total Nitrogen (N) lbs/ton
Animal Number	50	20.00
Animal Weight	6.85	Total Phosphate (P2O5) lbs/ton
Animal Group AUs	0.34	16.00
Animal Group AEUs	0.34	Total Potash (K2O) lbs/ton
Daily Manure Production per AU	110.0	12.00
Total Days Manure Produced	365	PSC Value
Total Manure Produced	7	0.80
Days On Pasture	365	
Hours Per Day On Pasture	24	
Total Bedding	0	
Total Washwater	0	
CALCULATED - Total Uncollected Manure Per Animal Group	6.9	7 - Tons
CALCULATED-Total Manure Collected Per Animal Group	0	

Animal Group 2	Brown Egg Layer Hen	Brown Egg Layer Hen - uncollected
Animal Type	Layer, brown egg: 18–90 wk.	Total Nitrogen (N) lbs/ton
Animal Number	15	35.00
Animal Weight	3.85	Total Phosphate (P2O5) lbs/ton
Animal Group AUs	0.06	11.00
Animal Group AEUs	0.06	Total Potash (K2O) lbs/ton
Daily Manure Production per AU	26.0	16.00
Total Days Manure Produced	365	PSC Value
Total Manure Produced	0	0.80
Days On Pasture	365	
Hours Per Day On Pasture	24	
Total Bedding	0	
Total Washwater	0	
CALCULATED - Total Uncollected Manure Per Animal Group	0.3	0 - Tons
CALCULATED-Total Manure Collected Per Animal Group	0	

Appendix 3 Manure Group Information Crop Yrs. 2020	Small Quantity Manure Group	
	Manure Generation per Animal Group	Uncollected Manure: Nutrient Analysis Book Values
Animal Group 3	Guinea Hen	
Animal Type	Guinea Hen	
Animal Number	15	
Animal Weight	3.75	
Animal Group AUs	0.06	
Animal Group AEUs	0.06	
Daily Manure Production per AU	0.0	
Total Days Manure Produced	365	
Total Manure Produced	0	
Days On Pasture	365	
Hours Per Day On Pasture	24	
Total Bedding	0	
Total Washwater	0	
CALCULATED - Total Uncollected Manure Per Animal Group	0.0	
CALCULATED-Total Manure Collected Per Animal Group	0	

Animal Group 4		
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 Per Animal Group		
CALCULATED-Total Manure Collected Per Animal Group		

Appendix 3 Manure Group Information Crop Yrs. 2021	Nursery Swine		Sheep & Goat Manure Fall		Sheep & Goat Manure Spring		Cattle Manure Fall		Cattle Manure Spring	
Manure Report Date (note if averaging several reports)	Book Value		Book Value		Book Value		Book Value		Book Value	
Laboratory Name	Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide	
Manure Type	Swine		Other		Other		Other		Other	
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	19.00		23.00		23.00		10.00		10.00	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	Complete NH4-N		Complete NH4-N		Complete NH4-N		Complete NH4-N		Complete NH4-N	
Total Organic N (lbs/ton or 1000 gal)	Check N values in Manure Avg Input	Go to NMP Index	Check N values in Manure Avg Input		Check N values in Manure Avg Input		Check N values in Manure Avg Input		Check N values in Manure Avg Input	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.00	Go to Appendix 3 Input	8.00		8.00		4.00		4.00	
Total Potash (K_2O) (lbs/ton or 1000 gal)	14.00	Go to Manure Avg Input	20.00		20.00		8.00		8.00	
Percent Solids	1.50	Grazing Calculator	25.00		25.00		12.00		12.00	
PSC Value (analytical or book value)	1.00		1.00		1.00		0.80		0.80	
Percent Moisture	98.50		75.00		75.00		88.00		88.00	
Manure Group AEU's	133.33		5.30		3.74		1.84		1.29	
Description: Site & Season Applied	Under-Barn Storage	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export
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	Nursery Swine		Sheep & Goat Manure Fall	Sheep & Goat Manure Fall - uncollected	Sheep & Goat Manure Spring		Cattle Manure Fall	Cattle Manure Fall - uncollected	Cattle Manure Spring	
CALCULATED: Total Manure Collected Per Manure Group	681,296.0		9.7	29.0	36.3		7.9	23.7	28.3	
Units	gallons		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	0.0	0.0	0.0	28.8	0.0	0.0	0.0	23.6	0.0	0.0
Units	Gallons		Tons	Tons	Tons		Tons	Tons	Tons	
Manure Exported	681,296.0		9.7		36.3		7.9		28.3	
Units	gallons		tons		tons		tons		tons	
Manure Allocation Balance	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
Units	Gallons		Tons	Tons	Tons		Tons	Tons	Tons	
Manure Balance as a Percent of Total Manure Collected	0.0%		-0.3%		0.0%		0.0%		0.0%	
Total Rainfall and Runoff	0		0		0		0		0	
	gallons		tons		tons		tons		tons	

Appendix 3 Manure Group Information Crop Yrs. 2021	Small Quantity Manure Group	
Manure Report Date (note if averaging several reports)	N/A	
Laboratory Name	N/A	
Manure Type	Other	
Manure Unit (lbs/ton or 1000 gal)	lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	Complete N	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	Complete NH4-N	
Total Organic N (lbs/ton or 1000 gal)	Check N values in Manure Avg Input	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	Complete P2O5	
Total Potash (K_2O) (lbs/ton or 1000 gal)	Complete K2O	
Percent Solids	Complete percent solids	
PSC Value (analytical or book value)	Complete PSC Value	
Percent Moisture	Check Percent Solids	
Manure Group AEU's	0.46	
Description: Site & Season Applied	Farmstead	Free Range Year Round
Inventory Method	Calculated	
	Collected Calc.	Uncollected Calc.
Manure Group Identification	Small Quantity Manure Group	Small Quantity Manure Group - uncollected
CALCULATED: Total Manure Collected Per Manure Group	0.0	7.1
Units	Tons	Tons
RECORDS: Total Manure Collected Per Manure Group		
Unit		
	Collected	Uncollected
Manure Used On-Farm	0.0	0.0
Units	Tons	Tons
Manure Exported	0.0	
Units	tons	
Manure Allocation Balance	0.0	7.1
Units	Tons	Tons
Manure Balance as a Percent of Total Manure Collected		
Total Rainfall and Runoff	0	
	tons	

Appendix 3 Manure Group Information Crop Yrs. 2022	Nursery Swine		Sheep & Goat Manure Fall		Sheep & Goat Manure Spring		Cattle Manure Fall		Cattle Manure Spring	
Manure Report Date (note if averaging several reports)	Book Value		Book Value		Book Value		Book Value		Book Value	
Laboratory Name	Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide		Penn State Agronomy Guide	
Manure Type	Swine		Other		Other		Other		Other	
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal		lb/ton		lb/ton		lb/ton		lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	19.00		23.00		23.00		10.00		10.00	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	Complete NH4-N		Complete NH4-N		Complete NH4-N		Complete NH4-N		Complete NH4-N	
Total Organic N (lbs/ton or 1000 gal)	Check N values in Manure Avg Input	Go to NMP Index	Check N values in Manure Avg Input		Check N values in Manure Avg Input		Check N values in Manure Avg Input		Check N values in Manure Avg Input	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.00	Go to Appendix 3 Input	8.00		8.00		4.00		4.00	
Total Potash (K_2O) (lbs/ton or 1000 gal)	14.00	Go to Manure Avg Input	20.00		20.00		8.00		8.00	
Percent Solids	1.50	Grazing Calculator	25.00		25.00		12.00		12.00	
PSC Value (analytical or book value)	1.00		1.00		1.00		0.80		0.80	
Percent Moisture	98.50		75.00		75.00		88.00		88.00	
Manure Group AEU's	133.33		5.30		3.74		1.84		1.29	
Description: Site & Season Applied	Under-Barn Storage	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export	Cattle, Sheep & Goat Barn	Spring & Fall Export
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	Nursery Swine		Sheep & Goat Manure Fall	Sheep & Goat Manure Fall - uncollected	Sheep & Goat Manure Spring		Cattle Manure Fall	Cattle Manure Fall - uncollected	Cattle Manure Spring	
CALCULATED: Total Manure Collected Per Manure Group	681,296.0		9.7	29.0	36.3		7.9	23.7	28.3	
Units	gallons		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	0.0	0.0	0.0	28.8	0.0	0.0	0.0	23.6	0.0	0.0
Units	Gallons		Tons	Tons	Tons		Tons	Tons	Tons	
Manure Exported	681,296.0		9.7		36.3		7.9		28.3	
Units	gallons		tons		tons		tons		tons	
Manure Allocation Balance	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
Units	Gallons		Tons	Tons	Tons		Tons	Tons	Tons	
Manure Balance as a Percent of Total Manure Collected	0.0%		-0.3%		0.0%		0.0%		0.0%	
Total Rainfall and Runoff	0		0		0		0		0	
	gallons		tons		tons		tons		tons	

Appendix 3 Manure Group Information Crop Yrs. 2022	Small Quantity Manure Group	
Manure Report Date (note if averaging several reports)	N/A	
Laboratory Name	N/A	
Manure Type	Other	
Manure Unit (lbs/ton or 1000 gal)	lb/ton	
Total Nitrogen (N) (lbs/ton or 1000 gal)	Complete N	
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	Complete NH4-N	
Total Organic N (lbs/ton or 1000 gal)	Check N values in Manure Avg Input	
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	Complete P2O5	
Total Potash (K_2O) (lbs/ton or 1000 gal)	Complete K2O	
Percent Solids	Complete percent solids	
PSC Value (analytical or book value)	Complete PSC Value	
Percent Moisture	Check Percent Solids	
Manure Group AEU's	0.46	
Description: Site & Season Applied	Farmstead	Free Range Year Round
Inventory Method	Calculated	
	Collected Calc.	Uncollected Calc.
Manure Group Identification	Small Quantity Manure Group	Small Quantity Manure Group - uncollected
CALCULATED: Total Manure Collected Per Manure Group	0.0	7.1
Units	Tons	Tons
RECORDS: Total Manure Collected Per Manure Group		
Unit		
	Collected	Uncollected
Manure Used On-Farm	0.0	0.0
Units	Tons	Tons
Manure Exported	0.0	
Units	tons	
Manure Allocation Balance	0.0	7.1
Units	Tons	Tons
Manure Balance as a Percent of Total Manure Collected		
Total Rainfall and Runoff	0	
	tons	

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2020	Nursery Swine					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Book Value**	Book Value				
Laboratory Name	**Penn State Agronomy Guide**	Penn State Agronomy Guide				
Manure Type	**Swine**	Swine				
Manure Unit (lbs/ton or 1000 gal)	**lb/1000 gal**	lb/1000 gal				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**19.00**	19.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**Complete NH4-N**					
Total Organic N (lbs/ton or 1000 gal)		19.00				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.00**	8.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**14.00**	14.00				
Percent Solids	**1.50**	1.50				
PSC Value (Enter analytical or book value)	**1.00**	1.00				

Manure Average for Crop Years. 2020	Sheep & Goat Manure Fall					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Book Value**	Book Value				
Laboratory Name	**Penn State Agronomy Guide**	Penn State Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**23.00**	23.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**Complete NH4-N**					
Total Organic N (lbs/ton or 1000 gal)		**23.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.00**	8.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**20.00**	20.00				
Percent Solids	**25.00**	25.00				
PSC Value (Enter analytical or book value)	**1.00**	1.00				

Manure Average for Crop Years. 2020	Sheep & Goat Manure Spring					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Book Value**	Book Value				
Laboratory Name	**Penn State Agronomy Guide**	Penn State Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**23.00**	23.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**Complete NH4-N**					
Total Organic N (lbs/ton or 1000 gal)		**23.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**8.00**	8.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**20.00**	20.00				
Percent Solids	**25.00**	25.00				
PSC Value (Enter analytical or book value)	**1.00**	1.00				

Manure Analysis 5 Year Running Average

Manure Average for Crop Years. 2020	Cattle Manure Fall					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Book Value**	Book Value				
Laboratory Name	**Penn State Agronomy Guide**	Penn State Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**10.00**	10.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**Complete NH4-N**					
Total Organic N (lbs/ton or 1000 gal)		**10.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**4.00**	4.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**8.00**	8.00				
Percent Solids	**12.00**	12.00				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2020	Cattle Manure Spring					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**Book Value**	Book Value				
Laboratory Name	**Penn State Agronomy Guide**	Penn State Agronomy Guide				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**10.00**	10.00				
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**Complete NH4-N**					
Total Organic N (lbs/ton or 1000 gal)		**10.00**				
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**4.00**	4.00				
Total Potash (K_2O) (lbs/ton or 1000 gal)	**8.00**	8.00				
Percent Solids	**12.00**	12.00				
PSC Value (Enter analytical or book value)	**0.80**	0.80				

Manure Average for Crop Years. 2020	Small Quantity Manure Group					
	Average	1 year ago	2 years ago	3 years ago	4 years ago	5 years ago
Manure Report Date	**N/A**	N/A				
Laboratory Name	**N/A**	N/A				
Manure Type	**Other**	Other				
Manure Unit (lbs/ton or 1000 gal)	**lb/ton**	lb/ton				
Total Nitrogen (N) (lbs/ton or 1000 gal)	**Complete N**					
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	**Complete NH4-N**					
Total Organic N (lbs/ton or 1000 gal)						
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	**Complete P2O5**					
Total Potash (K_2O) (lbs/ton or 1000 gal)	**Complete K2O**					
Percent Solids	**Complete percent solids**					
PSC Value (Enter analytical or book value)	**Complete PSC Value**					

App. 4: Crop Yrs. 2020	P1			P1			P1			P1			P1		
CMU/Field ID															
Acres	4.3			4.3			4.3			4.3			4.3		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	61	70	5.6	61	70	5.6	61	70	5.6	61	70	5.6	61	70	5.6
P Index Part A Evaluation	Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	110	125	0	110	125	0	110	125	0	110	125	0	110
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	90	0	110	85	-8	90	85	-9	88	81	-16	70	77	-23	53
Manure Group	Ewe Fall - Uncollected			Ram Fall - Uncollected			Lamb Fall - Uncollected			Doe Goat Fall - Uncollected			Buck Goat Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	20 tons/A			19 tons/A			19 tons/A			18 tons/A			17 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	5 tons/A			4 tons/A			4 tons/A			3 tons/A			2 tons/A		
	Crop P Removal (lb/A) 37.5			Crop P Removal (lb/A) 29.5			Crop P Removal (lb/A) 28.5			Crop P Removal (lb/A) 21.5			Crop P Removal (lb/A) 14.5		
P Index Value	23			23			23			23			23		
Planned Manure Rate (ton or gal/A)	**1 tons/A**			**0.09 tons/A**			**0.91 tons/A**			**0.85 tons/A**			**0.07 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	5	8	20	0	1	2	4	7	18	4	7	17	0	1	1
Nutrient Balance after Manure	85	-8	90	85	-9	88	81	-16	70	77	-23	53	77	-24	52
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)															
Multiple Application	Multiple Initial			Multiple			Multiple			Multiple			Multiple		
Manure Utilized on CMU	4 tons			0 tons			4 tons			4 tons			0 tons		

App. 4: Crop Yrs. 2020	P1			P1			P1			P2			P2		
CMU/Field ID															
Acres	4.3			4.3			4.3			3.6			3.6		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	61	70	5.6	61	70	5.6	61	70	5.6	78	174	6.7	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	110	125	0	110	125	0	110	125	0	20	125	0	20
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		35	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	77	-24	52	74	-30	37	71	-37	24	90	0	20	85	-8	0
Manure Group	Kid Goat Fall - Uncollected			Dairy Cow Fall - Uncollected			Calf Fall - Uncollected			Ewe Fall - Uncollected			Ram Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	17 tons/A			37 tons/A			36 tons/A			20 tons/A			19 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	2 tons/A			2 tons/A			0 tons/A			5 tons/A			4 tons/A		
	Crop P Removal (lb/A) 13.5			Crop P Removal (lb/A) 7.5			Crop P Removal (lb/A) 0.5			Crop P Removal (lb/A) 37.5			Crop P Removal (lb/A) 29.5		
P Index Value	23			23			23			20			20		
Planned Manure Rate (ton or gal/A)	**0.73 tons/A**			**1.63 tons/A**			**1.36 tons/A**			**1 tons/A**			**0.09 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	3	6	15	3	7	13	3	4	5	5	8	20	0	1	2
Nutrient Balance after Manure	74	-30	37	71	-37	24	68	-41	19	85	-8	0	85	-9	-2
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	68	0	19	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)							**0**	**-41**	**0**						
Multiple Application	Multiple			Multiple			Multiple Final			Multiple Initial			Multiple		
Manure Utilized on CMU	3 tons			7 tons			6 tons			4 tons			0 tons		

App. 4: Crop Yrs. 2020	P2			P2			P2			P2			P2		
CMU/Field ID															
Acres	3.6			3.6			3.6			3.6			3.6		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	78	174	6.7	78	174	6.7	78	174	6.7	78	174	6.7	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)			Planting Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	20	125	0	20	125	0	20	125	0	20	125	0	20
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	85	-9	-2	81	-16	-20	77	-23	-37	77	-24	-38	74	-30	-53
Manure Group	Lamb Fall - Uncollected			Doe Goat Fall - Uncollected			Buck Goat Fall - Uncollected			Kid Goat Fall - Uncollected			Dairy Cow Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19 tons/A			18 tons/A			17 tons/A			17 tons/A			37 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	4 tons/A			3 tons/A			2 tons/A			2 tons/A			2 tons/A		
	Crop P Removal (lb/A) 28.5			Crop P Removal (lb/A) 21.5			Crop P Removal (lb/A) 14.5			Crop P Removal (lb/A) 13.5			Crop P Removal (lb/A) 7.5		
P Index Value	20			20			20			20			20		
Planned Manure Rate (ton or gal/A)	**0.91 tons/A**			**0.85 tons/A**			**0.07 tons/A**			**0.73 tons/A**			**1.63 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	4	7	18	4	7	17	0	1	1	3	6	15	3	7	13
Nutrient Balance after Manure	81	-16	-20	77	-23	-37	77	-24	-38	74	-30	-53	71	-37	-66
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)															
Multiple Application	Multiple			Multiple			Multiple			Multiple			Multiple		
Manure Utilized on CMU	3 tons			3 tons			0 tons			3 tons			6 tons		

App. 4: Crop Yrs. 2020	P2		
CMU/Field ID			
Acres	3.6		
Soil Test Report Date	June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change		
Part A Result	Part B		
Crop	Planting Pasture (without legume)		
Planned Yield	2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**
	125	0	20
User Soil Test Recommendation (lb/A)			
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0
P Index Application Method			
Double Crop CarryOver N (lb/A)	0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume	
Net Nutrients Required (lb/A)	71	-37	-66
Manure Group	Calf Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	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	April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	36 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	0 tons/A		
	Crop P Removal (lb/A) 0.5		
P Index Value	20		
Planned Manure Rate (ton or gal/A)	**1.36 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	3	4	5
Nutrient Balance after Manure	68	-41	-71
Supplemental Fertilizer (lb/A)	68	0	0
P Index Application Method			
Final Nutrient Balance (lb/A)	**0**	**-41**	**-71**
Multiple Application	Multiple Final		
Manure Utilized on CMU	5 tons		

App. 4: Crop Yrs. 2021	P1			P1			P1			P1			P1		
CMU/Field ID															
Acres	4.3			4.3			4.3			4.3			4.3		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	61	70	5.6	61	70	5.6	61	70	5.6	61	70	5.6	61	70	5.6
P Index Part A Evaluation	Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	110	125	0	110	125	0	110	125	0	110	125	0	110
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	90	0	110	85	-8	90	85	-9	88	81	-16	70	77	-23	53
Manure Group	Ewe Fall - Uncollected			Ram Fall - Uncollected			Lamb Fall - Uncollected			Doe Goat Fall - Uncollected			Buck Goat Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	20 tons/A			19 tons/A			19 tons/A			18 tons/A			17 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	5 tons/A			4 tons/A			4 tons/A			3 tons/A			2 tons/A		
	Crop P Removal (lb/A) 37.5			Crop P Removal (lb/A) 29.5			Crop P Removal (lb/A) 28.5			Crop P Removal (lb/A) 21.5			Crop P Removal (lb/A) 14.5		
P Index Value	23			23			23			23			23		
Planned Manure Rate (ton or gal/A)	**1 tons/A**			**0.09 tons/A**			**0.91 tons/A**			**0.85 tons/A**			**0.07 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	5	8	20	0	1	2	4	7	18	4	7	17	0	1	1
Nutrient Balance after Manure	85	-8	90	85	-9	88	81	-16	70	77	-23	53	77	-24	52
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)															
Multiple Application	Multiple Initial			Multiple			Multiple			Multiple			Multiple		
Manure Utilized on CMU	4 tons			0 tons			4 tons			4 tons			0 tons		

App. 4: Crop Yrs. 2021	P1			P1			P1			P2			P2		
CMU/Field ID															
Acres	4.3			4.3			4.3			3.6			3.6		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	61	70	5.6	61	70	5.6	61	70	5.6	78	174	6.7	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	110	125	0	110	125	0	110	125	0	20	125	0	20
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		35	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	77	-24	52	74	-30	37	71	-37	24	90	0	20	85	-8	0
Manure Group	Kid Goat Fall - Uncollected			Dairy Cow Fall - Uncollected			Calf Fall - Uncollected			Ewe Fall - Uncollected			Ram Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	17 tons/A			37 tons/A			36 tons/A			20 tons/A			19 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	2 tons/A			2 tons/A			0 tons/A			5 tons/A			4 tons/A		
	Crop P Removal (lb/A) 13.5			Crop P Removal (lb/A) 7.5			Crop P Removal (lb/A) 0.5			Crop P Removal (lb/A) 37.5			Crop P Removal (lb/A) 29.5		
P Index Value	23			23			23			20			20		
Planned Manure Rate (ton or gal/A)	**0.73 tons/A**			**1.63 tons/A**			**1.36 tons/A**			**1 tons/A**			**0.09 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	3	6	15	3	7	13	3	4	5	5	8	20	0	1	2
Nutrient Balance after Manure	74	-30	37	71	-37	24	68	-41	19	85	-8	0	85	-9	-2
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	68	0	19	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)							**0**	**-41**	**0**						
Multiple Application	Multiple			Multiple			Multiple Final			Multiple Initial			Multiple		
Manure Utilized on CMU	3 tons			7 tons			6 tons			4 tons			0 tons		

App. 4: Crop Yrs. 2021	P2			P2			P2			P2			P2		
CMU/Field ID															
Acres	3.6			3.6			3.6			3.6			3.6		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	78	174	6.7	78	174	6.7	78	174	6.7	78	174	6.7	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	20	125	0	20	125	0	20	125	0	20	125	0	20
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	85	-9	-2	81	-16	-20	77	-23	-37	77	-24	-38	74	-30	-53
Manure Group	Lamb Fall - Uncollected			Doe Goat Fall - Uncollected			Buck Goat Fall - Uncollected			Kid Goat Fall - Uncollected			Dairy Cow Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19 tons/A			18 tons/A			17 tons/A			17 tons/A			37 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	4 tons/A			3 tons/A			2 tons/A			2 tons/A			2 tons/A		
	Crop P Removal (lb/A) 28.5			Crop P Removal (lb/A) 21.5			Crop P Removal (lb/A) 14.5			Crop P Removal (lb/A) 13.5			Crop P Removal (lb/A) 7.5		
P Index Value	20			20			20			20			20		
Planned Manure Rate (ton or gal/A)	**0.91 tons/A**			**0.85 tons/A**			**0.07 tons/A**			**0.73 tons/A**			**1.63 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	4	7	18	4	7	17	0	1	1	3	6	15	3	7	13
Nutrient Balance after Manure	81	-16	-20	77	-23	-37	77	-24	-38	74	-30	-53	71	-37	-66
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)															
Multiple Application	Multiple			Multiple			Multiple			Multiple			Multiple		
Manure Utilized on CMU	3 tons			3 tons			0 tons			3 tons			6 tons		

App. 4: Crop Yrs. 2021	P2		
CMU/Field ID			
Acres	3.6		
Soil Test Report Date	June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change		
Part A Result	Part B		
Crop	Established Pasture (without legume)		
Planned Yield	2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**
	125	0	20
User Soil Test Recommendation (lb/A)			
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0
P Index Application Method			
Double Crop CarryOver N (lb/A)	0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume	
Net Nutrients Required (lb/A)	71	-37	-66
Manure Group	Calf Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	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	April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	36 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	0 tons/A		
	Crop P Removal (lb/A) 0.5		
P Index Value	20		
Planned Manure Rate (ton or gal/A)	**1.36 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	3	4	5
Nutrient Balance after Manure	68	-41	-71
Supplemental Fertilizer (lb/A)	68	0	0
P Index Application Method			
Final Nutrient Balance (lb/A)	**0**	**-41**	**-71**
Multiple Application	Multiple Final		
Manure Utilized on CMU	5 tons		

App. 4: Crop Yrs. 2022	P1			P1			P1			P1			P1		
CMU/Field ID															
Acres	4.3			4.3			4.3			4.3			4.3		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	61	70	5.6	61	70	5.6	61	70	5.6	61	70	5.6	61	70	5.6
P Index Part A Evaluation	Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	110	125	0	110	125	0	110	125	0	110	125	0	110
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	90	0	110	85	-8	90	85	-9	88	81	-16	70	77	-23	53
Manure Group	Ewe Fall - Uncollected			Ram Fall - Uncollected			Lamb Fall - Uncollected			Doe Goat Fall - Uncollected			Buck Goat Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	20 tons/A			19 tons/A			19 tons/A			18 tons/A			17 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	5 tons/A			4 tons/A			4 tons/A			3 tons/A			2 tons/A		
	Crop P Removal (lb/A) 37.5			Crop P Removal (lb/A) 29.5			Crop P Removal (lb/A) 28.5			Crop P Removal (lb/A) 21.5			Crop P Removal (lb/A) 14.5		
P Index Value	23			23			23			23			23		
Planned Manure Rate (ton or gal/A)	**1 tons/A**			**0.09 tons/A**			**0.91 tons/A**			**0.85 tons/A**			**0.07 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	5	8	20	0	1	2	4	7	18	4	7	17	0	1	1
Nutrient Balance after Manure	85	-8	90	85	-9	88	81	-16	70	77	-23	53	77	-24	52
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)															
Multiple Application	Multiple Initial			Multiple			Multiple			Multiple			Multiple		
Manure Utilized on CMU	4 tons			0 tons			4 tons			4 tons			0 tons		

App. 4: Crop Yrs. 2022	P1			P1			P1			P2			P2		
CMU/Field ID															
Acres	4.3			4.3			4.3			3.6			3.6		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	61	70	5.6	61	70	5.6	61	70	5.6	78	174	6.7	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change <150ft			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	110	125	0	110	125	0	110	125	0	20	125	0	20
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		35	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	77	-24	52	74	-30	37	71	-37	24	90	0	20	85	-8	0
Manure Group	Kid Goat Fall - Uncollected			Dairy Cow Fall - Uncollected			Calf Fall - Uncollected			Ewe Fall - Uncollected			Ram Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	17 tons/A			37 tons/A			36 tons/A			20 tons/A			19 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	2 tons/A			2 tons/A			0 tons/A			5 tons/A			4 tons/A		
	Crop P Removal (lb/A) 13.5			Crop P Removal (lb/A) 7.5			Crop P Removal (lb/A) 0.5			Crop P Removal (lb/A) 37.5			Crop P Removal (lb/A) 29.5		
P Index Value	23			23			23			20			20		
Planned Manure Rate (ton or gal/A)	**0.73 tons/A**			**1.63 tons/A**			**1.36 tons/A**			**1 tons/A**			**0.09 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	3	6	15	3	7	13	3	4	5	5	8	20	0	1	2
Nutrient Balance after Manure	74	-30	37	71	-37	24	68	-41	19	85	-8	0	85	-9	-2
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	68	0	19	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)							**0**	**-41**	**0**						
Multiple Application	Multiple			Multiple			Multiple Final			Multiple Initial			Multiple		
Manure Utilized on CMU	3 tons			7 tons			6 tons			4 tons			0 tons		

App. 4: Crop Yrs. 2022	P2			P2			P2			P2			P2		
CMU/Field ID															
Acres	3.6			3.6			3.6			3.6			3.6		
Soil Test Report Date	June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019			June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.			Spectrum Analytic, Inc.		
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)	78	174	6.7	78	174	6.7	78	174	6.7	78	174	6.7	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B		
Crop	Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)			Established Pasture (without legume)		
Planned Yield	2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A			2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	125	0	20	125	0	20	125	0	20	125	0	20	125	0	20
User Soil Test Recommendation (lb/A)															
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															
Double Crop CarryOver N (lb/A)	0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop		0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	85	-9	-2	81	-16	-20	77	-23	-37	77	-24	-38	74	-30	-53
Manure Group	Lamb Fall - Uncollected			Doe Goat Fall - Uncollected			Buck Goat Fall - Uncollected			Kid Goat Fall - Uncollected			Dairy Cow Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			Grazing anytime with nutrient uptake during growing season			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**
	0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19 tons/A			18 tons/A			17 tons/A			17 tons/A			37 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	4 tons/A			3 tons/A			2 tons/A			2 tons/A			2 tons/A		
	Crop P Removal (lb/A) 28.5			Crop P Removal (lb/A) 21.5			Crop P Removal (lb/A) 14.5			Crop P Removal (lb/A) 13.5			Crop P Removal (lb/A) 7.5		
P Index Value	20			20			20			20			20		
Planned Manure Rate (ton or gal/A)	**0.91 tons/A**			**0.85 tons/A**			**0.07 tons/A**			**0.73 tons/A**			**1.63 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	4	7	18	4	7	17	0	1	1	3	6	15	3	7	13
Nutrient Balance after Manure	81	-16	-20	77	-23	-37	77	-24	-38	74	-30	-53	71	-37	-66
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P Index Application Method															
Final Nutrient Balance (lb/A)															
Multiple Application	Multiple			Multiple			Multiple			Multiple			Multiple		
Manure Utilized on CMU	3 tons			3 tons			0 tons			3 tons			6 tons		

App. 4: Crop Yrs. 2022	P2		
CMU/Field ID			
Acres	3.6		
Soil Test Report Date	June 20, 2019		
Laboratory Name	Spectrum Analytic, Inc.		
Soil Test Levels (Mehlich-3 P & K)	ppm P	ppm K	pH
(Show conversions to ppm in Appendix 10)	78	174	6.7
P Index Part A Evaluation	Farm Mgmt Change		
Part A Result	Part B		
Crop	Established Pasture (without legume)		
Planned Yield	2.5 ton/A		
PSU Soil Test Recommendation (lb/A)	**N**	**P2O5**	**K2O**
	125	0	20
User Soil Test Recommendation (lb/A)			
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0
P Index Application Method			
Double Crop CarryOver N (lb/A)	0		
Manure History Description Residual Manure N (lb/A)	0	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume	
Net Nutrients Required (lb/A)	71	-37	-66
Manure Group	Calf Fall - Uncollected		
Application Season: Management (Incorporation, cover crops, etc.)	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	April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	36 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	0 tons/A		
	Crop P Removal (lb/A) 0.5		
P Index Value	20		
Planned Manure Rate (ton or gal/A)	**1.36 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	3	4	5
Nutrient Balance after Manure	68	-41	-71
Supplemental Fertilizer (lb/A)	68	0	0
P Index Application Method			
Final Nutrient Balance (lb/A)	**0**	**-41**	**-71**
Multiple Application	Multiple Final		
Manure Utilized on CMU	5 tons		

Appendix 5 - P Index

[redacted]

Go to NMP Index

Crop Yrs. 2020

Pennsylvania P Index Version 2

Go to App 4 Input

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	P1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	No
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		Yes
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		61
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		Yes
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		No
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		No

PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)					61
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)						12
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)					Fertilizer P (lb P2O5/acre)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	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	-, -, -, -, -, -
SUPPLEMENTAL P FERTILIZER					Fertilizer P (lb P2O5/acre)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	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	-, -, -, -, -, -
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method						0
MANURE P RATE					Manure P (lb P2O5/acre)	8, 1, 7, 7, 1, 6
MANURE APPLICATION METHOD[3]	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	0.6, 0.6, 0.6, 0.6, 0.6, 0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.8, 0.8, 0.8, 0.8, 0.8, 0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						18
Source Factor Sum						30
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1
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	2
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] 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[2] < 100 ft.	6
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						9
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						0.38
P Index Value = 2 x Source x Transport						**23**

Low: 59 or less Nitrogen based management	Medium: 60 to 79 Nitrogen based management	High: 80 to 99 Phosphorus limited to crop removal	Very High: 100 or greater No Phosphorus applied

1 OR rapidly permeable soil near a stream

2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.

3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2020

PART A: SCREENING TOOL CMU/Field ID	P2
Is the CMU in a Special Protection watershed?	**No**
A significant farm management change as defined by Act 38?	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**78**
Contributing Distance from CMU to receiving water <150 ft.?	**No**
Is winter manure application planned for this field ?	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	78
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	16
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-, -, -, -, -, -
SUPPLEMENTAL P FERTILIZER	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-, -, -, -, -, -
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0
MANURE P RATE	8, 1, 7, 7, 1, 6
MANURE APPLICATION METHOD[3]	0.6, 0.6, 0.6, 0.6, 0.6, 0.6
P SOURCE COEFFICIENT[3]	0.8, 0.8, 0.8, 0.8, 0.8, 0.8
Manure Rating = Manure Rate x Manure Application Metho	18
Source Factor Sum	34
PART B: TRANSPORT FACTORS EROSION	1.2
RUNOFF POTENTIAL	2
SUBSURFACE DRAINAGE	0
CONTRIBUTING DISTANCE	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7
MODIFIED CONNECTIVITY	1.0
Transport Sum x Modified Connectivity / 24	0.30
P Index Value = 2 x Source x Transport	**20**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Appendix 5 - P Index

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Go to NMP Index

Crop Yrs. 2021

Pennsylvania P Index Version 2

Go to App 4 Input

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	P1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	No
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		Yes
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		61
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		Yes
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		No
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		No

PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)					61
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)						12
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)					Fertilizer P (lb P2O5/acre)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	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	-, -, -, -, -, -
SUPPLEMENTAL P FERTILIZER					Fertilizer P (lb P2O5/acre)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	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	-, -, -, -, -, -
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method						0
MANURE P RATE					Manure P (lb P2O5/acre)	8, 1, 7, 7, 1, 6
MANURE APPLICATION METHOD[3]	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	0.6, 0.6, 0.6, 0.6, 0.6, 0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.8, 0.8, 0.8, 0.8, 0.8, 0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						18
Source Factor Sum						30
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1
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	2
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] 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[2] < 100 ft.	6
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						9
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						0.38
P Index Value = 2 x Source x Transport						**23**

Low: 59 or less Nitrogen based management	Medium: 60 to 79 Nitrogen based management	High: 80 to 99 Phosphorus limited to crop removal	Very High: 100 or greater No Phosphorus applied

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2021

PART A: SCREENING TOOL CMU/Field ID	P2
Is the CMU in a Special Protection watershed?	**No**
A significant farm management change as defined by Act 38?	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**78**
Contributing Distance from CMU to receiving water <150 ft.?	**No**
Is winter manure application planned for this field ?	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	78
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	16
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-, -, -, -, -, -
SUPPLEMENTAL P FERTILIZER	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-, -, -, -, -, -
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0
MANURE P RATE	8, 1, 7, 7, 1, 6
MANURE APPLICATION METHOD[3]	0.6, 0.6, 0.6, 0.6, 0.6, 0.6
P SOURCE COEFFICIENT[3]	0.8, 0.8, 0.8, 0.8, 0.8, 0.8
Manure Rating = Manure Rate x Manure Application Metho	18
Source Factor Sum	34
PART B: TRANSPORT FACTORS EROSION	1.2
RUNOFF POTENTIAL	2
SUBSURFACE DRAINAGE	0
CONTRIBUTING DISTANCE	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7
MODIFIED CONNECTIVITY	1.0
Transport Sum x Modified Connectivity / 24	0.30
P Index Value = 2 x Source x Transport	**20**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Appendix 5 - P Index

[redacted]

Go to NMP Index

Crop Yrs. 2022

Pennsylvania P Index Version 2

Go to App 4 Input

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	P1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	No
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		Yes
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		61
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		Yes
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		No
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		No

PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)					61
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)						12
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)					Fertilizer P (lb P2O5/acre)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	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	-, -, -, -, -, -
SUPPLEMENTAL P FERTILIZER					Fertilizer P (lb P2O5/acre)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	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	-, -, -, -, -, -
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method						0
MANURE P RATE					Manure P (lb P2O5/acre)	8, 1, 7, 7, 1, 6
MANURE APPLICATION METHOD[3]	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	0.6, 0.6, 0.6, 0.6, 0.6, 0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					0.8, 0.8, 0.8, 0.8, 0.8, 0.8
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						18
Source Factor Sum						30
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1
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	2
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] 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[2] < 100 ft.	6
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						9
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						0.38
P Index Value = 2 x Source x Transport						**23**

Low: 59 or less Nitrogen based management	Medium: 60 to 79 Nitrogen based management	High: 80 to 99 Phosphorus limited to crop removal	Very High: 100 or greater No Phosphorus applied

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Appendix 5 - P Index

Crop Yrs. 2022

PART A: SCREENING TOOL CMU/Field ID	P2
Is the CMU in a Special Protection watershed?	**No**
A significant farm management change as defined by Act 38?	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**78**
Contributing Distance from CMU to receiving water <150 ft.?	**No**
Is winter manure application planned for this field ?	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	78
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	16
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-, -, -, -, -, -
SUPPLEMENTAL P FERTILIZER	0, 0, 0, 0, 0, 0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-, -, -, -, -, -
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0
MANURE P RATE	8, 1, 7, 7, 1, 6
MANURE APPLICATION METHOD[3]	0.6, 0.6, 0.6, 0.6, 0.6, 0.6
P SOURCE COEFFICIENT[3]	0.8, 0.8, 0.8, 0.8, 0.8, 0.8
Manure Rating = Manure Rate x Manure Application Metho	18
Source Factor Sum	34
PART B: TRANSPORT FACTORS EROSION	1.2
RUNOFF POTENTIAL	2
SUBSURFACE DRAINAGE	0
CONTRIBUTING DISTANCE	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7
MODIFIED CONNECTIVITY	1.0
Transport Sum x Modified Connectivity / 24	0.30
P Index Value = 2 x Source x Transport	**20**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Appendix 6

Manure Management

Date of Site Evaluation: June 13, 2019

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: location of proposed nursery swine barn, proposed location of cattle, sheep and goat barn, proposed pastures, proposed farmstead area

Identification of Inadequate Manure Management Practices and Conditions

List of each specific inadequate manure management practice or condition identified.

The operation lacks long term manure storage for liquid swine manure. A structure will be needed to properly dispose of mortalities. Stormwater controls will be needed at the cattle, sheep and goat barn. The proposed pasture areas will need to be established for livestock access.

BMPs to Address Manure Management Problem Areas

List of specific BMPs (including PA Technical Guide standard name and number) and management changes that will be implemented to address each of the inadequate practices listed above.

A concrete under-barn manure storage structure (313) will be built under the proposed nursery swine barn to collect and store liquid swine manure until it is exported off of the operation. A mortality incinerator (316) will be used to dispose of mortalities. It is anticipated that this structure will be built east of the nursery swine barn. A reinforced gravel access road (560) will be installed from the existing farmstead driveway to the proposed nursery swine barn to provide stable access to the structure. Roof gutters, downspouts (558) and underground outlet pipe (620) will be installed at the cattle, sheep and goat barn to collect and convey stormwater away from the structure. The proposed pasture areas, fields P1 and P2, will be fenced (382) and seeded to establish vegetation (512) for livestock access. Waterlines (516) and water troughs (614) will be implemented in the pastures to provide an off stream watering source for livestock. The pasture areas will be managed to maintain vegetation.

Appendix 7

Stormwater Control

Date of Site Evaluation: June 13, 2019

Statement Documenting Areas Evaluated During Site Evaluation

List and clearly identify each of the specific areas evaluated.

The following areas were evaluated: location of proposed nursery swine barn, proposed pasture fields P1 and P2

Identification of Critical Runoff Problem Areas

List of each specific critical runoff problem area identified.

Practices will be needed to control stormwater from impacting the proposed nursery swine under-barn manure storage.

BMPs to Address Critical Runoff Problem Areas

List of BMPs (including PA Technical Guide standard name and number) and specific management changes that will be implemented to address each of the critical runoff problem areas listed above.

A diversion (362) will be constructed upslope of the proposed nursery swine barn to capture surface water and convey it away from the structure. Vegetated swales (412), surface water inlets (587) and underground outlet pipes (620) will be installed to collect stormwater and convey it to a proposed stormwater basin (638) southwest of the nursery swine barn. Roof runoff water from the nursery swine barn will also be collected by the swales. Rock lined outlets (468) will be installed at the underground outlet pipe locations. Critical area planting (342) will be used to seed areas disturbed by construction activities.

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 Agricultural Land Application

Developed consistent with the PA Nutrient and Odor Management Act Program

1) This agreement is entered into on June 21, 2019, by Jay Stoltzfus (the "exporter") who will supply manure, and Greenbrier Farms, LLC – Ty Rothermel (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): Northumberland County, Washington Township
865 Schwaben Creek Road, Dornsife, PA 17823

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

Tons of Bedded Pack manure, per season:

Spring up to 255 tons or Summer 0 tons or Fall up to 255 tons or Winter 0 tons

Gallons of Nursery Swine manure, per season:

Spring up to 3,031,200 gal or Summer up to 2,800,800 gal or Fall up to 3,031,200 gal or Winter 0 gal

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

Tons of Bedded Pack manure: up to a total of 255 tons per year

Gallons of Nursery Swine manure: up to a total of 3,031,200 gallons per year

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 (maps indicating the location of importing fields must be attached to the supporting Nutrient Balance Sheets if manure is to be land applied at the importing site):
   a) **Phone number**: 570-847-7323
   b) **County(s)**: Northumberland
   c) **Address:** 441 Hunters Junction Road, Dornsife, PA 17823
   d) **Township(s)**: Washington
   d) **Owner(s) of the property receiving manure**: Jay Stoltzfus, Ty & April Rothermel, Marlin & Joan Rothermel, Dale Brosius, Christian Esh
   e) **Total cropland acres managed by the importer**: 1,000 acres
   f) **Number and type of animals raised by the importer**: 2,000 finishing swine
   g) **Number of acres available for this imported manure**: 336.8 acres
   h) **Other manures (type, amount) imported to the site AND/OR utilized on the site**: (Note- this would include manure that is generated on the site by the importers animals, etc.) 150 tons of imported layer manure (finishing swine manure is not applied to any fields included in the balance sheets)
      - **If other manure is generated, imported and/or utilized, is it applied to the same acres as indicated in item "g" above (relating to "acres available")**: Yes – layer manure

- **If other manure is generated, imported and/or utilized, is it applied during the same season as the imported manure:** No

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) When the exporter (or someone working for, or contracted by the exporter) applies the exported manure, the exporter shall maintain the following exported manure records:
      - Application dates, areas, rates and methods

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

   d) A manure export informational packet (as supplied by the conservation district or State Conservation Commission) shall be provided to the importer by the time of the manure export. This information only needs to be provided once to the importer.
      The manure export informational packet must include the following:
      i. Exported Manure Informational Packet Guidance Sheet
      ii. Nutrient Management Planning an Overview (Agronomy Facts 60)
      iii. Manure Management for Environmental Protection
      iv. Land Application of Manure- A supplement to the Manure Management Manual Plan Guidance
      v. Manure Export Sheet
      vi. Manure Transfer Summary Sheets
      vii. Manure Field Stacking Requirements Fact Sheet

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 > 120 days unless covered or otherwise protected .

9) Manure received by the importer shall be applied to the land at the rate(s) and method(s) provided in the attached "Nutrient Balance Sheet(s)", or in accordance with a Nutrient Management Plan approved for the importing operation. If the importer wishes to change the lands used for imported manure, the nutrient balance sheet must be revised to reflect the changes and be submitted to the conservation district or State Conservation Commission (and DEP if the exporter is a CAFO) prior to implementing the changes.

10) The importer shall comply with applicable manure application setbacks for the imported manure, as outlined in the Nutrient Balance Sheet map(s).

11) For any lands not owned by the importer where the manure will be applied (i.e., rented lands), the importer hereby confirms that the importer has the authority to apply manure on those lands.

12) 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

Jay Strawbridge (signature)

Jay Strawbridge (name)

6-21-19 (date)

Importer Signature, Name and Date

Ty Rothermel (signature)

Ty Rothermel DBA (name)

6/21/19 (date)

Greenbrier Farms LLC

Nutrient Balance Sheet

Prepared for

Greenbrier Farms, LLC - Ty Rothermel
441 Hunters Junction Road
Dornsife, PA 17823
570-847-7323

Prepared by

Todd C. Rush
#988-NMC
120 Lake Street, Ephrata PA 17522
570-764-7003

TeamAg Incorporated

Nutrient Management Specialist or Broker 2 Signature

Date of Development June 21, 2019

Exporter Information

Jay Stoltzfus
865 Schwaben Creek Road, Dornsife, PA 17823
570-250-7992

County of Origin Northumberland County

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to applied including required manure application setbacks.
- Completed P-Index spreadsheet and Winter Matrix for each crop management unit (if using Manure Plan Basis: Option 3)

Nutrient Balance Sheet Summary

Importing Farm: Greenbrier Farms, LLC

Whole Farm Note: None

Crop Group	Fields	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
									N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Corn Grain Spring	6 through 37	311.2	Corn for Grain (No-till)	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Corn Grain Fall	6 through 37	311.2	Corn for Grain (No-till)	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Soybeans Spring	6 through 37	311.2	Soybeans with Manure	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Soybeans Fall	6 through 37	311.2	Soybeans with Manure	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Wheat Fall	6 through 37	311.2	Wheat	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A	0	0	0	38	0	0	0	28	54
Hay Spring	6 through 37	311.2	Established Timothy	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	130	0	0	0	3	124
Hay Summer	6 through 37	311.2	Established Timothy	Nursery Swine Manure	Summer: 1.2-15	Summer 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	130	0	0	0	3	124
Hay Fall	6 through 37	311.2	Established Timothy	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days	9000	gal/A	0	0	0	130	0	0	0	3	124
Corn Grain Swine Spring Field 1	1	6.9	Corn for Grain (No-till)	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66

[1] See Nutrient Management Plan Summary Notes
[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Crop Group	Fields	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
									N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Corn Grain Swine Fall Field 1	1	6.9	Corn for Grain (No-till)	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Soybeans Swine Spring Field 1	1	6.9	Soybeans with Manure	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Soybeans Swine Fall Field 1	1	6.9	Soybeans with Manure	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Corn Grain Swine Spring Field 2	2	2.8	Corn for Grain (No-till)	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Corn Grain Swine Fall Field 2	2	2.8	Corn for Grain (No-till)	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Soybeans Swine Spring Field 2	2	2.8	Soybeans with Manure	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Soybeans Swine Fall Field 2	2	2.8	Soybeans with Manure	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Corn Grain Swine Spring Field 3	3	7.3	Corn for Grain (No-till)	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Corn Grain Swine Fall Field 3	3	7.3	Corn for Grain (No-till)	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Soybeans Swine Spring Field 3	3	7.3	Soybeans with Manure	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Soybeans Swine Fall Field 3	3	7.3	Soybeans with Manure	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Corn Grain Swine Spring Field 4	4	5.5	Corn for Grain (No-till)	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Corn Grain Swine Fall Field 4	4	5.5	Corn for Grain (No-till)	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66

[1] See Nutrient Management Plan Summary Notes
[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Crop Group	Fields	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
									N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Soybeans Swine Spring Field 4	4	5.5	Soybeans with Manure	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Soybeans Swine Fall Field 4	4	5.5	Soybeans with Manure	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Corn Grain Swine Spring Field 5	5	3.1	Corn for Grain (No-till)	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Corn Grain Swine Fall Field 5	5	3.1	Corn for Grain (No-till)	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	9000	gal/A	0	0	0	10	0	0	0	8	-66
Soybeans Swine Spring Field 5	5	3.1	Soybeans with Manure	Nursery Swine Manure	Spring: 1.2-15	Spring 1.2-15: Incorporated after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Soybeans Swine Fall Field 5	5	3.1	Soybeans with Manure	Nursery Swine Manure	Early Fall: 1.2-15	Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days	8750	gal/A	0	0	0	0	0	0	0	0	-25
Corn Grain Bed Pack Spring Field 1	1	6.9	Corn for Grain (No-till)	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Corn Grain Bed Pack Fall Field 1	1	6.9	Corn for Grain (No-till)	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Soybeans Bed Pack Spring Field 1	1	6.9	Soybeans with Manure	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Soybeans Bed Pack Fall Field 1	1	6.9	Soybeans with Manure	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Corn Grain Bed Pack Spring Field 2	2	2.8	Corn for Grain (No-till)	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Corn Grain Bed Pack Fall Field 2	2	2.8	Corn for Grain (No-till)	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Soybeans Bed Pack Spring Field 2	2	2.8	Soybeans with Manure	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82

[1] See Nutrient Management Plan Summary Notes
[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Crop Group	Fields	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
									N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Soybeans Bed Pack Fall Field 2	2	2.8	Soybeans with Manure	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Corn Grain Bed Pack Spring Field 3	3	7.3	Corn for Grain (No-till)	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Corn Grain Bed Pack Fall Field 3	3	7.3	Corn for Grain (No-till)	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Soybeans Bed Pack Spring Field 3	3	7.3	Soybeans with Manure	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Soybeans Bed Pack Fall Field 3	3	7.3	Soybeans with Manure	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Corn Grain Bed Pack Spring Field 4	4	5.5	Corn for Grain (No-till)	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Corn Grain Bed Pack Fall Field 4	4	5.5	Corn for Grain (No-till)	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Soybeans Bed Pack Spring Field 4	4	5.5	Soybeans with Manure	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Soybeans Bed Pack Fall Field 4	4	5.5	Soybeans with Manure	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82
Corn Grain Bed Pack Spring Field 5	5	3.1	Corn for Grain (No-till)	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Corn Grain Bed Pack Fall Field 5	5	3.1	Corn for Grain (No-till)	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	10	tons/A	0	0	0	49	0	0	0	0	-140
Soybeans Bed Pack Spring Field 5	5	3.1	Soybeans with Manure	Bedded Pack Manure	Spring	Spring: Spring or summer utilization-Incorporation after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82

[1] See Nutrient Management Plan Summary Notes
[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

Crop Group	Fields	Acres	Crop	Manure Group	Application Season	Application Management	Planned Manure Rate[1]		Starter/Other Fertilizer (lb/A)			Supplemental Fertilizer (lb/A)			Nutrient Balance (lb/A)[2]		
									N	P_2O_5	K_2O	N	P_2O_5	K_2O	N	P_2O_5	K_2O
Soybeans Bed Pack Fall Field 5	5	3.1	Soybeans with Manure	Bedded Pack Manure	Early Fall	Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none	9	tons/A	0	0	0	0	0	0	0	-2	-82

[1] See Nutrient Management Plan Summary Notes
[2] Positive numbers = nutrient deficit; Negative numbers = nutrient excess

NBS Summary Notes

Importing Farm: Greenbrier Farms, LLC

CMU/Field ID	Crop	Manure Group	Planned Rate Notes	Nutrient Balance Notes	Notes
Corn Grain Spring	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Corn Grain Fall	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Soybeans Spring	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Soybeans Fall	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Wheat Fall	Wheat	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Hay Spring	Established Timothy	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Hay Summer	Established Timothy	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Hay Fall	Established Timothy	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Corn Grain Swine Spring Field 1	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Corn Grain Swine Fall Field 1	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.

CMU/Field ID	Crop	Manure Group	Planned Rate Notes	Nutrient Balance Notes	Notes
Soybeans Swine Spring Field 1	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Soybeans Swine Fall Field 1	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Corn Grain Swine Spring Field 2	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Corn Grain Swine Fall Field 2	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Soybeans Swine Spring Field 2	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Soybeans Swine Fall Field 2	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Corn Grain Swine Spring Field 3	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Corn Grain Swine Fall Field 3	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Soybeans Swine Spring Field 3	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Soybeans Swine Fall Field 3	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Corn Grain Swine Spring Field 4	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.

CMU/Field ID	Crop	Manure Group	Planned Rate Notes	Nutrient Balance Notes	Notes
Corn Grain Swine Fall Field 4	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Soybeans Swine Spring Field 4	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Soybeans Swine Fall Field 4	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Corn Grain Swine Spring Field 5	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Corn Grain Swine Fall Field 5	Corn for Grain (No-till)	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Soybeans Swine Spring Field 5	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year.
Soybeans Swine Fall Field 5	Soybeans with Manure	Nursery Swine Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported swine manure within 100 feet of water wells or 150 feet of surface water. Imported swine manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported swine manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall swine manure application.
Corn Grain Bed Pack Spring Field 1	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Corn Grain Bed Pack Fall Field 1	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Soybeans Bed Pack Spring Field 1	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Soybeans Bed Pack Fall Field 1	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.

CMU/Field ID	Crop	Manure Group	Planned Rate Notes	Nutrient Balance Notes	Notes
Corn Grain Bed Pack Spring Field 2	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Corn Grain Bed Pack Fall Field 2	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Soybeans Bed Pack Spring Field 2	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Soybeans Bed Pack Fall Field 2	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Corn Grain Bed Pack Spring Field 3	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Corn Grain Bed Pack Fall Field 3	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Soybeans Bed Pack Spring Field 3	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Soybeans Bed Pack Fall Field 3	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Corn Grain Bed Pack Spring Field 4	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Corn Grain Bed Pack Fall Field 4	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Soybeans Bed Pack Spring Field 4	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.

CMU/Field ID	Crop	Manure Group	Planned Rate Notes	Nutrient Balance Notes	Notes
Soybeans Bed Pack Fall Field 4	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Corn Grain Bed Pack Spring Field 5	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Corn Grain Bed Pack Fall Field 5	Corn for Grain (No-till)	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.
Soybeans Bed Pack Spring Field 5	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year.
Soybeans Bed Pack Fall Field 5	Soybeans with Manure	Bedded Pack Manure	Planned rate can be applied annually	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs	Do not apply imported bed pack manure within 100 feet of water wells or 150 feet of surface water. Imported bed pack manure may only be applied at the planned rate per acre once per crop year. Do not apply other manures to the same fields as imported bed pack manure in the same crop year. Fields must have 25% cover from a growing crop, crop residue or cover crop at the time of fall bed pack manure application.

Nutrient Balance Sheets	Corn Grain Spring			Corn Grain Fall		
Crop Group Indentification						
Fields	6 through 37			6 through 37		
Acres	311.2			311.2		
NBS Option	Option 1 P Removal			Option 1 P Removal		
P Banking	No			No		
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P			ppm P		
P Index Part A Evaluation						
Part A Result	P Index not Required			P Index not Required		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	**P2O5**	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method						
N Balanced Manure Rate (ton; gal/A)	10,000 gal/A			10,000 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	10,000 gal/A			10,000 gal/A		
	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value						
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	86	72	126	86	72	126
Nutrient Balance after Manure	10	8	-66	10	8	-66
Supplemental Fertilizer (lb/A)	10	0	0	10	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**8**	**-66**	**0**	**8**	**-66**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Soybeans Spring			Soybeans Fall		
Crop Group Indentification						
Fields	6 through 37			6 through 37		
Acres	311.2			311.2		
NBS Option	Option 1 P Removal			Option 1 P Removal		
P Banking	No			No		
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P			ppm P		
P Index Part A Evaluation						
Part A Result	P Index not Required			P Index not Required		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method						
N Balanced Manure Rate (ton; gal/A)	19,895 gal/A			19,895 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	8,750 gal/A			8,750 gal/A		
	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value						
Planned Manure Rate (ton or gal/A)	**8,750 gal/A**			**8,750 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	83	70	123	83	70	123
Nutrient Balance after Manure	0	0	-25	0	0	-25
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-25**	**0**	**0**	**-25**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Wheat Fall			Hay Spring		
Crop Group Indentification						
Fields	6 through 37			6 through 37		
Acres	311.2			311.2		
NBS Option	Option 1 P Removal			Option 1 P Removal		
P Banking	No			No		
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P			ppm P		
P Index Part A Evaluation						
Part A Result	P Index not Required			P Index not Required		
Crop	Wheat			Established Timothy		
Planned Yield	100 bu/A			5 ton/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	100	100	180	250	75	250
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	11	Continuously - Winter Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	89	100	180	215	75	250
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Early Fall 1.2-15: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-15: Incorporated after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.30		0.30	0.50
P Index Application Method						
N Balanced Manure Rate (ton; gal/A)	15,614 gal/A			22,632 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	12,500 gal/A			9,375 gal/A		
	Crop P Removal (lb/A) 100.0			Crop P Removal (lb/A) 75.0		
P Index Value						
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	51	72	126	86	72	126
Nutrient Balance after Manure	38	28	54	130	3	124
Supplemental Fertilizer (lb/A)	38	0	0	130	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**28**	**54**	**0**	**3**	**124**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Hay Summer			Hay Fall			Corn Grain Swine Spring Field 1			Corn Grain Swine Fall Field 1			Soybeans Swine Spring Field 1			Soybeans Swine Fall Field 1		
Crop Group Indentification																		
Fields	6 through 37			6 through 37			1			1			1			1		
Acres	311.2			311.2			6.9			6.9			6.9			6.9		
NBS Option	Option 1 P Removal			Option 1 P Removal			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking	No			No														
Mehlich 3 Soil Test P	ppm P			ppm P			ppm P			ppm P			ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI							106			106			106			106		
P Index Part A Evaluation							Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	P Index not Required			P Index not Required			Part B			Part B			Part B			Part B		
Crop	Established Timothy			Established Timothy			Corn for Grain (No-till)			Corn for Grain (No-till)			Soybeans with Manure			Soybeans with Manure		
Planned Yield	5 ton/A			5 ton/A			200 bu/A			200 bu/A			70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	250	75	250	250	75	250	200	80	60	200	80	60	224	70	98	224	70	98
Soil Test Recommendation (lb/A)																		
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	0	0	0
P Index Application Method																		
Double Crop CarryOver N (lb/A)	0			0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	215	75	250	215	75	250	95	80	60	95	80	60	189	70	98	189	70	98
Manure Group	Nursery Swine Manure			Nursery Swine Manure			Nursery Swine Manure			Nursery Swine Manure			Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00	19.00	8.00	14.00	19.00	8.00	14.00	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Summer 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: fall and spring use by grass hay, small grains and small grain silage. Incorp after 7 days			Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days			Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp 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**	**NH4-N**	**Org. N**
(Total N or NH4-N & Organic N)		0.30	0.50		0.30	0.50		0.30	0.50		0.20	0.50		0.30	0.50		0.20	0.50
P Index Application Method							April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	22,632 gal/A			22,632 gal/A			10,000 gal/A			10,000 gal/A			19,895 gal/A			19,895 gal/A		
P Removal Balance Manure Rate	9,375 gal/A			9,375 gal/A			10,000 gal/A			10,000 gal/A			8,750 gal/A			8,750 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 75.0			Crop P Removal (lb/A) 75.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value							38			38			37			37		
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**			**9,000 gal/A**			**9,000 gal/A**			**8,750 gal/A**			**8,750 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	86	72	126	86	72	126	86	72	126	86	72	126	83	70	123	83	70	123
Nutrient Balance after Manure	130	3	124	130	3	124	10	8	-66	10	8	-66	0	0	-25	0	0	-25
Supplemental Fertilizer (lb/A)	130	0	0	130	0	0	10	0	0	10	0	0	0	0	0	0	0	0
P Index Application Method																		
Final Nutrient Balance (lb/A)	**0**	**3**	**124**	**0**	**3**	**124**	**0**	**8**	**-66**	**0**	**8**	**-66**	**0**	**0**	**-25**	**0**	**0**	**-25**
Multiple Application																		
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Corn Grain Swine Spring Field 2			Corn Grain Swine Fall Field 2		
Crop Group Indentification						
Fields	2			2		
Acres	2.8			2.8		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P	ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	64			64		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	10,000 gal/A			10,000 gal/A		
P Removal Balance Manure Rate	10,000 gal/A			10,000 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	24			24		
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	86	72	126	86	72	126
Nutrient Balance after Manure	10	8	-66	10	8	-66
Supplemental Fertilizer (lb/A)	10	0	0	10	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**8**	**-66**	**0**	**8**	**-66**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Soybeans Swine Spring Field 2			Soybeans Swine Fall Field 2		
Crop Group Indentification						
Fields	2			2		
Acres	2.8			2.8		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P	ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	64			64		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19,895 gal/A			19,895 gal/A		
P Removal Balance Manure Rate	8,750 gal/A			8,750 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	23			23		
Planned Manure Rate (ton or gal/A)	**8,750 gal/A**			**8,750 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	83	70	123	83	70	123
Nutrient Balance after Manure	0	0	-25	0	0	-25
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-25**	**0**	**0**	**-25**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Corn Grain Swine Spring Field 3			Corn Grain Swine Fall Field 3		
Crop Group Indentification						
Fields	3			3		
Acres	7.3			7.3		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P	ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	60			60		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	10,000 gal/A			10,000 gal/A		
P Removal Balance Manure Rate	10,000 gal/A			10,000 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	33			33		
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	86	72	126	86	72	126
Nutrient Balance after Manure	10	8	-66	10	8	-66
Supplemental Fertilizer (lb/A)	10	0	0	10	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**8**	**-66**	**0**	**8**	**-66**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets Crop Group Indentification	Soybeans Swine Spring Field 3			Soybeans Swine Fall Field 3		
Fields	3			3		
Acres	7.3			7.3		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P 60			ppm P 60		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19,895 gal/A			19,895 gal/A		
P Removal Balance Manure Rate	8,750 gal/A			8,750 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	32			32		
Planned Manure Rate (ton or gal/A)	**8,750 gal/A**			**8,750 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	83	70	123	83	70	123
Nutrient Balance after Manure	0	0	-25	0	0	-25
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-25**	**0**	**0**	**-25**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets Crop Group Indentification	Corn Grain Swine Spring Field 4			Corn Grain Swine Fall Field 4		
Fields	4			4		
Acres	5.5			5.5		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P 101			ppm P 101		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	10,000 gal/A			10,000 gal/A		
P Removal Balance Manure Rate	10,000 gal/A			10,000 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	37			37		
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	86	72	126	86	72	126
Nutrient Balance after Manure	10	8	-66	10	8	-66
Supplemental Fertilizer (lb/A)	10	0	0	10	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**8**	**-66**	**0**	**8**	**-66**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets Crop Group Indentification	Soybeans Swine Spring Field 4			Soybeans Swine Fall Field 4		
Fields	4			4		
Acres	5.5			5.5		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P 101			ppm P 101		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19,895 gal/A			19,895 gal/A		
P Removal Balance Manure Rate	8,750 gal/A			8,750 gal/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	37			37		
Planned Manure Rate (ton or gal/A)	**8,750 gal/A**			**8,750 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	83	70	123	83	70	123
Nutrient Balance after Manure	0	0	-25	0	0	-25
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-25**	**0**	**0**	**-25**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets						
Crop Group Indentification	Corn Grain Swine Spring Field 5			Corn Grain Swine Fall Field 5		
Fields	5			5		
Acres	3.1			3.1		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P 90			ppm P 90		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	10,000 gal/A			10,000 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	10,000 gal/A			10,000 gal/A		
	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	36			36		
Planned Manure Rate (ton or gal/A)	**9,000 gal/A**			**9,000 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	86	72	126	86	72	126
Nutrient Balance after Manure	10	8	-66	10	8	-66
Supplemental Fertilizer (lb/A)	10	0	0	10	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**8**	**-66**	**0**	**8**	**-66**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets						
Crop Group Indentification	Soybeans Swine Spring Field 5			Soybeans Swine Fall Field 5		
Fields	5			5		
Acres	3.1			3.1		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P 90			ppm P 90		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Nursery Swine Manure			Nursery Swine Manure		
Units	lb/1000 gal			lb/1000 gal		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	19.00	8.00	14.00	19.00	8.00	14.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring 1.2-15: Incorporated after 7 days			Early Fall 1.2-15: next summer use by a summer crop after a green manure cover crop. Incorp after 7 days		
Availability Factors (Total N or NH4-N & Organic N)	**Total N**	**NH4-N**	**Org. N**	**Total N**	**NH4-N**	**Org. N**
		0.30	0.50		0.20	0.50
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	19,895 gal/A			19,895 gal/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	8,750 gal/A			8,750 gal/A		
	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	36			36		
Planned Manure Rate (ton or gal/A)	**8,750 gal/A**			**8,750 gal/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	83	70	123	83	70	123
Nutrient Balance after Manure	0	0	-25	0	0	-25
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-25**	**0**	**0**	**-25**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets						
Crop Group Indentification	Corn Grain Bed Pack Spring Field 1			Corn Grain Bed Pack Fall Field 1		
Fields	1			1		
Acres	6.9			6.9		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	ppm P 106			ppm P 106		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Bedded Pack Manure			Bedded Pack Manure		
Units	lb/ton			lb/ton		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	23.00	8.00	20.00	23.00	8.00	20.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring: Spring or summer utilization- Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: 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**
	0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	21 tons/A			21 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	10 tons/A			10 tons/A		
	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	41			41		
Planned Manure Rate (ton or gal/A)	**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	46	80	200	46	80	200
Nutrient Balance after Manure	49	0	-140	49	0	-140
Supplemental Fertilizer (lb/A)	49	0	0	49	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-140**	**0**	**0**	**-140**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Soybeans Bed Pack Spring Field 1			Soybeans Bed Pack Fall Field 1		
Crop Group Indentification						
Fields	1			1		
Acres	6.9			6.9		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P	ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	106			106		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Bedded Pack Manure			Bedded Pack Manure		
Units	lb/ton			lb/ton		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	23.00	8.00	20.00	23.00	8.00	20.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring: Spring or summer utilization- Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: 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**
	0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	41 tons/A			41 tons/A		
P Removal Balance Manure Rate	9 tons/A			9 tons/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	38			38		
Planned Manure Rate (ton or gal/A)	**9 tons/A**			**9 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	41	72	180	41	72	180
Nutrient Balance after Manure	0	-2	-82	0	-2	-82
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**-2**	**-82**	**0**	**-2**	**-82**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Corn Grain Bed Pack Spring Field 2			Corn Grain Bed Pack Fall Field 2		
Crop Group Indentification						
Fields	2			2		
Acres	2.8			2.8		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P	ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	64			64		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60
Manure Group	Bedded Pack Manure			Bedded Pack Manure		
Units	lb/ton			lb/ton		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	23.00	8.00	20.00	23.00	8.00	20.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring: Spring or summer utilization- Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: 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**
	0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	21 tons/A			21 tons/A		
P Removal Balance Manure Rate	10 tons/A			10 tons/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	26			26		
Planned Manure Rate (ton or gal/A)	**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	46	80	200	46	80	200
Nutrient Balance after Manure	49	0	-140	49	0	-140
Supplemental Fertilizer (lb/A)	49	0	0	49	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**0**	**-140**	**0**	**0**	**-140**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Soybeans Bed Pack Spring Field 2			Soybeans Bed Pack Fall Field 2		
Crop Group Indentification						
Fields	2			2		
Acres	2.8			2.8		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking						
Mehlich 3 Soil Test P	ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	64			64		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98
Soil Test Recommendation (lb/A)						
Other Nutrients Applied (lb/A) (Nutrients applied regardless of manure)	0	0	0	0	0	0
P Index Application Method						
Double Crop CarryOver N (lb/A)	0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98
Manure Group	Bedded Pack Manure			Bedded Pack Manure		
Units	lb/ton			lb/ton		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	23.00	8.00	20.00	23.00	8.00	20.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring: Spring or summer utilization- Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: 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**
	0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	41 tons/A			41 tons/A		
P Removal Balance Manure Rate	9 tons/A			9 tons/A		
(ton or gal/A; If required by P Index)	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	24			24		
Planned Manure Rate (ton or gal/A)	**9 tons/A**			**9 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	41	72	180	41	72	180
Nutrient Balance after Manure	0	-2	-82	0	-2	-82
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0
P Index Application Method						
Final Nutrient Balance (lb/A)	**0**	**-2**	**-82**	**0**	**-2**	**-82**
Multiple Application						
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Corn Grain Bed Pack Spring Field 3			Corn Grain Bed Pack Fall Field 3			Soybeans Bed Pack Spring Field 3			Soybeans Bed Pack Fall Field 3			Corn Grain Bed Pack Spring Field 4			Corn Grain Bed Pack Fall Field 4		
Crop Group Indentification																		
Fields	3			3			3			3			4			4		
Acres	7.3			7.3			7.3			7.3			5.5			5.5		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking																		
Mehlich 3 Soil Test P	ppm P			ppm P			ppm P			ppm P			ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	60			60			60			60			101			101		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B			Part B		
Crop	Corn for Grain (No-till)			Corn for Grain (No-till)			Soybeans with Manure			Soybeans with Manure			Corn for Grain (No-till)			Corn for Grain (No-till)		
Planned Yield	200 bu/A			200 bu/A			70 bu/A			70 bu/A			200 bu/A			200 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	200	80	60	200	80	60	224	70	98	224	70	98	200	80	60	200	80	60
Soil Test Recommendation (lb/A)																		
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	0	0	0
P Index Application Method																		
Double Crop CarryOver N (lb/A)	0			0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A		0	No Previous Year Legume		0	No Previous Year Legume		70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A	
Net Nutrients Required (lb/A)	95	80	60	95	80	60	189	70	98	189	70	98	95	80	60	95	80	60
Manure Group	Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure		
Units	lb/ton			lb/ton			lb/ton			lb/ton			lb/ton			lb/ton		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring: Spring or summer utilization-Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none			Spring: Spring or summer utilization-Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none			Spring: Spring or summer utilization-Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: 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**	**Total N**	**NH4-N**	**Org. N**
	0.20			0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	21 tons/A			21 tons/A			41 tons/A			41 tons/A			21 tons/A			21 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	10 tons/A			10 tons/A			9 tons/A			9 tons/A			10 tons/A			10 tons/A		
	Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0		
P Index Value	36			36			33			33			40			40		
Planned Manure Rate (ton or gal/A)	**10 tons/A**			**10 tons/A**			**9 tons/A**			**9 tons/A**			**10 tons/A**			**10 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	46	80	200	46	80	200	41	72	180	41	72	180	46	80	200	46	80	200
Nutrient Balance after Manure	49	0	-140	49	0	-140	0	-2	-82	0	-2	-82	49	0	-140	49	0	-140
Supplemental Fertilizer (lb/A)	49	0	0	49	0	0	0	0	0	0	0	0	49	0	0	49	0	0
P Index Application Method																		
Final Nutrient Balance (lb/A)	**0**	**0**	**-140**	**0**	**0**	**-140**	**0**	**-2**	**-82**	**0**	**-2**	**-82**	**0**	**0**	**-140**	**0**	**0**	**-140**
Multiple Application																		
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Nutrient Balance Sheets	Soybeans Bed Pack Spring Field 4			Soybeans Bed Pack Fall Field 4			Corn Grain Bed Pack Spring Field 5			Corn Grain Bed Pack Fall Field 5			Soybeans Bed Pack Spring Field 5			Soybeans Bed Pack Fall Field 5		
Crop Group Indentification																		
Fields	4			4			5			5			5			5		
Acres	5.5			5.5			3.1			3.1			3.1			3.1		
NBS Option	Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed			Option 3 P Index Must be Completed		
P Banking																		
Mehlich 3 Soil Test P	ppm P			ppm P			ppm P			ppm P			ppm P			ppm P		
For Option 2 enter maximum Soil Test For Option 3 enter soil test for PI	101			101			90			90			90			90		
P Index Part A Evaluation	Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change			Farm Mgmt Change		
Part A Result	Part B			Part B			Part B			Part B			Part B			Part B		
Crop	Soybeans with Manure			Soybeans with Manure			Corn for Grain (No-till)			Corn for Grain (No-till)			Soybeans with Manure			Soybeans with Manure		
Planned Yield	70 bu/A			70 bu/A			200 bu/A			200 bu/A			70 bu/A			70 bu/A		
Crop Removal Recommendations (LB/A)	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**	**N**	**P2O5**	**K2O**
	224	70	98	224	70	98	200	80	60	200	80	60	224	70	98	224	70	98
Soil Test Recommendation (lb/A)																		
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	0	0	0
P Index Application Method																		
Double Crop CarryOver N (lb/A)	0			0			0			0			0			0		
Manure History Description Residual Manure N (lb/A)	35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop		35	Continuously - Summer Crop	
Legume History Description Residual Legume N (lb/A)	0	No Previous Year Legume		0	No Previous Year Legume		70	Soybeans, 70 bu/A		70	Soybeans, 70 bu/A		0	No Previous Year Legume		0	No Previous Year Legume	
Net Nutrients Required (lb/A)	189	70	98	189	70	98	95	80	60	95	80	60	189	70	98	189	70	98
Manure Group	Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure			Bedded Pack Manure		
Units	lb/ton			lb/ton			lb/ton			lb/ton			lb/ton			lb/ton		
Manure Nutrient Content	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**	**N**	P2O5	**K20**
(lbs/ton or 1000 gal)	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00	23.00	8.00	20.00
Application Season: Management (Incorporation, cover crops, etc.)	Spring: Spring or summer utilization-Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none			Spring: Spring or summer utilization-Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: Incorporated after 7 days or none			Spring: Spring or summer utilization-Incorporation after 7 days or none			Early Fall: Summer utilization with cover crop used as green manure: 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**	**Total N**	**NH4-N**	**Org. N**
	0.20			0.20			0.20			0.20			0.20			0.20		
P Index Application Method	April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.			April - Oct: No incorp or incorp > 1 wk.		
N Balanced Manure Rate (ton; gal/A)	41 tons/A			41 tons/A			21 tons/A			21 tons/A			41 tons/A			41 tons/A		
P Removal Balance Manure Rate (ton or gal/A; If required by P Index)	9 tons/A			9 tons/A			10 tons/A			10 tons/A			9 tons/A			9 tons/A		
	Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 80.0			Crop P Removal (lb/A) 70.0			Crop P Removal (lb/A) 70.0		
P Index Value	37			37			39			39			36			36		
Planned Manure Rate (ton or gal/A)	**9 tons/A**			**9 tons/A**			**10 tons/A**			**10 tons/A**			**9 tons/A**			**9 tons/A**		
Nutrients Applied at Planned Manure Rate (lb/A)	41	72	180	41	72	180	46	80	200	46	80	200	41	72	180	41	72	180
Nutrient Balance after Manure	0	-2	-82	0	-2	-82	49	0	-140	49	0	-140	0	-2	-82	0	-2	-82
Supplemental Fertilizer (lb/A)	0	0	0	0	0	0	49	0	0	49	0	0	0	0	0	0	0	0
P Index Application Method																		
Final Nutrient Balance (lb/A)	**0**	**-2**	**-82**	**0**	**-2**	**-82**	**0**	**0**	**-140**	**0**	**0**	**-140**	**0**	**-2**	**-82**	**0**	**-2**	**-82**
Multiple Application																		
Soil test or Crop Removal	Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs			Nutrient Balances for P2O5 and K2O are based on Crop Removal and SHOULD NOT be used to determine additional fertilizer needs		

Phosphorus Index

Go to NBS Input Go to NBS Index

Pennsylvania P Index Version 2

PART A: SCREENING TOOL CMU/Field ID		PART A: SCREENING TOOL	CMU/Field ID	Corn Grain Swine Spring Field 1
Is the CMU in a Special Protection watershed?		Is the CMU in a Special Protection watershed?	If the answer is Yes to any of these questions, Part B must be used.	**No**
A significant farm management change as defined by Act 38?		Is there a significant farm management change as defined by Act 38?		**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?		Is the Soil Test Mehlich 3 P greater than 200 ppm P? (enter soil test value in ppm P)		**106**
Contributing Distance from CMU to receiving water <150 ft.?		Is the Contributing Distance from this CMU to receiving water less than 150 ft.?		**No**
Is winter manure application planned for this field ?		Is winter manure application planned for this field ?		**No**
Run P Index Part B voluntarily? (No to all Part A questions.)		Run P Index Part B voluntarily? (Answers are No to all Part A questions.)		**No**

PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	Mehlich 3 Soil Test P (ppm P)					106
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)						21
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)					Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	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	-
SUPPLEMENTAL P FERTILIZER					Fertilizer P (lb P2O5/acre)	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	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	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Method						0
MANURE P RATE					Manure P (lb P2O5/acre)	72
MANURE APPLICATION METHOD[3]	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	0.6
P SOURCE COEFFICIENT[3]	Refer to: Test results for P Source Coefficient OR Book values from P Index Fact Sheet Table 1					1
Manure Rating = Manure Rate x Manure Application Method x P Source Coefficient						43
Source Factor Sum						64
PART B: TRANSPORT FACTORS EROSION	Soil Loss (ton/acre/yr)					1.1
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	2
SUBSURFACE DRAINAGE	0 None		1 Random		2[1] 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[2] < 100 ft.	4
Transport Sum = Erosion + Runoff Potential + Subsurface Drainage + Contributing Distance						7
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						0.30
P Index Value = 2 x Source x Transport						**38**

Low: 59 or less
Nitrogen based management

Medium: 60 to 79
Nitrogen based management

High: 80 to 99
Phosphorus limited to crop removal

Very High: 100 or greater
No Phosphorus applied

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no corresponding method factor or PSC, it will display an "E".

Phosphorus Index

PART A: SCREENING TOOL CMU/Field ID	Corn Grain Swine Fall Field 1	Soybeans Swine Spring Field 1	Soybeans Swine Fall Field 1	Corn Grain Swine Spring Field 2	Corn Grain Swine Fall Field 2	Soybeans Swine Spring Field 2	Soybeans Swine Fall Field 2
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
A significant farm management change as defined by Act 38?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**106**	**106**	**106**	**64**	**64**	**64**	**64**
Contributing Distance from CMU to receiving water <150 ft.?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	106	106	106	64	64	64	64
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	21	21	21	13	13	13	13
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-	-	-	-	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	72	70	70	72	72	70	70
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	1	1	1	1	1	1	1
Manure Rating = Manure Rate x Manure Application Metho	43	42	42	43	43	42	42
Source Factor Sum	64	63	63	56	56	55	55
PART B: TRANSPORT FACTORS EROSION	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RUNOFF POTENTIAL	2	2	2	2	2	2	2
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	4	4	4	2	2	2	2
Transport Sum = Erosion + Runoff Potential + Subsurface	7	7	7	5	5	5	5
MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Transport Sum x Modified Connectivity / 24	0.30	0.30	0.30	0.21	0.21	0.21	0.21
P Index Value = 2 x Source x Transport	**38**	**37**	**37**	**24**	**24**	**23**	**23**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

PART A: SCREENING TOOL CMU/Field ID	Corn Grain Swine Spring Field 3	Corn Grain Swine Fall Field 3	Soybeans Swine Spring Field 3	Soybeans Swine Fall Field 3	Corn Grain Swine Spring Field 4	Corn Grain Swine Fall Field 4	Soybeans Swine Spring Field 4
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
A significant farm management change as defined by Act 38?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**60**	**60**	**60**	**60**	**101**	**101**	**101**
Contributing Distance from CMU to receiving water <150 ft.?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	60	60	60	60	101	101	101
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	12	12	12	12	20	20	20
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-	-	-	-	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	72	72	70	70	72	72	70
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	1	1	1	1	1	1	1
Manure Rating = Manure Rate x Manure Application Metho	43	43	42	42	43	43	42
Source Factor Sum	55	55	54	54	63	63	62
PART B: TRANSPORT FACTORS EROSION	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RUNOFF POTENTIAL	2	2	2	2	2	2	2
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	4	4	4	4	4	4	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7	7	7	7	7	7	7
MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Transport Sum x Modified Connectivity / 24	0.30	0.30	0.30	0.30	0.30	0.30	0.30
P Index Value = 2 x Source x Transport	**33**	**33**	**32**	**32**	**37**	**37**	**37**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

PART A: SCREENING TOOL CMU/Field ID	Soybeans Swine Fall Field 4	Corn Grain Swine Spring Field 5	Corn Grain Swine Fall Field 5	Soybeans Swine Spring Field 5	Soybeans Swine Fall Field 5	Corn Grain Bed Pack Spring Field 1	Corn Grain Bed Pack Fall Field 1
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
A significant farm management change as defined by Act 38?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**101**	**90**	**90**	**90**	**90**	**106**	**106**
Contributing Distance from CMU to receiving water <150 ft.?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	101	90	90	90	90	106	106
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	20	18	18	18	18	21	21
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-	-	-	-	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	70	72	72	70	70	80	80
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	1	1	1	1	1	1	1
Manure Rating = Manure Rate x Manure Application Metho	42	43	43	42	42	48	48
Source Factor Sum	62	61	61	60	60	69	69
PART B: TRANSPORT FACTORS EROSION	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RUNOFF POTENTIAL	2	2	2	2	2	2	2
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	4	4	4	4	4	4	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7	7	7	7	7	7	7
MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Transport Sum x Modified Connectivity / 24	0.30	0.30	0.30	0.30	0.30	0.30	0.30
P Index Value = 2 x Source x Transport	**37**	**36**	**36**	**36**	**36**	**41**	**41**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

PART A: SCREENING TOOL CMU/Field ID	Soybeans Bed Pack Spring Field 1	Soybeans Bed Pack Fall Field 1	Corn Grain Bed Pack Spring Field 2	Corn Grain Bed Pack Fall Field 2	Soybeans Bed Pack Spring Field 2	Soybeans Bed Pack Fall Field 2	Corn Grain Bed Pack Spring Field 3
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
A significant farm management change as defined by Act 38?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**106**	**106**	**64**	**64**	**64**	**64**	**60**
Contributing Distance from CMU to receiving water <150 ft.?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	106	106	64	64	64	64	60
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	21	21	13	13	13	13	12
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-	-	-	-	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	72	72	80	80	72	72	80
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	1	1	1	1	1	1	1
Manure Rating = Manure Rate x Manure Application Metho	43	43	48	48	43	43	48
Source Factor Sum	64	64	61	61	56	56	60
PART B: TRANSPORT FACTORS EROSION	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RUNOFF POTENTIAL	2	2	2	2	2	2	2
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	4	4	2	2	2	2	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7	7	5	5	5	5	7
MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Transport Sum x Modified Connectivity / 24	0.30	0.30	0.21	0.21	0.21	0.21	0.30
P Index Value = 2 x Source x Transport	**38**	**38**	**26**	**26**	**24**	**24**	**36**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

PART A: SCREENING TOOL CMU/Field ID	Corn Grain Bed Pack Fall Field 3	Soybeans Bed Pack Spring Field 3	Soybeans Bed Pack Fall Field 3	Corn Grain Bed Pack Spring Field 4	Corn Grain Bed Pack Fall Field 4	Soybeans Bed Pack Spring Field 4	Soybeans Bed Pack Fall Field 4
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
A significant farm management change as defined by Act 38?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**60**	**60**	**60**	**101**	**101**	**101**	**101**
Contributing Distance from CMU to receiving water <150 ft.?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	60	60	60	101	101	101	101
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	12	12	12	20	20	20	20
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-	-	-	-	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0	0	0	0
MANURE P RATE	80	72	72	80	80	72	72
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	1	1	1	1	1	1	1
Manure Rating = Manure Rate x Manure Application Metho	48	43	43	48	48	43	43
Source Factor Sum	60	55	55	68	68	63	63
PART B: TRANSPORT FACTORS EROSION	1.1	1.1	1.1	1.1	1.1	1.1	1.1
RUNOFF POTENTIAL	2	2	2	2	2	2	2
SUBSURFACE DRAINAGE	0	0	0	0	0	0	0
CONTRIBUTING DISTANCE	4	4	4	4	4	4	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7	7	7	7	7	7	7
MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Transport Sum x Modified Connectivity / 24	0.30	0.30	0.30	0.30	0.30	0.30	0.30
P Index Value = 2 x Source x Transport	**36**	**33**	**33**	**40**	**40**	**37**	**37**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Phosphorus Index

PART A: SCREENING TOOL CMU/Field ID	Corn Grain Bed Pack Spring Field 5	Corn Grain Bed Pack Fall Field 5	Soybeans Bed Pack Spring Field 5	Soybeans Bed Pack Fall Field 5
Is the CMU in a Special Protection watershed?	**No**	**No**	**No**	**No**
A significant farm management change as defined by Act 38?	**Yes**	**Yes**	**Yes**	**Yes**
Soil Test Mehlich 3 P greater than 200 ppm P?	**90**	**90**	**90**	**90**
Contributing Distance from CMU to receiving water <150 ft.?	**No**	**No**	**No**	**No**
Is winter manure application planned for this field ?	**No**	**No**	**No**	**No**
Run P Index Part B voluntarily? (No to all Part A questions.)	**No**	**No**	**No**	**No**
PART B: SOURCE FACTORS: Mehlich 3 Soil Test P (ppm P)	90	90	90	90
Soil Test Rating = 0.20* Mehlich 3 Soil Test P (ppm P)	18	18	18	18
FERTILIZER P APPLIED REGARDLESS OF MANURE (Starter or other)	0	0	0	0
P INDEX APPLICATION METHOD OF FERTILIZER P APPLIED REGARGLESS OF MANURE[3]	-	-	-	-
SUPPLEMENTAL P FERTILIZER	0	0	0	0
P INDEX APPLICATION METHOD OF SUPPLEMENTAL P FERTILIZER[3]	-	-	-	-
Fertilizer Rating = Fertilizer Rate x Fertilizer Application Me	0	0	0	0
MANURE P RATE	80	80	72	72
MANURE APPLICATION METHOD[3]	0.6	0.6	0.6	0.6
P SOURCE COEFFICIENT[3]	1	1	1	1
Manure Rating = Manure Rate x Manure Application Metho	48	48	43	43
Source Factor Sum	66	66	61	61
PART B: TRANSPORT FACTORS EROSION	1.1	1.1	1.1	1.1
RUNOFF POTENTIAL	2	2	2	2
SUBSURFACE DRAINAGE	0	0	0	0
CONTRIBUTING DISTANCE	4	4	4	4
Transport Sum = Erosion + Runoff Potential + Subsurface	7	7	7	7
MODIFIED CONNECTIVITY	1.0	1.0	1.0	1.0
Transport Sum x Modified Connectivity / 24	0.30	0.30	0.30	0.30
P Index Value = 2 x Source x Transport	**39**	**39**	**36**	**36**

Low: 59 or less
Nitrogen based management

1 OR rapidly permeable soil near a stream
2 "9" factor does not apply to fields receiving manure with a 35 ft. buffer.
3 Error Note: if there is a manure or fertilizer rate and there is no correspondi

Manure Group Information

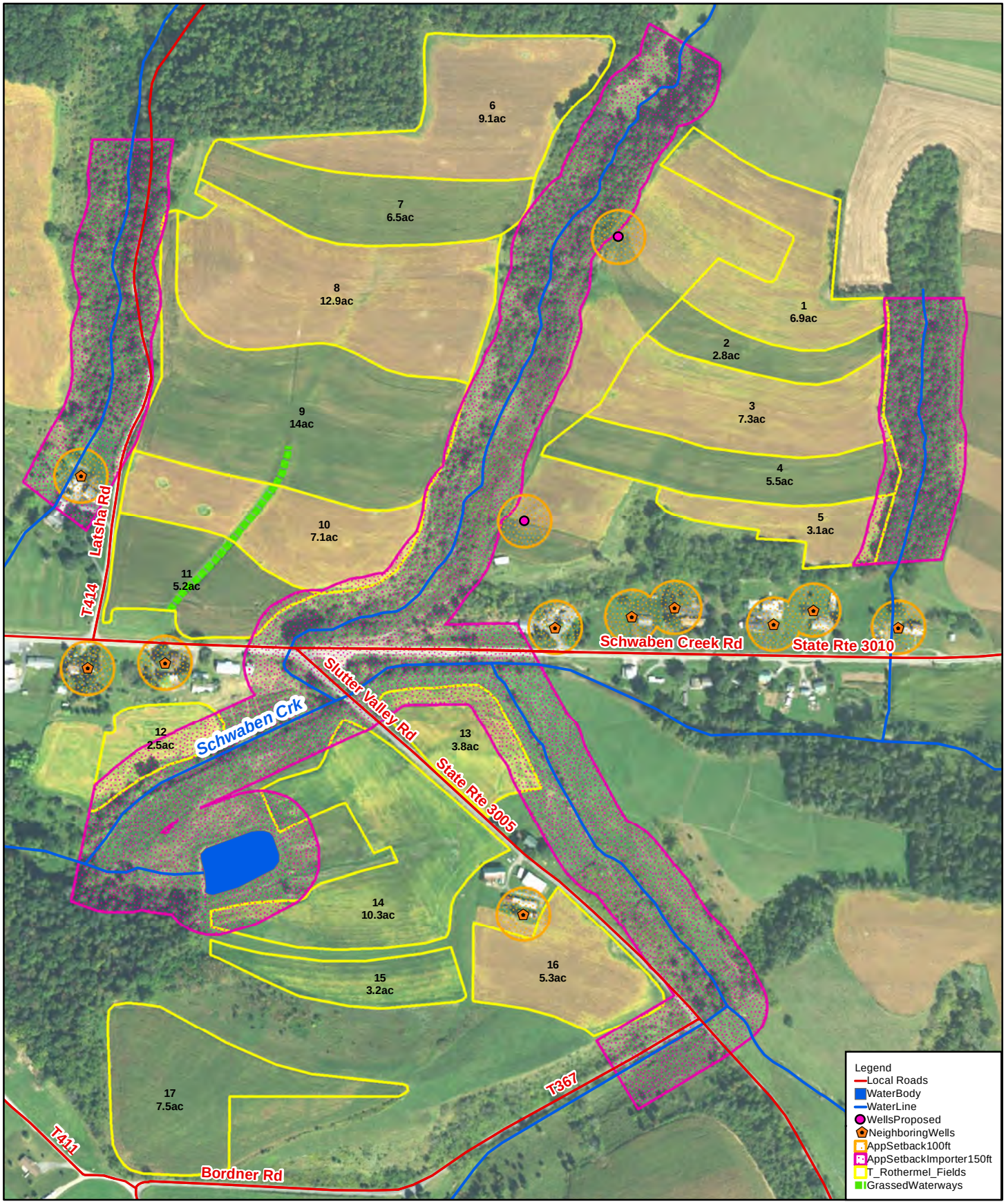
Appendix 3 Manure Group Information	Nursery Swine Manure	Bedded Pack Manure
Manure Report Date (note if averaging several reports)	Book Value	Book Value
Laboratory Name	Penn State Agronomy Guide	Penn State Agronomy Guide
Manure Type	Swine	Other
Manure Unit (lbs/ton or 1000 gal)	lb/1000 gal	lb/ton
Total Nitrogen (N) (lbs/ton or 1000 gal)	19.00	23.00
Ammonium N (NH_4-N) (lbs/ton or 1000 gal)	0.00	0.00
Total Organic N (lbs/ton or 1000 gal)	19.00	23.00
Total Phosphate (P_2O_5) (lbs/ton or 1000 gal)	8.00	8.00
Total Potash (K_2O) (lbs/ton or 1000 gal)	14.00	20.00
Percent Solids	1.50	25.00
PSC Value (analytical or book value)	1.00	1.00

Appendix 1

Operation Maps

Maps (or aerial photographs) required in Nutrient Balance Sheets must identify: road and road names adjacent to and within the operation; field identification, boundaries and acreage; manure application setback areas and vegetated buffers and associated landscape features (streams and other water bodies, sinkholes, and active water wells or springs); and location of in-field manure stacking areas (including each site in stacking area rotation).

Ty Rothermel NBS Field Map



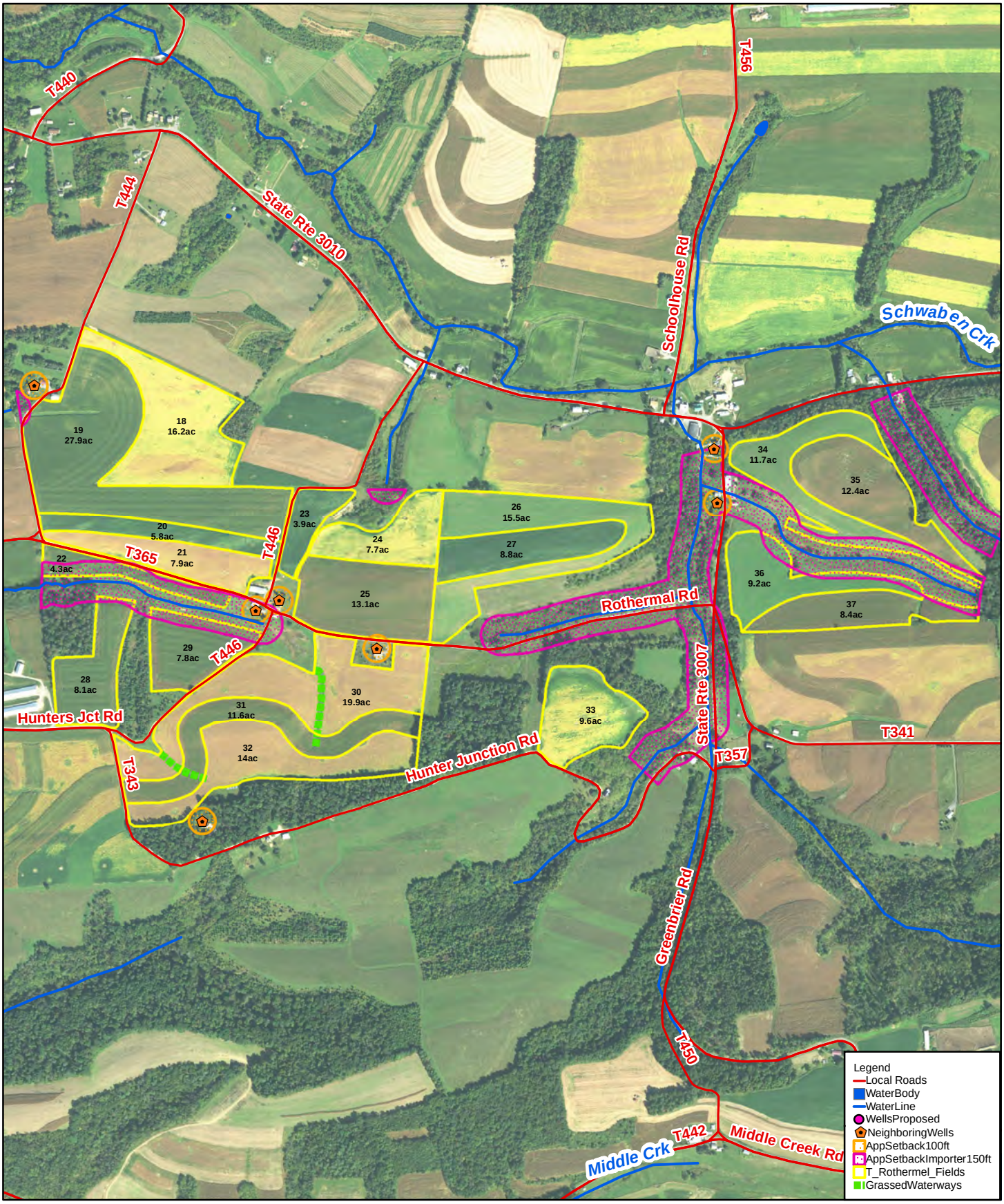
TeamAg Incorporated

0 250 500 1,000 1,500 Feet

N W E S

****Field verification of application setbacks and buffers is required prior to land application of manure.****

Ty Rothermel NBS Field Map



TeamAg Incorporated

0 500 1,000 2,000 3,000 Feet

N W E S

****Field verification of application setbacks and buffers is required prior to land application of manure.****

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 the field identification and boundaries, soil types and slopes with soil 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.

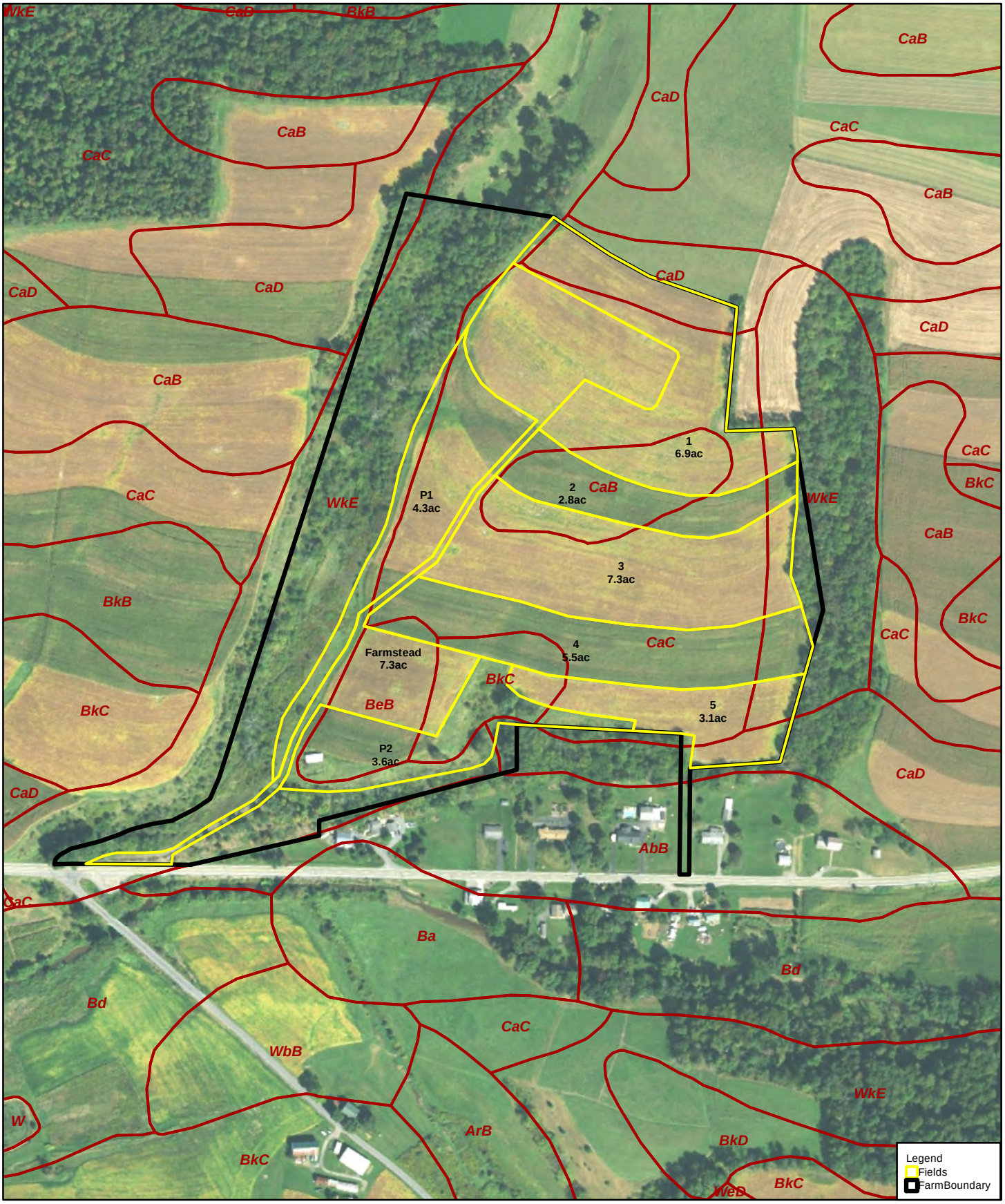
Jay Stoltzfus Topographic Map

TeamAg Incorporated

0 400 800 1,600 2,400 Feet

N W E S

Jay Stoltzfus Soils Map



TeamAg Incorporated

0 200 400 800 1,200 Feet

N W E S

Northumberland County Soils Legend

AbB	ALBRIGHTS SILT LOAM, 3 TO 8 PERCENT SLOPES
AnA	ALLENWOOD GRAVELLY SILT LOAM, 0 TO 3 PERCENT SLOPES
AnD	ALLENWOOD GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES
AoB	ALLENWOOD AND WASHINGTON SOILS, 3 TO 8 PERCENT SLOPES
AoC	ALLENWOOD AND WASHINGTON SOILS, 8 TO 15 PERCENT SLOPES
ArA	ALVIRA SILT LOAM, 0 TO 3 PERCENT SLOPES
ArB	ALVIRA SILT LOAM, 3 TO 8 PERCENT SLOPES
ArC	ALVIRA SILT LOAM, 8 TO 15 PERCENT SLOPES
AsB	ALVIRA VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES
Ba	BARBOUR SOILS, FREQUENTLY FLOODED
Bb	BARBOUR-LINDEN COMPLEX, RARELY FLOODED
Bc	BASHER SOILS
Bd	BASHER SOILS, FREQUENTLY FLOODED
BeB	BEDINGTON SILT LOAM, 3 TO 8 PERCENT SLOPES
BeC	BEDINGTON SILT LOAM, 8 TO 15 PERCENT SLOPES
BeD	BEDINGTON SILT LOAM, 15 TO 25 PERCENT SLOPES
BkB	BERKS SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES
BkC	BERKS SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES
BkD	BERKS SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES
BuB	BUCHANAN GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES
BuC	BUCHANAN GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES
BxB	BUCHANAN VERY STONY LOAM, 0 TO 8 PERCENT SLOPES
BxD	BUCHANAN VERY STONY LOAM, 8 TO 25 PERCENT SLOPES
CaB	CALVIN-KLINESVILLE SHALY SILT LOAMS, 3 TO 8 PERCENT SLOPES
CaC	CALVIN-KLINESVILLE SHALY SILT LOAMS, 8 TO 15 PERCENT SLOPES
CaD	CALVIN-KLINESVILLE SHALY SILT LOAMS, 15 TO 25 PERCENT SLOPES
DAM	DAMS
DeB	DEKALB EXTREMELY STONY SANDY LOAM, 0 TO 8 PERCENT SLOPES
DeD	DEKALB EXTREMELY STONY SANDY LOAM, 8 TO 25 PERCENT SLOPES
DeF	DEKALB EXTREMELY STONY SANDY LOAM, STEEP
Du	DUMPS, MINE
Dy	DYSTROCHREPTS, BOULDERY
EdB	EDOM COMPLEX, 3 TO 8 PERCENT SLOPES
EdC	EDOM COMPLEX, 8 TO 15 PERCENT SLOPES
EdD	EDOM COMPLEX, 15 TO 25 PERCENT SLOPES
EsB	ELLIBER CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES
EsC	ELLIBER CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES
EsD	ELLIBER CHERTY SILT LOAM, 15 TO 25 PERCENT SLOPES
EtB	ELLIBER VERY CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES
EtC	ELLIBER VERY CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES
EtD	ELLIBER VERY CHERTY SILT LOAM, 15 TO 25 PERCENT SLOPES
EtF	ELLIBER VERY CHERTY SILT LOAM, 25 TO 70 PERCENT SLOPES
EvB	EVENDALE CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES
HaB	HAGERSTOWN SILT LOAM, 3 TO 8 PERCENT SLOPES
HaC	HAGERSTOWN SILT LOAM, 8 TO 15 PERCENT SLOPES
HaD	HAGERSTOWN SILT LOAM, 15 TO 25 PERCENT SLOPES
HtB	HARTLETON CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES
HtC	HARTLETON CHANNERY SILT LOAM, 8 TO 15 PERCENT
HtD	HARTLETON CHANNERY SILT LOAM, 15 TO 25 PERCENT SLOPES
HuB	HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 0 TO 8 PERCENT SLOPES
HuD	HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 8 TO 25 PERCENT SLOPES
HuF	HAZLETON AND CLYMER EXTREMELY STONY SANDY LOAMS, 25 TO 80 PERCENT SLOPES
Hv	HOLLY SILT LOAM
Hy	HOLLY SILT LOAM, PONDED
Hz	HOLLY SILT LOAM, RARELY FLOODED
KmB	KREAMER CHERTY SILT LOAM, 3 TO 8 PERCENT SLOPES
KmC	KREAMER CHERTY SILT LOAM, 8 TO 15 PERCENT SLOPES
LaB	LAIDIG GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES
LaC	LAIDIG GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES
LbB	LAIDIG EXTREMELY STONY LOAM, 0 TO 8 PERCENT SLOPES
LdD	LAIDIG AND MECKESVILLE EXTREMELY STONY SOILS, 8 TO 25 PERCENT SLOPES
LdF	LAIDIG AND MECKESVILLE EXTREMELY STONY SOILS, STEEP
LkB	LAKIN LOAMY FINE SAND, 3 TO 8 PERCENT SLOPES
LkC	LAKIN LOAMY FINE SAND, 8 TO 15 PERCENT SLOPES
LnB	LECK KILL SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES
LnC	LECK KILL SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES
LnD	LECK KILL SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES
Lw	LINDEN SILT LOAM
MkB	MECKESVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES
MkC	MECKESVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES
MkD	MECKESVILLE SILT LOAM, 15 TO 25 PERCENT SLOPES
MoA	MONONGAHELA SILT LOAM, 0 TO 3 PERCENT SLOPES
MoB	MONONGAHELA SILT LOAM, 3 TO 8 PERCENT SLOPES
OpB	OPEQUON SILTY CLAY LOAM, 3 TO 8 PERCENT SLOPES
OpD	OPEQUON SILTY CLAY LOAM, 8 TO 25 PERCENT SLOPES
OpE	OPEQUON SILTY CLAY LOAM, 25 TO 50 PERCENT SLOPES
Pa	PITS
Qu	QUARRIES
RwB	RUSHTOWN VERY SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES
RwC	RUSHTOWN VERY SHALY SILT LOAM, 8 TO 25 PERCENT SLOPES
ShA	SHELMADINE SILT LOAM, 0 TO 3 PERCENT SLOPES
ShB	SHELMADINE SILT LOAM, 3 TO 8 PERCENT SLOPES
SmB	SHELMADINE VERY STONY SILT LOAM, 0 TO 8 PERCENT SLOPES
Uf	UDIFLUVENTS, COAL OVERWASH
Ug	UDIFLUVENTS AND FLUVAQUENTS, GRAVELLY
Uh	UDORTHENTS, SANDSTONE AND SHALE
UnB	UNADILLA SILT LOAM, 3 TO 8 PERCENT SLOPES
UnC	UNADILLA SILT LOAM, 8 TO 15 PERCENT SLOPES
UnD	UNADILLA SILT LOAM, 15 TO 25 PERCENT SLOPES
Ur	URBAN LAND
W	WATER
WaB	WASHINGTON SILT LOAM, WET SUBSTRATUM, 3 TO 8 PERCENT SLOPES
WbA	WATSON SILT LOAM, 0 TO 3 PERCENT SLOPES
WbB	WATSON SILT LOAM, 3 TO 8 PERCENT SLOPES
WbC	WATSON SILT LOAM, 8 TO 15 PERCENT SLOPES
WeB	WEIKERT SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES
WeC	WEIKERT SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES
WeD	WEIKERT SHALY SILT LOAM, 15 TO 25 PERCENT SLOPES
WkE	WEIKERT AND KLINESVILLE SHALY SILT LOAMS, STEEP
WsA	WHEELING SOILS, 0 TO 3 PERCENT SLOPES
WsB	WHEELING SOILS, 3 TO 8 PERCENT SLOPES
WsC	WHEELING SOILS, 8 TO 15 PERCENT SLOPES
WyA	WYOMING GRAVELLY SANDY LOAM, 0 TO 3 PERCENT SLOPES
WyB	WYOMING GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES

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.

Bedding Calculations:

Due to this being a proposed operation, it is assumed that bedding equal to 30% of the manure volume will be needed to maintain the manure as a bedded pack. Waste hay and straw will be used as bedding.

Sheep & Goats Spring:
27.3 tons of manure produced x 0.3 = ~9 tons of bedding needed
9 tons of bedding / 6 animal groups = 1.5 tons per group

Cattle Spring:
22.3 tons of manure produced x 0.3 = ~6 tons of bedding needed
6 tons of bedding / 2 animal groups = 3 tons per group

Emergency Response Plan

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

1) **Ensure that you and other people are safe. If the spill or leak involves a public road:**
   a. Contact the police for traffic control: *State Police - 911*
   b. Use flares, safety cones, etc. to warn approaching motorists

2) **Stop the leak or spill:**
   a. If the leak or spill occurs while emptying the storage:
      i. Stop pumps, close valves and / or stop siphoning of manure
      ii. Park on top of the flexible piping to pinch it closed
      iii. If necessary, direct manure to another storage structure
      iv. Plug holes in the impoundment, build dams to capture the leak and either pump the manure back into the storage or spread it on crop fields according to your nutrient management plan

   b. If the spill happens while on the road:
      i. Pull off to the side of the road
      ii. Plug the leak or otherwise stop the flow of manure from the tank
      iii. Build a berm or dike to keep manure from flowing into streams, ditches, etc.
      iv. Call the police for traffic control: *State Police – 911*

3) **Contain and control the leak or spill:**
   a. Build a containment dam to capture the manure using 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 manure. Local individuals with excavation and manure hauling equipment are:
      i. *Jordan D. Zimmerman – 570-692-0188*
      ii. *Ressco Excavating – 570-837-2699*

   b. Prevent manure from running into streams, ditches, waterways, etc.

   c. Use absorbent materials such as straw, hay, sawdust, animal feed or soil to soak up the manure and to limit or stop manure flow.

   d. Check for contaminated subsurface tile lines and divert manure flow from inlet structures

4) **Notify the proper authorities:**
   Pennsylvania Department of Environmental Protection Emergency Response – 570-327-3636
   Northumberland County Conservation District – 570-495-4665
   PA Fish & Boat Commission Southeast Regional Office – 814-359-5250
   TeamAg, Inc. Nutrient Management Specialist – 570-764-7003

   a. Make a record of the details of the spill and the actions you took to remedy the situation. Take pictures of the extent of the spill as well as 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. Clean up procedures may be directed by the authorities listed above.

   b. Pick up absorbent materials you used and properly dispose of the material.

   c. Restore damaged areas if necessary.

TeamAg Incorporated

MEMORANDUM

TO: State Conservation Commission

FROM: Joel Semke – REAP Coordinator

SUBJECT: FY 2019 REAP Guidelines & Application packet - revised

The Pennsylvania Tax code, which includes provision for the establishment of the REAP Tax Credit Program was revised in early-July (Act 13 of 2019) as part of the PA Farm Bill slate of legislation - resulting in some significant changes to the REAP program. The FY2019 REAP Guidelines & Application packet was initially approved by the Commission in May 2019. Commission staff has integrated the changes into a revised FY2019 REAP Guidelines and Application packet. In addition, the REAP Sale/Assignment Application, all publications, and all presentations have been updated. Commission staff worked closely with PDA legal staff and PA Department of Revenue to interpret the changes and implement them as quickly as possible. Commission staff's goal is to begin accepting FY2019 REAP Applications – pending approval by the Commission - in late-September.

The following is a summary of the previously-approved changes to the FY 2019 REAP Guidelines & Application. These approved changes will not be impacted by the revised REAP Tax Code provision of July 2019. **See following page for the proposed September 2019 revisions.**

1. For sponsorship applications, Page 9 (signature page) of the REAP application now contains the sentence:

   "I affirm that there is a signed written agreement between the sponsor and the owner/operator regarding payment to the owner/operator in exchange for the REAP credits."

   Previously, there was only a statement affirming the presence of an agreement certifying the project owner/operator would comply with the requirements of the REAP program.

2. A Manure/Nutrient Management Plan "questionnaire" has been added to the REAP Guidelines & Application packet for informational purposes only. Since agricultural compliance is a huge part of REAP eligibility, staff feels that the REAP application is a good opportunity to provide additional information to farmers about what type of manure plan is needed for their operation. Over the past several years, staff has seen many instances of farmers paying a lot of money for plans that are not well-suited for their operation simply because they are unclear about what is needed for agricultural compliance purposes. The "questionnaire" is a first step toward trying to address that issue.

Program Year 2019 changes to the REAP program

1. REAP Credit Limit – The REAP tax credit limit has been changed for an eligible applicant and/or agricultural operation. The tax credit limit was increased from a lifetime credit limit of $150,000 to a maximum of $250,000 in tax credits in any consecutive seven-year period. The 7-year time frame is a sliding "window" and is calculated using the fiscal year round of REAP in which the credit was issued.

   If an eligible applicant has never received REAP credits, they will be immediately eligible for $250K. For applicants who have received credits in the past, the exact amount of credits they are eligible for in FY2019 and beyond will be determined by the date of issuance of previous credits. The fiscal year in which the credit was issued will be used to determine how it factors into the new 7-yr window. Previously awarded tax credits will "fall off" the sliding "window" after 7 years. Any credits issued in the last 7 years will count toward the amount an applicant is currently eligible to receive. Thus, most applicants in FY2019 will be eligible for somewhere between $100K and $250K.

   Section A. Introduction on page 1 and section D. Project Eligibility on page 2 of the proposed 2019 REAP Guidelines contain this information. All fact-sheets and presentations have been updated with the new information. The website will be updated with the change as soon as possible. Staff is working with IT to have the REAP database automatically calculate an applicant's eligibility. In the short term, staff will manually determine the exact amount an applicant is eligible to receive.

2. Filing status – Effective July 1, 2019, REAP tax credits can now be claimed through a jointly-filed PA tax return. Previously, recipients (eligible applicant and spouse) were required to file separately to claim the credit. The primary effect of the change is a family can use the REAP credit to pay all their PA income tax through a jointly-filed return. In addition, those wishing to sell/transfer the credit will not have to amend old returns to fix filing status issues.

   REAP Credit Certificates and the associated cover letter have been updated with this info. Section E. Tax Credits on page 3 of the REAP Guidelines includes this info, as well. The REAP Sale/Assignment Application has been updated. All presentations and publications include the information.

3. REAP Allocation – REAP's total annual allocation of tax credits has been increased to $13 million. Under previous REAP tax code provisions, the annual allocation was $10 million. Staff expects new allocation amount to cover 300-325 FY2019 REAP applications. In FY 2018, the REAP allocation of $10 million was exhausted by 232 applications

   Section A. Introduction on page 1 of the 2019 REAP Guidelines (and several other references to the REAP credit cap scattered throughout the Guidelines & Application) and all factsheets, publications, and the REAP webpage have been updated.

4. Tax credit rates – The revised REAP tax code provisions gives the Commission the ability to grant a tax credit equal to 90% of the eligible costs for certain high-priority best management practices as determined by the Commission and implemented within a watershed covered under an approved TMDL. The list of "high-priority" BMPs include: riparian forest buffers and maintenance, livestock exclusion from streams and associated practices (crossings, fence, water facilities, etc.), cover crops, and soil-health BMPs.

   Commission staff is currently considering integrating this new tax credit rate into the development and implementation of a new Conservation Excellence Grant Program pilot project, targeting Tier 1 Chesapeake Bay WIP counties (York & Lancaster). A simple example: A farmer in Salisbury Twp., Lancaster County, submits a REAP application for a no-till planter, a waste storage facility, a 35' riparian buffer and fence, and 2 stream crossings. Since the farm is in a watershed with a TMDL and is in a Tier 1 county, the farmer would receive tax credits for 90% of the out-of-packet installation costs of the buffer, stream crossings, and fence. The other BMPs would be reimbursed at the traditional 50% rate of out-of-pocket expenses.

   Commission staff favors implementing this aspect of the REAP program on a limited basis before making it available statewide (watersheds with a developed TMDL). This option could be expanded in subsequent years to include TMDL watersheds outside of the Bay watershed – and to include other soil-health BMPs.

   Section D. Project Eligibility on p2 of the Introducion of the 2019 REAP Guidelines includes the change. However, details of the provision are not completely developed yet. The proposed guidelines state that projects completed after July 1st, 2019 (effective date of Act 13) and meeting all other eligibility requirements will be eligible for the 90% rate. Staff's goal is to roll out this element of the program in conjunction with the CEG program. The FY2019 REAP Application contains sufficient information for staff to determine an applicant's eligibility for the 90% reimbursement rate. Details will be provided to local stakeholders at the time of roll-out.

5. Legacy Sediment – The revised REAP tax code provisions raises the tax credit rate for legacy sediment projects to 50%. The original REAP provisions stipulated a 25% tax credit rate (the only BMP with a rate other than 75% or 50%). We have yet to receive an application involving a legacy sediment project.

   Attachment7 (p20) of the 2019 REAP Guidelines and all REAP fact-sheets/presentations have been updated with the new information. Since there currently is no practice standard for Legacy Sediment, projects are eligible for REAP under already existing BMPs – like Streambank and Shoreline Protection.

6. Chesapeake Bay reserve – The revised REAP tax code provisions allows the Commission to reserve and target a maximum of $3 million for use only on projects within the

Chesapeake Bay Watershed. Up to $3 million of REAP's annual $13 million allocation could be targeted to farmers (for a specified time frame) within specific geographic areas of the Chesapeake Bay watershed (i.e. Tier 1 counties) and/or the $3 million reserve could be targeted toward specific practices within the watershed.

If the reserved funds are not allocated within the time frame specified, the funds would be open to all farmers – regardless of location.

Commission staff has not yet fully developed a system for implementing this change. If the change is implemented this year, all publicity documents will be updated and details will be provided to local stakeholders at the time of roll-out. Staff's goal is to roll out this element of the program in conjunction with the CEG program. The current REAP Application system provides enough information to adequately assess an applicant's eligibility under this potential change.

7. Sponsorship limit - The revised REAP provisions allows the Commission to set an aggregate limit on the amount of tax credits that sponsors may be awarded in any given program year. This addition to the REAP tax code provisions is a safeguard against an aggregate amount of the annual tax code allocation going to a single sponsor. The REAP tax code provisions specifies that there is no cap to the amount of credits any given sponsor may receive (the $250K cap does not apply). However, if staff encounters a scenario where sponsors are reserving an ever-increasing amount of the annual tax credit allocation – to the point where staff feels that individual farmers are being squeezed out of the program – the Commission could create a cap for sponsorship applications. For example, the Commission could stipulate that no more than 25% of REAP's annual allocation be awarded to sponsors and/or, the Commission could stipulate that an individual sponsor can receive no more than 10% of REAP's annual allocation. For reference: less than 10% of the allocation was awarded to sponsors in FY 2018. There are no current plans to develop a cap for sponsorship.

   There is no change for FY 2019 and no plans to implement this soon. Staff will continue to monitor usage of REAP sponsorship.

8. Definitions, eligible BMPS and certification provisions - The following REAP tax code revisions do not directly impact the day-to-day functioning of REAP. These changes clarify current Commission policy under the current REAP program (i.e. planning and certification standards; rate schedules for annual BMP tax credit calculation) and clarify definitions for eligible BMPS and other terms that were deemed necessary for consistency within the REAP provisions: For example, DEP developed the standards for Manure Management Plans (MMP) after the initial REAP tax code was passed in 2007. The revised tax code (Act 13 of 2019) includes a definition of MMP and inserts the term throughout the "Law" at appropriate places. The Commission has already implemented policies regarding MMPs and there is no change to the REAP Guidelines – except for Attachment 7 (definitions).

Definitions: Eligible Applicant; TMDL, Conservation Plan; Riparian Forest Buffer; Manure Management Plan,

Attachment 7 of the REAP Guidelines has been updated with the definitions.

Program staff recommends adoption of the proposed changes to the FY2019 REAP Guidelines & Application – pending final legal review by PDA legal counsel. Staff will provide updates and recommendations to the Commission regarding the 90% tax credit rate and Chesapeake Bay watershed targeting when REAP provisions are fully developed and ready for implementation.

Resource Enhancement and Protection Program

APPLICATION

Fiscal Year 2019

(July 1, 2019 – June 30, 2020)

State Conservation Commission
2301 North Cameron Street
Harrisburg, PA 17110

Phone: (717) 787-8821
Fax: (717) 705-3778
www.pda.state.pa.us/REAP

REAP APPLICATION INSTRUCTIONS
FY 2019

SUBMISSION INFORMATION

The Commission will accept FY 2019 REAP application beginning **September 16th, 2019**. Please send applications to the following address:

State Conservation Commission
REAP Tax Credit Program
2301 North Cameron Street
Harrisburg, PA 17110-9408

Applications must be typed or neatly printed. Emailed applications should be sent to: jsemke@pa.gov Faxed applications will not be accepted.

For those applicants that do not have a current up-to-date Conservation Plan, Agricultural E&S Plan and/or Nutrient Management Plan, Manure Management Plan (if required by law), the applicant will be restricted to applying for tax credits consistent with the "General Eligibility" provisions established at Section 1704-E of the REAP Statute and defined under the "General Eligibility Criteria" delineated in these guidelines.

Please refer to the program guidelines for additional information regarding eligible projects and for information regarding the use of REAP tax credits.

Parts of this Application may require the assistance of your local Conservation District, Natural Resource and Conservation Service (NRCS) office, or a qualified private sector technical service provider. Some sections require a signature of one of these parties for verification. See Attachment 4 of the Guidelines for a list of organizations who are qualified under the REAP tax credit program to provide verification signatures.

Please note: Section 2A and Section 2B must be verified on p4 by a qualified individual, even if there are is no livestock present on the operation.

Remove the cover page and instruction sheet before submitting the application. Please submit only the pages that pertain to your project.

REMINDERS

Before you submit the REAP Application, make sure you have….

- √ Provided contact name, mailing address, ag operation address, and one Social Security Number and/or EIN number for the applicant. Please note that the tax credit will be awarded to the Social Security Number or EIN number that you submit.
- √ Answered all eligibility questions (pp 2-3).
- √ Had your application verified with an appropriate signature of a qualified person(p4).
- √ Completed the REAP Project Cost/Funding Summary Table (pp5-8).
- √ Signed and dated the application (p9).
- √ Provided a map of the agricultural operation (for applications involving constructed BMP).

- √ Included the addendum page for sponsors and signed the appropriate boxes on p9 for sponsorship (if applicable)

If you are applying for Plans, have you provided the following?

- √ For proposed Plans: a cost estimate and a total acreage (p5). Please refer to the next page (iii) for information regarding the appropriate plan for your operation.
- √ For completed Plans: receipts/invoices that provide acreage data.

If you are applying for Equipment, have you attached the following?

- √ For proposed purchases: A cost estimate, price quote, or purchase order.
- √ For completed (delivered) purchases: the corresponding equipment dealer certification form (pp 10, 11, 12) and a sales receipt/invoice.

If you are applying for a constructed BMP project, did you include the following?

- √ For proposed projects: cost estimates, estimated other public funding at time of application (if applicable), estimated project completion date. (pp 5-8)
- √ For completed projects: all receipts (including any of your own labor), all records of other public funding associated with the project, and appropriate certification data (p15).

If you are applying for a roofed BMP, did you include the following?

- √ Roofed Waste Storage/Roofed Animal Concentration Area Evaluation Worksheet (p13). The form must be completed for all projects involving a roof.

If you are applying for cover crops, did you include the following?

- √ Cover Crop Job Sheet (p14) and receipts for completed plantings. If also applying for proposed plantings*, estimate future years on p14. For p6 (summary tables), please provide a sum of all years included in the application (completed plus proposed). Please refer to PA Custom Guide (NASS) to calculate planting costs (if planted by the applicant).
  ***If applying for proposed cover crop plantings, you must send final receipts/invoices and acreage data upon completion of the planting to have REAP credits officially awarded by PA Department of Revenue.**

If you are applying for riparian buffer maintenance costs, did you include the following?

- √ Riparian Forest Buffer Maintenance Worksheet (p14). The form must be completed for all projects involving a buffer.

REAP Planning Questionaire

****must be completed with all REAP applications for Nutrient Management Plans and/or Manure Management Plans****

"My operation generates or utilizes manure. What type of manure plan do I need?"

1. Is your operation a CAO or CAFO?

   YES → Your operation needs an approved Act 38 Nutrient Management Plan (NMP).

   NO ↓

2. Are you interested in participating in Act 38 as a volunteer (VAO)? VAOs can benefit from the limited legal protections provided by an approved Act 38 NMP.

   YES → Your operation needs an approved Act 38 Nutrient Management Plan (NMP).

   NO ↓

3. Are you interested in applying for funding from USDA/NRCS to help install ag BMPs?

   YES → It could benefit you to have NRCS 590 Standard NMP developed as part of your NRCS Conservation Plan. NRCS 590 Standard Plans are written to Act 38 standards. NRCS Plans must be approved by NRCS. (*see footnote)*

   NO ↓

4. Are you interested in the additional crop-year-specific agronomic information that an NMP contains?

   YES → It could benefit your operation to have an NMP developed by an Act 38 certified specialist. An NMP written to Act 38 standards will contain more information for your operation than a DEP Manure Management Plan (see below).

   NO ↓

<u>A PA DEP Chapter 91 Manure Management Plan (MMP) will meet your needs</u>.

Types of operations best-served by an MMP:

1. Operations with few animals
2. grazing-intensive operations
3. Operations with large acreage available for manure spreading

Footnote: NMPs that do not go through the Act 38 approval process (see questions 3 and 4) do not confer any of the limited legal protections provided by Act 38.

PA REAP
Resource Enhancement and Protection

REAP ID Number 19 -

For Commission use only

SECTION 1A - APPLICANT INFORMATION

APPLICANT NAME:

MAILING ADDRESS:

TOTAL REAP REQUEST: (sum pp 6-9)

street:

city *state* *zip*

phone : *email* :

CONTACT NAME: *(If different than applicant)*

Section 1B - TAX INFORMATION

REAP Tax Credits awarded by the Department of Revenue will automatically be issued under the FEIN for the business or pass-through entity, unless the applicant is a Sole Proprietorship, in which case, the credits will be issued under the SSN.

SSN (If you do not have a FEIN):

Federal Employer Identification Number(FEIN): PA Revenue ID:

Please check which type of business entity

Individual	LLC	S Corp	Partnership	C Corp
Bank	Limited Partnership	Other entity (please list):		

Has this applicant received a REAP tax credit in a previous program year? Yes No

Section 1C: Operation Information

same as applicant info *please provide County and Twp info below*

Operator Name (if different than above):

street

city *state* *zip*

county: *township:*

The ***applicant*** is:

The owner/operator of the property on which the project will be completed

A sponsor of the project*

**For projects where the applicant is a sponsor, a signed written agreement between the sponsor (applicant) and the owner/operator of the property on which the project is located must be completed, attesting that the owner/operator will comply with all the requirements associated with the award of the REAP tax credit, including the obligation to maintain the sponsored BMP(s). Both the sponsor's and the property owner's signature must appear in the appropriate sections of this application. A sample agreement is available upon request.*

Section 1D: General Project Information

This application is for a project(s) which include(s): (check all that apply)

Planning *(Conservation Plan, Ag E&S Plan, Nutrient Management Plan, Manure Management Plan)*

Best Management Practices (BMPs)

Purchase of Equipment

for constructed BMP projects*:

Yes No Have you **applied** for funding from any other source? (EQIP, CBP, Growing Greener,etc.)

Yes No Are you planning to apply for funding from any other source?(EQIP, CBP, Growing Greener,etc.)

**Answers do not impact the REAP application process and are used solely for record keeping purposes.*

SECTION 2 - REAP Eligibility

A. Conservation and Agricultural E&S (Ag E&S) Plans

Refer to Attachment 2 of the REAP Program Guidelines to complete this Section.

1. Do you have current Conservation Plans for all acres owned and/or operated that address all the relevant resource concerns - consistent with the list contained in Attachment 2 of the REAP Program Guidelines?

Yes ☐ If Yes, proceed to Question A.3

No ☐ If No, proceed to Question A.2 (also if you have both Conservation and Ag E&S Plans for your operation)

2. Do you have current Ag E&S Plans for all acres owned and/or operated that meet the requirements of DEP regulations Chapter 102.4(a) on all acres owned and/or operated? These requirements are:

- Cropland must be treated to eliminate ephemeral or classic gullies
- Cropland must be treated to tolerable soil loss (T) over the crop rotation
- Cropland with less than 25% cover within 100 feet of rivers and streams must be treated with additional BMPs
- Animal Heavy Use Areas (AHUAs) must be treated to minimize accelerated erosion and sedimentation
- If you do no plowing or tilling, a Prescribed Grazing (528) Plan (where approprate) or Mushroom Management Plan (where appropriate) meets the requirements of bullets 1-3 above.

Yes ☐ If Yes, proceed to Question A.3

No ☐ If No, you must include the development of such plans in your initial application for REAP tax credits. All ACA-related BMPs in the new plan must be fully implemented prior to receiving any REAP credits other than planning.

3. If you answered Yes to Question A.1 or A.2 above, is your plan fully implemented?

Yes ☐

No ☐ If No, list BMPs yet to be completed and an implementation schedule below:

Please do NOT attach a copy of the plan

B. Nutrient/Manure Management Plans and Animal Concentration Areas (ACAs)

Refer to Attachment 3 of the REAP Program Guidelines when completing this Section.

1. Do you have any livestock, poultry or equine on your operation or utilize/handle manure?

Yes ☐ If Yes, proceed to Question B.2

No ☐ If No, proceed to page 4 (Verification Page)

2. Is your operation a Concentrated Animal Operation (CAO) or Concentrated Animal Feeding Operation (CAFO)

Yes ☐ If Yes, proceed to Question B.3

No ☐ If No, proceed to Question B.4

3. Do you have a current Act 38 Nutrient Management Plan for your CAO or CAFO operation?

Yes ☐ If Yes, proceed to Question B.5

No ☐ If No, you must include the development of such plans in your initial application for REAP tax credits. All ACA-related BMPs in the new plan must be fully implemented prior to receiving any REAP credits other than planning.

4. If your operation is not a CAO or CAFO, do you have a Plan that meet the requirements of Chapter 91 of the PA Clean Streams Law?

Yes ☐ If Yes, check appropriate box below. Then proceed to Question B.5

No ☐ If No, you must include the development of such plans in your initial application for REAP tax credits. All ACA-related BMPs in the new plan must be fully implemented prior to receiving any REAP credits other than planning.

☐ **voluntary Act 38 NMP or NRCS 590 Plan** **or** ☐ **DEP Manure Management Plan**

5. If you answered Yes to Question B.3 or B.4, is the Nutrient/Manure Management Plan fully implemented?

Yes ☐

No ☐ If No, list the BMPs yet to be completed and an implementation schedule below:

6. Does this application include REAP-eligible BMPs necessary to implement the Nutrient/Manure Management Plan?

Yes ☐

No ☐

7. Does your operation have any Animal Concentration Areas (ACAs) as defined below?

- Livestock confinement areas other than indoor facilities and true pastures
- Barnyards, feedlots, loafing areas, exercise lots and similar animal confinement areas that will not maintain a growing crop
- Heavily stocked livestock areas where nutrients are applied by animals in excess of crop removal rates
- Animal congregation areas within pastures that meet the above requirements, such as: supplemental feeding areas, shade and watering areas, congested travel areas

Yes ☐

No ☐

8. Does your operation have any untreated ACAs?

Yes ☐

No ☐

Use the evaluation information below to determine whether there is a negative impact to surface water and groundwater.

- Does untreated runoff from the area enter surface water and/or have a direct connection to surface water?
- Does runoff from the area present a potential impact to groundwater?
- Is the areas within 50 feet of an active well, spring or sinkhole?

9. Does this application include REAP-eligible BMPs to address the ACAs?

Yes ☐

No ☐

Please do NOT attach a copy of the plans.

VERIFICATION PAGE

See Attachment 4 of the Guidelines for information on individuals who are qualified to provide this verification

Verifiers are attesting to the accuracy of the answers in Sec 2.

Please note, both Section 2.A and Section 2.B, must be verified by a qualified individual, even if there is no livestock and/or manure handling on the operation.

A. Conservation and Agricultural E & S Plans

I affirm that I have reviewed the responses made by the applicant in **Section 2A**, and after due diligence and inquiry I hereby affirm the foregoing to be true and correct to the best of my knowledge, and make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities.

NAME: (print)

TITLE:

ORGANIZATION OR BUSINESS:

PHONE:

VERIFICATION SIGNATURE: DATE:

B. Nutrient/Manure Management Plans and Animal Concentration Areas

I affirm that I have reviewed the responses made by the applicant in **Section 2B**, and after due diligence and inquiry I hereby affirm the foregoing to be true and correct to the best of my knowledge, and make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities.

NAME: (print)

TITLE:

ORGANIZATION OR BUSINESS:

PHONE:

VERIFICATION SIGNATURE: DATE:

C: Important

1. Acres operated by the applicant and therefore covered by this plan verification. _____

2. For constructed BMP projects that do not include other public funding: Has the project been included in any reporting to DEP or NRCS? **Yes** ☐ **No** ☐

REAP Project Cost/Public Funding Summary Table

Eligible Best Management Practice	Units Planned/ Installed	Total Cost	Public Funds	Source (NRCS, Growing Greener, etc.)	Total Cost Minus Public Funds	50% or 75%	REAP Request	Practice Used in ACA Treatment? (circle one)	Complete or Proposed	Date/ Proposed date of Completion
Additional Expenses for BMPs Previously Credited										
EQUIPMENT BMPs										
Composting Equipment	no.					50%				
Cover Crop Roller/ Roller Attachments	no.					50%				
Manure Incineration Equipment	no.					50%				
Manure Injection Equip. - Low-disturbance	no.					50%				
Manure Separation Equipment	no.					50%				
No-Till Planting Equipment DRILL	no.					50%				
No-Till Planting Equipment PLANTER	no.					50%				
Precision Nutrient Application Equipment	no.					50%				
Residue Management Equip - Low-disturbance	no.					50%				
PLANNING BMPs										
Agriculture E& S Plan	ac.					75%				
Conservation Plan	ac.					75%				
Manure Management Plan - DEP Chapter 91	ac.					75%				
Nutrient Management Plan	ac.					75%				
Constucted BMPs										
Access Road - 560	ft.					50%				
Animal Mortality Facility - 316	no.					50%				

REAP Project Cost/Public Funding Summary Table

Eligible Best Management Practice	Units Planned/ Installed	Total Cost	Public Funds	Source (NRCS, Growing Greener, etc.)	Total Cost Minus Public Funds	50% or 75%	REAP Request	Practice Used in ACA Treatment? (circle one)		Complete or Proposed	Date/ Proposed date of Completion
Channel Stabilization - 584	ft.					50%					
Closure of Waste Impoundments - 360	no.					50%					
Composting Facility - 317	ft^2					50%					
Constructed Wetland - 656	ft^2					50%					
Cover Crop - 340	ac.					50%					
Critical Area Planting - 342	ac.							Yes	No		
Diversion - 362	ft.							Yes	No		
Filter Strip -393	ac.					50%					
Grassed Waterway - 412	ac.							Yes	No		
Heavy Use Area Protection - 561	ft^2							Yes	No		
Lined Waterway or Outlet – 468	ft.							Yes	No		
Obstruction Removal – 500	ft^2					50%					
Other - _ _ _	units							Yes	No		
Poulty/Livestock House Vegetative Buffer - 380	ft.					50%					
Pumping Plant for Waste Water Control - 533	no.					50%					
Riparian Forest Buffer – 391	ac.										
Riparian Forest Buffer Maintenance – 391	ac.										

REAP Project Cost/Public Funding Summary Table

Eligible Best Management Practice	Units Planned/ Installed	Total Cost	Public Funds	Source (NRCS, Growing Greener, etc.)	Total Cost Minus Public Funds	50% or 75%	REAP Request	Practice Used in ACA Treatment? (circle one)		Complete or Proposed	Date/ Proposed date of Completion
Riparian Herbaceous Cover-390	ac.					50%					
Roof Runoff Structure -558	ft.							Yes	No		
Roofs and Covers – 367	ft^2							Yes	No		
Sediment Basin -350	no.					50%					
Silage Leachate Management	no.					50%					
Sinkhole and Sinkhole Area Treatment -527	ac.					50%					
Solid/Liquid Waste Separation Facility- 632	no.					50%					
Streambank and Shoreline Protection - 580	ft.					50%					
Structure for Water Control – 587	no.							Yes	No		
Subsurface Drain -606	ft.							Yes	No		
Terrace – 600	ft.					50%					
Underground Outlet - 620	ft.							Yes	No		
Vegetated Buffer	ac.							Yes	No		
Vegetated Treatment Area – 635	ac.							Yes	No		
Waste Storage Facility -313	ft^3					50%		Yes	No		
Waste Transfer - 634	ft.					50%					
Waste Treatment - 629	no.					50%					

REAP Project Cost/Public Funding Summary Table

Eligible Best Management Practice	Units Planned/ Installed	Total Cost	Public Funds	Source (NRCS, Growing Greener, etc.)	Total Cost Minus Public Funds	50% or 75%	REAP Request	Practice Used in ACA Treatment? (circle one)		Complete or Proposed	Date/ Proposed date of Completion
BMPs in Conjunction with Prescribed Grazing (528)											
Animal Trails and Walkways - 575	ft^2							Yes	No		
Fence - 382	ft.							Yes	No		
Pipeline - 516	ft.					50%					
Pond - 378	no.					50%					
Spring Development - 574	no.					50%					
Stream Crossing - 578	no.					50%					
Water Well – 642	no.					50%					
Watering Facility – 614	no.					50%					
extra lines for duplicate BMPs											
								Yes	No		
								Yes	No		
								Yes	No		
								Yes	No		

SECTION 4 - Signature Page

Owner/Operator Signature

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

I affirm that I am authorized to legally bind the company, corporation, partnership or other legal entity whose name appears as the applicant and/or owner/operator (for projects involving a sponsor).

I hereby give permission for the State Conservation Commission, its staff and/or its agents to review my Conservation Plan, Ag E&S plan and/or my Nutrient/Manure Management Plan, and all relevant records pertaining to these plans, as required as part of the application review process.

I understand that any project receiving REAP credits is subject to on-site inspection by SCC staff and/or a representative of the SCC.

I agree to permit the State Conservation Commission, its staff and/or its agents to conduct site visits of the project location and to monitor the project for the lifespan of the project.

I understand that if a BMP is not maintained and properly managed for the required lifespan, as defined by the REAP Guidelines, I will be required to return the full amount of the tax credit originally granted for the BMP. I understand that if I provide prior written notification to the Commission that I am unable to maintain the BMP due to the sale of the property, cessation of an agricultural operation, or other factors, the Commission may direct the Department to prorate the amount of tax credit that shall be returned. I understand this applies to any violations of the provisions of the REAP Program.

I understand and acknowledge that approved REAP applications are a "public record" under the Pennsylvania Right-To-Know Law (65 P.S. §§ 66.1 *et seq.* , as amended).

Print Name(s) of Project Owner/Operator	Printed Title or Affiliation to a Business (if applicable):
Project Owner/Operator Signature	Date

For Projects Involving a Sponsor

I hereby affirm that I am authorized to legally bind the company, corporation, partnership or other legal entity whose name appears as the applicant and sponsor.

I hereby affirm that there is a signed written agreement certifying that the project owner/operator will comply with all of the requirements associated with the award of the REAP tax credit. I hereby affirm that there is a signed written agreement between the sponsor and the owner/operator of the project regarding financial details of the sponsorship. I make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities.

Print Name(s) of Sponsor	
Sponsor Signature	Date
Owner/Operator Signature	Date

If this application is prepared by someone other than the applicant, please provide the following:

NAME:
ORGANIZATION:
PHONE:

REAP No-Till Equipment Purchase Certification

For more information, please refer to Att 5 of the REAP Guidelines.

Dealer Certification

I certify that the no-till planting equipment described below is sold under the following conditions:

1. The equipment is capable of placing seeds at the optimum depth for germination and growth in untilled soil with plant residue cover.

2. The purchase agreement includes field setup by a qualified representative of the dealership.

3. For used equipment, all wear items meet or exceed manufacturer's guidelines for replacement parts.

4. I have no conflict of interest as defined by the REAP Guidelines.

Note: Used equipment sold privately must also be certified by a dealer representative or other persons approved by the Commission.

Dealer Representative Printed Name	for	Company Name
Dealer Representative Signature		Phone Number

Equipment Information

Equipment Make, Model and Year:	
Planter ☐ Drill ☐	
Serial Number: ☐ Check if serial number is not yet available	
The equipment is: New ☐ Used ☐	Purchase Price: $
☐ Check here if equipment has already been delivered. Date of Delivery/Expected Delivery:	

Applicant Certification

I certify that the no-till equipment described above will be:

1. Utilized in untilled soil consistent with the provisions of a current Conservation/Ag E&S plan.

2. Maintained for the designated lifespan of the equipment, which is 7 years for new equipment and 3 years for used equipment.

3. Utilized on an agricultural operation that is identified in this application.

I agree to allow inspections by an agent of the State Conservation Commission to ensure that my operation is utilizing this equipment for no-till crop production. I affirm the foregoing to be true and correct, and make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities. I agree to provide to the SCC the information requested below concerning my operation.

Applicant Name	Signature	date

Please provide the following:

Number of acres planted no-till on my operation annually:	_____ acres
Number of acres of cover crops planted annually:	_____ acres
Acres that receive automated precision application of nutrients annually:	_____ acres

REAP Precision Nutrient Application Equipment Certification

****For more information, please refer to Att 5 of the REAP Guidelines****

Dealer Certification

I certify that the precision application equipment described below is sold under the following conditions:

1. The equipment is capable of applying manure or other fertilizers at variable rates based on data input from maps or optical sensors.
2. The purchased components are necessary for variable rate spreading of nutrients.
3. The purchase agreement includes setup by a qualified representative of the dealership.
4. I have no conflict of interest as defined by the REAP Guidelines.

Equipment Information

Base Equipment Make, Model:

Serial Number(of the base model equipment): ☐ check if not yet available

****Please note: Only the precision ag* ***components*** *are eligible for REAP tax credits. Check all that apply:****

☐ displays, monitors, controllers	☐ variable rate drives, hydraulic motors
☐ GPS	☐ metering devices
☐ section/swath control	☐ nozzle controls

The equipment is: New ☐ Used ☐ | Purchase Price (components): $

☐ Check here if equipment has already been delivered. Date of Delivery/Expected Delivery:

****If possible, please itemize receipt****

Dealer Representative Printed Name for Company Name

Dealer Representative Signature Phone Number

Note: Used equipment sold privately must also be certified by a dealer representative or other persons approved by the Commission.

Applicant Certification

I certify that the precision fertilizer application equipment described above will be:

1. Utilized to apply nutrients at variable rates across crop fields in accordance with data input from maps or optical sensors.

2. Maintained for the designated lifespan of the equipment, which is 7 years for new equipment and 3 years for used equipment.

3. Utilized on an agricultural operation that is identified in this application.

I agree to allow inspections by an agent of the State Conservation Commission to ensure that my operation is utilizing this equipment for variable rate application of manure or other fertilizers. I agree to report to the Commission on an annual basis the number of acres on which the above equipment is operated, throughout the designated lifespan of the equipment. I affirm the foregoing to be true and correct, and make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities.

Please provide the following:

Number of acres planted no-till on my operation annually: _____ acres

Number of acres of cover crops planted annually: _____ acres

Acres that receive automated precision application of nutrients annually: _____ acres

Applicant Name Applicant Signature date

REAP Low Disturbance Residue Management/Manure Injection Equipment Purchase Certification

****For more information, refer to Att 6 of the REAP Guidelines****

Dealer Certification

I certify that the low-disturbance manure injection equipment/low disturbance residue management equipment described below meets the standards set forth in Attachment 6 of the REAP Guidelines and is sold under the following conditions:

1a. For Manure Injection equipment: The equipment is designed for and is capable of injecting and/or incorporating manure at a shallow depth with minimal soil disturbance; which leaves at least 60% plant residue on the surface.

1b. For Residue Management equipment: The equipment is designed for - and is capable of - cutting and sizing crop residue with minimal soil disturbance; which leaves a minimum of 60% plant residue on the surface.

2. For Residue Management Equipment: The gang angles or disc angles of the equipment (fixed or adjustable) do not exceed 5 degrees.

3. For Residue Management Equipment: The working depth of the equipment does not exceed 4 inches.

4. For Residue Management Equipment: The discs/coulters are not concave.

5. I have no conflict of interest as defined in the REAP Guidelines with respect to this application (pp 21, 22).

Note: Used equipment sold through a dealership or privately must also be certified by a dealer representative or other persons approved by the Commission.

Dealer Representative (print)	for	Company Name
Dealer Representative Signature		Phone Number

Equipment Information

Equipment Make, Model and Year:		
Injector ☐	Residue Mgmt. ☐	Seed Box ☐
Serial Number:		☐ Check if serial number is not yet available
The equipment is: New ☐ Used ☐		Purchase Price: $
Order Date:		Expected Delivery Date:
☐ Check here if equipment has already been delivered.		Date of Delivery:

Applicant Certification

I certify that the equipment described above will be:

1. Utilized in a manner consistent with the provisions of a current Conservation/Ag E&S Plan and Nutrient/Manure Management Plan.

2. Operated in a manner which leaves a minimum of 60% of crop residue on the surface.

3. Not altered in any way that increases soil disturbance beyond the original design of the equipment.

4. Maintained by the applicant for the designated lifespan of the equipment: 7 years for new equipment and 3 years for used equipment.

5. Utilized by the applicant on an agricultural operation that is identified in this application.

I agree to allow inspections by the State Conservation Commission to ensure that I am utilizing this equipment for **low disturbance** manure injection/incorporation and/or **low disturbance** residue management. I affirm the foregoing to be true and correct, and make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities.

Applicant Name (print)	
Applicant Signature	Date

Roofed Waste Storage or Roofed Animal Concentration Area Evaluation Worksheet

The roofed BMP is: Waste Storage Facility ☐ Animal Concentration Area (ACA) ☐

Animal Type: _____

Animal Numbers: Current* _____ Proposed (if part of expansion) _____
*prior to construction of the roofed structure

Roof Evaluation Section

1. Is the roofed BMP checked above listed in the implementation schedule of your Act 38 Nutrient Management, Manure Management Plan, or Conservation Plan/Ag E&S Plan?

   ☐ Yes - list plan: _____
   ☐ No

2. Was the roofed structure designed by an engineer? Yes ☐ No ☐

   If yes, Name: _____ Telephone: _____

3. Were alternatives to "Roofed Structures" evaluated? Yes ☐ No ☐
   If Yes, list alternatives considered and why those were rejected

   _____
   _____
   _____
   _____

REAP Intended Purpose - Roofs

1. I understand that a roofed BMP under the REAP Tax Credit Program may only be used for its intended purpose as defined by the Commission. It may not be used for long-term storage of hay, feed, equipment, or other materials; nor may it be converted to any other use for the entire REAP lifespan (10 years) of the practice.

2. I understand that a roofed Animal Concentration Area may only be used as a sacrifice, loafing, or exercise area. It may not be converted into animal housing (by adding permanent sides, walls, stalls, etc.) for the entire REAP lifespan (10 years) of the practice.

3. I understand that roofed BMPs are subject to annual inspections for the lifetime (10 years) of the project to assure that they are being managed for their intended purpose.

4. I understand that if an inspection reveals that BMPs are being misused, the Commission may revoke all or a portion of the allocated tax credits.

I have read and understand the information on this worksheet. I affirm the foregoing to be true and correct, and make these statements subject to the penalties of 18 PA.C.S.A §4904, relating to unsworn falsification to authorities.

Applicant Name (Print) _____

Applicant Signature _____ Date_____

REAP Cover Crop Job Sheet

Refer to Attachment 8 of the REAP Guidelines for more information

Single-Species: ☐ Yr 1 _____ ac. Yr 2 _____ ac Yr 3 _____ ac.

Multi-Species: ☐ Yr 1 _____ ac. Yr 2 _____ ac. Yr 3 _____ ac.

**must contain grass and broadleaf species*

Planting Information: (for completed plantings)

Field(s)	Species	Rate	Planting Date	Drill	Broadcast	Termination Method/date
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	

Additional Notes (if necessary):

Certification: *(subject to spot-check by State Conservation Commission)*

1. _____ acres (total) of cover crops were planted on the locations covered by this job sheet.
2. I certify that no nutrients - manure or fertilizer - have been or will be applied to this cover crop
   Yes ☐
   No ☐
   **answer does not impact the REAP application process*
3. I affirm the information provided on this form is true and correct, and make these statements subject to the penalties of 18 PA.C.S.A 4904, relating to unsworn falsification to authorities

_____

Signature Date

REAP Project Completion Certification for BMPs

APPLICANT NAME:	REAP ID #*(if applicable)* :

Completion: List approved eligible BMP(s) certified as complete for the REAP Program:

For reporting purposes, for each BMP Certified, estimate approximate "units" of measure. (i.e. linear, square, cubic feet, acres of BMPs installed, etc.)

BMP:	**Number/Unit:**	**BMP:**	**Number/Unit:**
Example:			
Waste Storage Facility	*10,000 cubic feet*		

List additional BMPs, if necessary, on a separate sheet.

Certification: Complete the appropriate certification below:

Project Designer/Engineer Certification of BMPs

I certify that, to the best of my knowledge, the BMP(s) listed above have been installed to meet the requirements of REAP program guidelines, and that the project design meets or exceeds the design standards and specifications of the "Pennsylvania Technical Guide." I certify that I have the appropriate job approval authority from NRCS to certify this project.

Name (printed)	Title/Organization
Signature	Date

~OR~

Registered Professional Engineer Certification

I certify that, to the best of my knowledge, the BMP(s) listed above have been installed to meet the requirements of REAP program guidelines, and that the project design meets or exceeds the design standards and specifications of the "Pennsylvania Technical Guide."

Name (printed)

Title/Organization

Signature Date

Registered Professional Engineer's Seal

REAP Project Completion Summary

Name: _____ Date: _____

List each completed BMPs below. Use additional sheets if necessary. Use REAP ID if known

REAP ID#	BMP Name	Total Cost	Contractor Receipt	Other Public Funding	Total Cost minus Other Funding	50% or 75%	REAP Request

Are all invoices/receipt attached? Yes ☐ No ☐

Is the signed Engineer Certification attached? Yes ☐ No ☐

Is documentation of all other public funding attached? Yes ☐ No ☐

Resource Enhancement and Protection Program

Guidelines

Fiscal Year 2019

(July 1, 2019 – June 30, 2020)

State Conservation Commission
2301 North Cameron Street
Harrisburg, PA 17110

Phone: (717) 787-8821
Fax: (717) 705-3778
www.pda.state.pa.us/REAP

Resource Enhancement and Protection (REAP) Program Guidelines
FY 2019

General Information

A. Introduction

Act 55 of 2007 – amended in Act 13 of 2019 - created the Resource Enhancement and Protection Program (REAP). The REAP program is designed to enhance farm production and protect natural resources by enabling farmers, landowners, and businesses to earn Pennsylvania state income tax credits in exchange for implementing "Best Management Practices" (BMPs).

$13 million in PA tax credits is available annually to individuals and businesses that meet the eligibility requirements for the program. Guidelines for the program are established and administered by the State Conservation Commission.

Eligible applicants receive 50%-75% of out-of-pocket project costs in the form of state tax credits - up to $250,000 in a 7-yr period, per agricultural operation. The amount of tax credit available to a recipient is dependent on the type of BMP implemented. See Attachment 1 for a list of REAP Eligible BMPs.

B. Applicant Eligibility

To be eligible for the REAP program, an applicant must meet the following criteria:

1. The applicant must be an individual or business who is subject to taxation by the Commonwealth of Pennsylvania under the following state taxes: Personal Income Tax, Corporate Net Income Tax, Capital Stock and Franchise Tax, Bank Shares Tax, Title Insurance Company Tax, Insurance Premiums Tax, and Mutual Thrift Institutions Tax.
2. The agricultural operation must be in compliance with the PA Clean Streams Law. As such, the operation must have the following:

    i) A current Agricultural E&S Plan or Conservation Plan for all acres that are under their management control (owned/leased/utilized) - in the year that they are applying for REAP Tax Credits. The applicant must be on-schedule for full implementation of the plan.

    ii) A current Nutrient Management Plan or Manure Management Plan (as required by law) for all acres under their management control if they generate/utilize manure and/or other organic sources of plant nutrients (e.g. biosolids) – in the year that they are applying for REAP Tax Credits. The applicant must be on-schedule for full implementation of the plan.

3. An agricultural operation with animal concentration areas (ACAs) on any portion of the agricultural operation under its management control, must first implement all best management practices necessary to abate nutrient runoff, sediment runoff, and storm water runoff from these areas before receiving any tax credits for other REAP-eligible BMPs or equipment (other than planning). Any REAP-approved BMPs necessary to properly treat an ACA under your management control are eligible for REAP tax credits.

If you do not have a current Agricultural E&S Plan/ Conservation Plan and/or a current Nutrient Management/Manure Management Plan (as required by law), your application must include the development of these plans. No credits will be awarded for any other eligible BMP or equipment until plans are complete and certified.

C. Sponsorship

An eligible individual, business, or entity may act as a sponsor of a REAP-eligible project. A sponsor provides funding to an eligible ag operation for the REAP-eligible BMPs and REAP credits are awarded directly to the sponsor. A sponsor is defined in Attachment 9. Typical examples of sponsors include: banks/lending institutions, businesses, and individuals/family trusts. For projects involving a sponsor, the Commission requires a signed written agreement between the sponsor (applicant) and the owner/operator of the property on which the project will be completed, certifying that the operator will comply with all the requirements associated with the REAP tax credit. A sample Sponsor agreement is available upon request. Please contact the Commission for more information regarding Sponsorship.

D. Project Eligibility

Applications are accepted on a first-come, first-served basis. The following are considered eligible costs of a project to which a tax credit may be applied:

- Project design engineering and associated planning
- Project construction or installation – including labor provided by the applicant
- Equipment, materials and other components of eligible projects
- Post construction inspections
- Interest payments on loans for project implementation for up to one year

All projects (BMPs) must be necessary to reduce pollution from nitrogen and/or phosphorus and/or sediment runoff into surface waters to be eligible for REAP tax credits.

Any costs associated with an eligible project may be included in a REAP application. However, no tax credit will be provided for a publicly funded portion of a project. Projects involved in other public funding programs (i.e. EQIP, Chesapeake Bay, Growing Greener) are eligible to receive REAP credits - based on true out-of-pocket costs – after funding from other programs is accounted for in the REAP application.

Projects are eligible for REAP tax credits until the BMP's REAP lifespan has expired. Life spans established by the Commission for specific practices are found in Attachment 1 (typically 5-10 yrs).

An ag operation is eligible for a maximum of $250,000 of REAP tax credits in any consecutive 7-yr period.

The Commission may establish a list of BMPs for which applicants are eligible to receive REAP credits equal to 90% of out-of-pocket installation costs. The Commission may also establish a list of watersheds in which applicants are eligible to receive REAP credits equal to 90% of out-of-pocket installation costs. Projects completed after July 1, 2019 (passage of Act 13) that meet the Commission's requirements for the 90% credit rate will be considered eligible.

Any of the above costs for services provided by a Conservation District or private sector technical service provider through a fee are eligible costs. These services are eligible for credits at a reimbursement rate of 75%. REAP application/verification fees are not eligible costs nor are fees charged by consultants to fill out a REAP application.

The tax credit must be returned if the practice is not maintained and managed for the life span of the practice. the BMP is not maintained for the required period, the owner of the property upon which the project exists shall return to the Department of Revenue the full amount of the tax credit originally granted.

If the recipient of a tax credit provides prior written notification to the Commission that the BMP will not be maintained due to the sale of the property, cessation of an agricultural operation, or other factors, the

Commission may direct the Department of Revenue to prorate the amount of the tax credit that shall be returned based on the remaining lifespan of the BMP in question.

The Commission has established a trade-in policy for no till equipment (and other equipment) for trade-ins that occur before the established lifespan of the equipment has expired. See Attachment 12 for more information on this policy.

The Commission reserves the right to deny an application for any BMP and/or equipment if the cost is not within reasonable and fair market value as determined by the Commission. The Commission reserves the right to deny an application for any BMP and/or equipment that does not meet the intent of the standards set forth by the Commission.

E. Tax Credits

The PA Department of Revenue will review an approved applicant's compliance with the Commonwealth's tax laws and regulations prior to awarding REAP tax credits.

REAP tax credits can be used to pay PA income tax, dollar for dollar. The tax credit may be used for up to 15 years from the date it is awarded - applying the credit on each annual PA tax return until it is depleted. In addition, a spouse can use the REAP credit through a jointly-filed PA return.

A tax credit awarded in accordance with the guidelines of the REAP program must first be applied against the awardee's: Personal Income Tax, Corporate Net Income Tax, Bank Shares Tax, Title Insurance Company Tax, Insurance Premiums Tax, and Mutual Thrift Institutions Tax for the taxable year during which the credit is awarded (the effective date on the credit certificate). The unpaid tax liability must be satisfied before any portion of the credit can be carried forward to satisfy the tax liabilities for future years or be sold or passed-through.

1. To claim the tax credit, the awardee must return the tax credit claim form – found on the reverse of the credit certificate - to the Department of Revenue.
2. The tax credit may be carried over and applied to succeeding taxable years up to 15 years from the effective date the tax credit.
3. An awardee may not carry back or obtain a refund of all or any portion of an unused tax credit granted under this program.
4. To pass through this credit to the shareholders, members or partners, please return the tax credit claim form to the Department of Revenue. Do not include the claim form with any tax report.

The REAP tax credit may be sold or transferred to another PA taxpayer.

1. An awardee, upon application to and approval by SCC, may sell or assign, in whole or in part, unused credits to an identified buyer, one calendar year from the effective date on the credit certificate.
2. Before an application to sell or assign tax credits will be approved, the Department of Revenue must find that the applicant has filed all required state tax reports and returns for all applicable tax years and paid any balance of state tax due as determined by the Department of Revenue.
3. Once a sale or assignment is approved, it is final, and the seller's or assignor's right to claim the credit is terminated. Buyers may not resell or reassign tax credits.
4. The assignee or purchaser of tax credits shall immediately claim the credits in the taxable year in which the purchase or assignment is made. The purchaser or assignee may not carry forward, carry back or obtain a refund of the tax credit.

Individuals who have been awarded REAP credits may directly arrange the sale or transfer of REAP credits to any eligible buyer. In addition, a list of private brokers who can assist with the sale of tax credits is found in Attachment 11 - or on the REAP webpage.

The REAP Tax Credit Sale Application packet is available on the REAP webpage or by calling the Commission at 717-787-8821. Please refer to the packet for additional details regarding the sale of REAP tax credits.

F. Application Procedures

Applications will be accepted for projects that are **proposed** or **completed** (or mixed) at the time of application. Applications are accepted on a first-come, first-served basis.

Proposed projects must be based on a reasonable cost estimate and/or a current site Inventory and Evaluation (I&E) that has been developed by a person with appropriate NRCS job approval authority or equivalent experience/training. Applications for proposed projects must include an estimated timeline for completion.

Projects that include the proposed purchase of equipment must be completed by **June 30, 2020**. Projects involving the implementation of structural BMPs must be complete by **June 30, 2021** to be eligible. If the approved projects are not completed within the specified time frames, the proposed projects may be removed from the program. Implementation schedules may be extended past the dates approved with the application, on a case-by case basis at the discretion of the Commission, if the applicant notifies the Commission of the delay.

REAP credits for eligible multi-year projects will be reserved from the allocation of the fiscal year in which the application is approved. Tax credits are awarded upon completion of the approved project.

Upon completion of the eligible project, the applicant must provide to the Commission paid receipts for the project and signed project certification information from a qualified individual. All projects must meet the design and certification standards established by the Commission.

The Commission will process all FY 2019 applications within 60 days of receipt of a complete application, and will notify the applicant, in writing, if the application meets the requirements for an eligible project. An approved project is authorized to receive REAP tax credits.

The PA Department of Revenue will conduct a compliance check to determine the status of the applicant regarding all relevant state tax reports and returns. Within 60 days of notice from the Commission, the PA Department of Revenue will issue a notice of award of a tax credit.

If the PA Department of Revenue deems that the applicant is non-compliant with regards to the required state tax reports, the applicant must immediately contact the Department of Revenue to resolve the tax issue. If the applicant remains in a non-compliant status for two years, the project will be removed from the REAP program.

The Commission will consider applications for BMPs on existing agricultural operations. Projects which include expansion of an existing agricultural operation of greater than 25% will not be eligible for REAP tax credits.

For all issues not specifically addressed by these guidelines, please refer to the provisions of Act 13 of 2019, Section 1701-E to Section 1710-E, or contact the Commission at 717-787-8821. Questions regarding tax implications for individual applicants should be directed to an accountant or other tax professional.

Applications will be accepted beginning **September 16th, 2019**. Applications may be delivered to the Commission office at the following address:

State Conservation Commission
REAP Program
2301 North Cameron Street
Harrisburg, PA 17110

E-mailed applications should be sent to: jsemke@pa.gov. Faxed applications will not be accepted.

Attachment 1

REAP Eligible Best Management Practices (BMPs)

The following is a list of the most-commonly used REAP-eligible BMPs. Please contact the SCC if you have questions regarding a specific BMP or water-quality project that is not listed below.

Planning BMPs

Agricultural Erosion & Sedimentation (AG E&S) Control Plan

Lifespan:	3 years
Tax Credit Rate:	75%
Additional Information:	Refer to Attachment 2
REAP Conditions:	The plan must meet the requirements of Chapter 102 of the PA Clean Streams Law
Certification Requirements:	The Ag E&S Plan shall be prepared by a person trained and experienced in Agricultural E&S control methods and techniques applicable to the size and scope of the project being designed.

Conservation Plan

Lifespan:	3 years
Tax Credit Rate:	75%
Additional Information:	Refer to Attachment 2
Certification Requirements:	The plan must be written by a NRCS certified conservation planner.

Manure Management Plan (MMP)

Lifespan:	3 years
Tax Credit Rate:	75%
Additional Information:	Refer to Attachment 3. See also: DEP Land Application of Manure – Manure Management Plan Guidance
REAP Conditions:	The plan must meet the standards of Chapter 91 of the PA Clean Streams Law

Nutrient Management Plan

Lifespan:	3 years
Tax Credit Rate:	75%
Additional Information:	Refer to Attachment 3. Must meet Act 38 Standards.
Certification Requirements:	Must be written by an Act 38 certified specialist.

Equipment BMPs

Composting Equipment

Lifespan:	New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate:	50%
Additional Information:	Compost screeners, turning equipment, baggers, etc. as approved by the Commission
REAP Conditions:	Composting must be included in the operation's Nutrient/Manure Management Plan.

Cover Crop Rollers and Roller Attachments

Lifespan:	New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate:	50%
Additional Information:	Refer to Attachment 5
REAP Conditions:	Equipment used to roll down cover crop residue prior to no-till planting of subsequent crops

Manure Incineration Equipment

Lifespan:	New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate:	50%
Additional Information:	Furnaces, Burners, Conveyors, other equipment approved by Commission
REAP Conditions:	Incineration must be included in the operator's Nutrient/Manure Management Plan

Manure Injection Equipment – Low Disturbance

Lifespan:	New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate:	50%

Additional Information: Refer to Attachment 6
REAP Conditions: Equipment must be capable of shallow injection of manure and/or must be a contiguous part of a manure injection system. Manure injection equipment that utilizes new technology will be evaluated by the Commission on a case by case basis.
Certification Requirements: Requires Equipment Dealer Certification

Manure Separation Equipment
Lifespan: New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate: 50%
REAP Conditions: Manure separation must be included in the operation's Nutrient/Manure Management Plan.

No-Till Planting Equipment – Planter or Drill
Lifespan: New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate: 50%
Additional Information: Refer to Attachment 5
Certification Requirements: Requires Equipment Dealer Certification

Precision Nutrient Application Equipment
Lifespan: New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate: 50%
Additional Information: Refer to Attachment 5
REAP Conditions: Components of Nutrient Application Equipment that enable base equipment (new or existing) to perform with variable rate application capabilities.
Certification Requirements: Requires Equipment Dealer Certification

Residue Management Equipment – Low Disturbance
Lifespan: New Equipment - 7 years, Used Equipment - 3 years
Tax Credit Rate: 50%
Additional Information: Refer to Attachment 6
REAP Conditions: Vertical tillage equipment used to incorporate manure and/or manage heavy corn residue with minimal soil disturbance. Equipment whose main function is secondary tillage (i.e. disking equipment) is not eligible. Equipment that utilizes new technology will be evaluated by the Commission on a case-by-case basis.
Certification Requirements: Requires Equipment Dealer Certification

Constructed BMPs

Access Road
NRCS Practice Code: 560
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: This practice shall only be applicable to those locations on the farm where an improved travel-way is needed to access newly established BMPs. REAP tax credits will not be authorized for any construction or portion thereof exceeding 14 feet in width or 500 feet in length.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Animal Mortality Facility
NRCS Practice Code: 316
Lifespan: 10 years
Tax Credit Rate: 50%
REAP Conditions: The animal mortality composting facility must be part of a manure/nutrient management plan. The dead animals must come from the producer's operation and may not come from outside sources.
Certification Requirements: Any Conservation district or NRCS employee, or NRCS Certified Technical Service Provider, or private sector engineer or technician who has appropriate training and experience in the BMP planning, design and installation methods and techniques applicable to the size and scope of the BMP being certified.

Animal Trails and Walkways
NRCS Practice Code: 575

Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Eligible in conjunction with Prescribed Grazing (528) only. REAP tax credit not authorized for any construction or portion thereof that is greater than 12 feet in width.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Closure of Waste Impoundments
NRCS Practice Code: 360
Lifespan: Operator must agree to permanently abandon the designated existing structure and the appropriate component practices of the structure.
Tax Credit Rate: 50%
REAP Conditions: BMP must be identified in operator's Nutrient/Manure Management Plan.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Composting Facility
NRCS Practice Code: 317
Lifespan: 10 years
Tax Credit Rate: 50%
REAP Conditions: The composting facility must be included in manure/nutrient management plan. The material to be composed must include animal waste generated on the operation and may not originate from outside sources. The composting operation must meet the PA-DEP criteria for on-farm composting.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Constructed Wetland
NRCS Practice Code: 656
Lifespan: 5 years
Tax Credit Rate: 50%
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Cover Crop
NRCS Practice Code: 340
Lifespan: Annual
Tax Credit Rate: 50%
Additional Information: Refer to Attachment 11
REAP Conditions: Applicants may include 3 years of proposed plantings. Invoices must be submitted at the end of each year's establishment. Burndown, nutrient applications, and lime are not eligible.
Certification Requirements: Completion of the Cover Crop – Job Sheet (Application p 14) is required.

Critical Area Planting
NRCS Practice Code: 342
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Diversion
NRCS Practice Code: 362
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Fence
NRCS Practice Code: 382
Lifespan: 10 years
Tax Credit Rate: 50% or 75%
Additional Information: 75% rate only applies when used for ACA treatment or for animal exclusion in conjunction with 50 Foot Riparian Forest Buffer (391). All other uses are at the 50% rate.
REAP Conditions: Used in conjunction with Prescribed Grazing (528) only. REAP tax credits will be authorized for establishing fencing permanent fence utilizing new materials – unless otherwise justified by Prescribed Grazing. Fencing receiving REAP tax credits must not have indirect negative

environmental impacts on adjacent areas, such as allowing uncontrolled livestock access to sensitive areas such as stream corridors, steep areas subject to erosion, or woodland subject to overgrazing. REAP tax credit not authorized for removal and/or upgrade of existing fence.

Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer

Grassed Waterway

NRCS Practice Code: 412
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Heavy Use Area Protection

NRCS Practice Code: 561
Lifespan: 10 years
Tax Credit Rate: 50% or 75%
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Lined Waterway or Outlet

NRCS Practice Code: 468
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
REAP Conditions: Used where vegetation alone will not provide adequate stabilization.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Obstruction Removal

NRCS Practice Code: 500
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Eligible when existing obstructions interfere with other planned BMPs. REAP tax credits not authorized to remove brush in order to install fence or for expansion of crop fields.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Pipeline

NRCS Practice Code: 516
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Eligible as a component of livestock watering systems in conjunction with Prescribed Grazing (528) only. Pipe with a diameter of 8 inches or less that is used to convey clean water for livestock. REAP tax credits not authorized when the pipeline will be used in conjunction with a domestic water supply or irrigation.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Poultry/Livestock Housing Vegetative Buffers

NRCS Practice Code: 380 (Windbreak/Shelterbelt Establishment)
Lifespan: 10 years
Tax Credit Rate: 50%
Additional Information: Plantings must conform to USDA/NRCS Windbreak/Shelterbelt Establishment (380)-Technical Note No. 1, SCC Odor Management BMP Guide
REAP Conditions: Establishment costs only. Plantings must be within close proximity to livestock housing and exhaust fans
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Pumping Plant for Waste Water Control

NRCS Practice Code: 533
Lifespan: 10 years
Tax Credit Rate: 50%
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Riparian Forest Buffer

NRCS Practice Code: 391

Lifespan: 15 years
Tax Credit Rate: 50% rate when used in conjunction with the minimum width of the practice (35 feet); 75% rate when used in conjunction with 50 foot or greater width.
Additional Information: NRCS Practice Guide for Riparian Forest Buffers, PA DEP Riparian Forest Buffer Guidance
REAP Conditions: Riparian buffer establishment only. This practice is available to agricultural and non-agricultural operations.
Certification Requirements: Any Conservation district or NRCS employee, or NRCS Certified Technical Service Provider, or private sector engineer or technician who has appropriate training and experience in the BMP planning, design and installation methods and techniques applicable to the size and scope of the BMP being certified.

Riparian Forest Buffer Maintenance
NRCS Practice Code: 391
Lifespan: annual
Tax Credit Rate: 50% rate when used in conjunction with the minimum width of the practice (35 feet); 75% rate when used in conjunction with 50 foot or greater width.
Additional Information: NRCS Practice Guide for Riparian Forest Buffers, DEP Riparian Forest Buffer Guidance (pp10-11)
REAP Conditions: Maintenance activities performed to ensure the survival and growth of riparian buffer plantings, in accordance with long-term buffer operation and maintenance, are eligible – including: mowing, applications of herbicide, vegetation removal, control of noxious weeds, protections from competing plants/animals.
Certification Requirements: Any Conservation district, NRCS employee, NRCS Certified Technical Service Provider, DEP employee, or private sector technician who has appropriate training and experience in the BMP planning, design and installation methods and techniques applicable to the size and scope of the BMP being certified.
Completion of the Riparian Forest Buffer Maintenance Worksheet (Application p 15) is required.

Riparian Herbaceous Cover
NRCS Practice Code: 390
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Buffer establishment only.
Certification Requirements: Any Conservation district or NRCS employee, or NRCS Certified Technical Service Provider, or private sector engineer or technician who has appropriate training and experience in the BMP planning, design and installation methods and techniques applicable to the size and scope of the BMP being certified.

Roof Runoff Structure
NRCS Practice Code: 558
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
REAP Conditions: This practice includes roof gutters and downspouts and shall only be applied to locations where runoff from farm buildings is causing severe erosion and/or transporting pollutants from animal wastes. Practice must include establishment of a stable outlet (see Underground Outlet). Repairs to a roof in preparation for this practice are not eligible for REAP tax credits.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Roofs and Covers
NRCS Practice Code: 367
Lifespan: 10 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
Additional Information: The Roofed Storage/Roofed ACA worksheet (p 13 of Application) must be submitted along with the application.
REAP Conditions: Practice applies to construction of roofing over Waste Storage Facility (313) and/or Heavy Use Area Protection (561). SCC staff site visit required. Roofs over new permanent animal housing (barns) are not eligible for REAP credits.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Sediment Basin

NRCS Practice Code: 350
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Basins associated with new animal housing are not eligible for REAP credits. If other REAP-eligible BMPs are associated with the practice, a prorated portion of the basin may be eligible.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Silage Leachate Management

Practice Code:
Lifespan: Equal to longest component BMP lifespan, not to exceed 15 years
Tax Credit Rate: 50%
Certification Requirements: Any Conservation district or NRCS employee, or NRCS Certified Technical Service Provider, or private sector engineer or technician who has appropriate training and experience in the BMP planning, design and installation methods and techniques applicable to the size and scope of the BMP being certified.

Sinkhole Treatment

NRCS Practice Code: 527
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Utilized to permanently close sinkholes that currently pose a threat to groundwater pollution from animal activity or manure application.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Solid/Liquid Waste Separation Facility

NRCS Practice Code: 632
Lifespan: 10 years
Tax Credit Rate: 50%
REAP Conditions: Manure separation must be included in the operation's Nutrient/Manure Management Plan.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Spring Development

NRCS Practice Code: 574
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Eligible in conjunction with Prescribed Grazing (528) only. Subsurface drainage (606) is authorized for supplying a viable water source needed for the livestock and in conjunction with providing a stable outlet. Practice may include a maximum of 1,200 feet of 4-inch collection line only. For collection systems greater than 1,200 feet, SCC staff approval is required. All Federal, State, and Local laws and regulation pertaining to wetlands must be followed.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Stream Crossing

NRCS Practice Code: 578
Lifespan: 5 years
Tax Credit Rate: 50%
Additional Information: Applicant is responsible for all local, state and federal permits and approvals that may be required.
REAP Conditions: Eligible for animal and agricultural equipment crossing and in conjunction with Prescribed Grazing (528). REAP tax credits not authorized for any construction or portion thereof that is greater than 14 feet in width.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Stream Bank and Shoreline Protection

NRCS Practice Code: 580
Lifespan: 5 years
Tax Credit Rate: 50%
Additional Information: Applicant is responsible for all local, state and federal permits and approvals that may be required.

REAP Conditions: Used to stabilize stream banks eroded due to excessive water flow or livestock activity.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Structure for Water Control
NRCS Practice Code: 587
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
REAP Conditions: REAP tax credits not authorized for the installation of structures designed to impound water for irrigation, recreation, household water, or to create ponds.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Subsurface Drain
NRCS Practice Code: 606
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: Subsurface drainage is eligible only as a companion practice for primary structural BMPs. REAP tax credits for 606 are not authorized for non-structural or vegetative practices such as Conservation Cover (327), Contour Farming (330), Cover Crop, Forage and Biomass Planting.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Terrace
NRCS Practice Code: 600
Lifespan: 5 years
Tax Credit Rate: 50%
REAP Conditions: The practice is to be applied where: water erosion is a resource concern, the soils and topography are such that terraces can be constructed and farmed with a reasonable effort, and a stable outlet can be provided.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Underground Outlet
NRCS Practice Code: 620
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
REAP Conditions: This practice is to be used as a supporting practice to outlet water from other conservation practices such as roof runoff structure, terrace, and watering facilities.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Vegetated Treatment Area
NRCS Practice Code: 635
Lifespan: 5 years
Tax Credit Rate: 50% or 75% (rate when used for ACA treatment)
REAP Conditions: Permanent vegetation used for agricultural wastewater treatment is eligible for REAP credits.
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Waste Storage Facility
NRCS Practice Code: 313
Lifespan: 10 years
Tax Credit Rate: 50%
Additional Information: If BMP includes a roof structure, the Roofed Storage/Roofed ACA worksheet (page 13 of Application) must be submitted along with the application. Applicant is responsible for all local, state and federal permits and approvals that may be required.
REAP Conditions: SCC staff site visit required to prior to BMP approval for the roof structure component
Certification Requirements: Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Waste Transfer
NRCS Practice Code: 634
Lifespan: 10 years
Tax Credit Rate: 50%

REAP Conditions:	Eligible in conjunction with Waste Storage Facility. REAP tax credits are not authorized for: Portable pumps, pumping equipment or other portable equipment for removing, distributing, or applying animal waste on the land.
Certification Requirements:	Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Waste Treatment

NRCS Practice Code:	629
Lifespan:	Annual
Tax Credit Rate:	50%
Additional Information:	Only completed projects are eligible
REAP Conditions:	Use of the Waste Treatment practice must be included in the operation's Nutrient/Manure Management Plan.
Certification Requirements:	Any Conservation district or NRCS employee, or NRCS Certified Technical Service Provider, or private sector engineer or technician who has appropriate training and experience in the BMP planning, design and installation methods and techniques applicable to the size and scope of the BMP being certified.

Water Well

NRCS Practice Code:	642
Lifespan:	5 years
Tax Credit Rate:	50%
REAP Conditions:	Eligible in conjunction with Prescribed Grazing (528) only. REAP tax credits not authorized for: providing water for the farm headquarters; domestic use.
Certification Requirements:	Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Watering Facility

Practice Code:	614
Lifespan:	5 years
Tax Credit Rate:	50%
REAP Conditions:	Eligible in conjunction with Prescribed Grazing (528) only. REAP tax credits authorized for permanently located facilities within grazing paddocks or pastures. REAP tax credits not authorized for providing water for the farm headquarters; domestic use.
Certification Requirements:	Individual with appropriate NRCS Job Approval Authority or Registered Professional Engineer.

Attachment 2

Conservation Plan and Agricultural E&S Plan Policy

An agricultural operation that is an applicant for the REAP Tax Credit Program for agricultural BMP or equipment must first have in place a current Conservation Plan and/or Ag E&S Plan for all acres plowed and or tilled that are under their management control (owned or rented or leased or utilized) in the year that they are applying for REAP Tax Credits to be eligible for the program.

For the purposes of REAP, a Conservation Plan and/or Ag E&S Plan, is defined as "current" if the plan accurately reflects the existing operation; including correct and current number of acres, crop rotations, tillage, and animal numbers. The applicant must be on-schedule for full implementation of the plan.

A current Conservation Plan/Ag E&S Plan must address the following soil, water, and nutrient resource concerns on the agricultural operation with the identified quality criteria:

Resource Concern	Description of Concern	Quality Criteria	Assessment or Evaluation Tools
Soil Erosion – Sheet & Rill	Detachment and transport of soil particles degrade soil quality.	Sheet and Rill erosion does not exceed "T" over the crop rotation.	Visual, RUSLE hard copy, RUSLE2
Soil Erosion – Ephemeral & Classic Gully	Small and large channels degrade soil quality.	Conservation Practices or BMPs stabilize the small and large channels.	Visual, volume calculation
Water Quality – Excessive Suspended Sediment in Surface Water	Cropping system includes crops with <25% *cover** adjacent to *surface water***, which degrades *surface water*** quality.	Cropland with <25% *cover** within 100' of *surface water*** are treated with additional Conservation Practices or BMPs to mitigate adverse effect.	Visual, transect measurement
Water Quality – Excessive Nutrients & Organics in Surface Water and Groundwater #	Pollution from human-induced nutrients (N, P and Organics) degrades *surface water***/groundwater.	Nutrients and organics are stored, handled and applied to mitigate adverse effect.	Visual, water quality indicators, P Index, MMP***, P.C. 590, Act 38, Act 38 + Permit

* The term *cover* includes living plant cover and post- harvest crop residue.

** The term *surface water* is limited to: perennial and intermittent streams, lakes, ponds and existing open sinkholes.

*** The term *MMP* denotes the requirements of the DEP Manure Management Plan.

This resource concern is now required to be addressed for all REAP participating farms.

Attachment 3

Nutrient Management/Manure Management Policy

Proposed and existing CAOs and CAFOs are required to have an approved Nutrient Management Plan under the State Conservation Commission's (SCC) Nutrient Management Program (Act 38) in order to be eligible for REAP tax credits. If these operators do not have a plan, they may submit a REAP application to support their efforts to get a plan developed for their farm. Likewise, all farming operations (Non-CAO and Non-CAFO) may also apply for REAP tax credits to develop a nutrient management plan meeting the SCC's Act 38 criteria.

All farming operations that generate or utilize manure, other than CAO's and CAFOs, are required to have a Manure Management Plan (MMP) under the Department of Environmental Protection (DEP) Chapter 91 regulations or a voluntary Act 38 Nutrient Management Plan in order to be eligible for REAP tax credits.

Nutrient Management Plans written under Natural Resources Conservation Service (NRCS) Comprehensive Nutrient Management Plans (CNMPs) or NRCS 590 standard, as part of the operations conservation plan meet the criteria of DEP's Chapter 91 MMP.

MMPs can be prepared by the farmer although the farmer may benefit from obtaining assistance from individuals trained and experienced in developing these plans. The Best Management Practices (BMPs) applied for through the REAP Tax Credit program must be consistent with the MMP.

This nutrient/manure planning requirement (NMP, MMP) must address the owned and rented fields where manure from the operation is planned to be mechanically applied. For grazing operations, a grazing plan that meets NRCS P.C. 528 standards will meet this requirement.

Manure volume for the operation will be calculated by the BMP designer, as necessary to properly design the manure management or storage BMP being considered for this operation.

To be considered a current NMP or MMP, the operator must be on-schedule for full implementation of the plan. The operator will need to implement the chosen NMP/MMP and keep it current with the farming operation for the lifespan of the BMP for which the REAP tax credit has been approved. This will generally be 10 years from the certification date of the BMP.

REAP Planning Questionaire

****must be completed with all REAP applications for Nutrient Management Plans and/or Manure Management Plans****

"My operation generates or utilizes manure. What type of manure plan do I need?"

1. Is your operation a CAO or CAFO?

   YES → Your operation needs an approved Act 38 Nutrient Management Plan (NMP).

   NO ↓

2. Are you interested in participating in Act 38 as a volunteer (VAO)? VAOs can benefit from the limited legal protections provided by an approved Act 38 NMP.

   YES → Your operation needs an approved Act 38 Nutrient Management Plan (NMP).

   NO ↓

3. Are you interested in applying for funding from USDA/NRCS to help install ag BMPs?

   YES → It could benefit you to have NRCS 590 Standard NMP developed as part of your NRCS Conservation Plan. NRCS 590 Standard Plans are written to Act 38 standards. NRCS Plans must be approved by NRCS. (*see footnote)*

   NO ↓

4. Are you interested in the additional crop-year-specific agronomic information that an NMP contains?

   YES → It could benefit your operation to have an NMP developed by an Act 38 certified specialist. An NMP written to Act 38 standards will contain more information for your operation than a DEP Manure Management Plan (see below).

   NO ↓

<u>A PA DEP Chapter 91 Manure Management Plan (MMP) will meet your needs</u>.

Types of operations best-served by an MMP:

1. Operations with few animals
2. Grazing-intensive operations
3. Operations with large acreage available for manure spreading

Footnote: NMPs that do not go through the Act 38 approval process (see questions 3 and 4) do not confer any of the limited legal protections provided by Act 38.

Attachment 4

Verification Signatures

Verification Signatures for REAP Eligibility

Applies to: REAP Application Section 2 (p4)

The individual signing the Verification Page in Section 2 of the REAP application is verifying that the applicant's answers to questions on pp2-3 of the REAP application are accurate and true.

For example, if the applicant indicates that plans exist on all acres operated and are fully implemented, the verifier is certifying that to be true. If the applicant indicates that plans do not exist or are not fully implemented, the verifier is certifying that applicant either: is applying for cost associated with plan writing; does not need the plans in question; or the applicant's explanations regarding development of plans and timeline of implementation is true. If an applicant's answers are not accurate or true, the verifier should not certify (by signing p4) the REAP application.

The individual signing the Verification Page must not have a potential conflict of interest with the applicant. The individual shall not verify an application pertaining to their own farming operation, an application for immediate family members (parent, spouse, child, brother, or sister), or a business with which the individual or a member of their immediate family is associated.

Please note that <u>BOTH</u> Section 2A and Section 2B must be verified on p4 of the application by a qualified individual, even if there are no animals present on the operation. If an applicant answers "NO" to question B1. on p2, the accuracy of that answer must be verified on p4.

The following individuals are qualified under REAP to provide the necessary verification signatures:

- Conservation District employees with appropriate training and experience
- USDA/NRCS employees who are certified in conservation planning, or working under the supervision of a certified individual. ***The Commission will accept the signature of a USDA/NRCS employee on a form provided by the USDA/NRCS in lieu of p4 of the REAP application. Please attach the USDA/NRCS form***
- Qualified Technical Service Providers (TSPs) – those in the TSP registry and certified to write conservation plans. Also, individuals with current certification under Act 38 of 2005 are qualified to provide verification signatures.

Verification signatures provided by qualified staff at the County Conservation District do not require an action of the District Board.

The Commission reserves the right to disqualify any individual from providing a Verification Signature.

Verification Signatures for Equipment Purchases

Applies to: REAP Application pp10-12

For equipment purchases, equipment dealers and others as determined by the Commission (on a case-by-case basis) are qualified under the REAP program to sign the "Dealer Certification" forms in the REAP Application.

The individual signing on the Dealer Certification forms must not have a conflict of interest with the applicant. The individual cannot certify their own equipment, equipment purchased by an immediate family member, or a business with which the individual or a member of immediate family is associated.

The Commission reserves the right to disqualify any individual from providing a Verification Signature.

Attachment 5

REAP No-Till and Precision Ag Equipment Requirements

*Applications for no-till equipment and precision ag equipment must meet **ALL** other REAP eligibility requirements.*

The Commission will not approve applications for tax credits for any equipment for which the REAP life span, as defined by Attachment 1 of the REAP Guidelines has expired.

For the FY 2019 program, delivery of all equipment must take place by **June 30, 2020.**

The SCC reserves the right to deny an application for equipment if the cost of the equipment is not within reasonable and fair market value as determined by the Commission. The SCC reserves the right to deny an application for equipment that does not meet the intent of the standards set forth for the equipment by the SCC.

To be eligible for the REAP program, all equipment must be designed and commercially manufactured for the specific purpose and intent as listed below and the applicant must agree to not alter the intended use.

see **Attachment 9 for the REAP Equipment Trade-In/Trade-Up Policy**

No-Till Planting Equipment

Equipment qualifications:

- The no-till planter or drill must be capable of placing seeds at the optimum depth for germination and growth in un-tilled soil with residue cover.
- The equipment is certified to meet the above criteria by a qualified farm equipment dealer authorized by the Commission - REAP No-Till Equipment Purchase Certification (Application p10).
- Applicants must sign the same form – certifying that the equipment will be used as intended.
- New equipment shall have a REAP lifespan of 7 years. Used equipment shall have a lifespan of 3 years.
- Used equipment sold privately must be certified by a dealer representative to meet the above used equipment criteria. (p10)
- All wear items must meet or exceed manufacturer's guidelines for wear replacement parts as certified by a qualified equipment dealer.
- The cost of operator-installed parts, repair or refurbishing of existing equipment is ineligible for REAP Tax credits

Note: Drills used for inter-seeding cover crops are eligible for REAP credits.

Precision Nutrient Application Equipment

Equipment qualifications:

- The equipment must be capable of applying nutrients at variable rates across a crop field according to specific data input from computerized maps or optical sensors.
- Only the components necessary to apply nutrients at variable rates are eligible. Examples include: hydraulic motors, variable rate drives, section control, scales, nozzle controls, metering devices.
- Monitors and displays necessary to control the components are eligible.
- Components necessary to upgrade existing application equipment to variable rate capabilities are eligible.
- The equipment is certified to meet the above criteria by a qualified farm equipment dealer authorized by the Commission - REAP Precision Application Equipment Certification (Application p11)
- Applicants must sign the same certification (p11) stating that the equipment will be used, as intended - consistent with a current Nutrient/Manure Management Plan.
- New equipment shall have a REAP lifespan of 7 years. Used equipment shall have a REAP lifespan of 3 years.
- Used equipment sold privately must be certified by a qualified farm equipment dealer to meet the above used equipment criteria. (p11)

Precision Nutrient Application equipment purchased after Jan 1, 2015 is eligible for REAP tax credits.

Attachment 6

REAP Low-Disturbance Manure Injection/Low Disturbance Residue Management Requirements

All REAP Tax Credit applications for the purchase of Low-Disturbance Residue Management Equipment and/or Low Disturbance Manure Injection Equipment must meet ALL other general REAP Eligibility Requirements.
Please complete the REAP Eligibility questions beginning on Page 2 of the Application to determine eligibility.

For the FY 2019 REAP program, delivery of all equipment must take place by **June 30, 2020.**

All applicants for Low-Disturbance Manure Injection Equipment and/or Low-Disturbance Residue Management Equipment must attach an invoice, receipt, sales order, or price quote which shows the purchase price of the equipment. If the equipment has been delivered at the time of application, the applicant must also provide the serial number of the equipment.

The Commission reserves the right to deny an application for equipment if the cost of the equipment is not within reasonable and fair market value as determined by the Commission. The Commission reserves the right to deny an application for equipment that does not meet the intent set forth in the standards for the equipment by the Commission.

To be eligible for the REAP program, all equipment must be designed and manufactured for the specific purpose and intent established by the Commission. The applicant must agree to not alter the intended use.

The Commission will not approve applications for any equipment for which the life span, as defined by Attachment 1 of the REAP Guidelines has expired.

see **Attachment 9 for the REAP Equipment Trade-In/Trade-Up Policy**

Low Disturbance Manure Injection Equipment

Equipment qualifications:

- The equipment is capable of injecting manure effectively at a shallow depth (approx. 4" maximum) while creating minimal surface disturbance. Adjustable equipment must be set up to meet the above residue or cover condition.
- The equipment must be used in a manner consistent with the provisions of a current Conservation Plan/Ag E&S Plan and a current Nutrient Management Plan/Manure Management Plan.
- The purchase of equipment must include field setup by an equipment dealer.
- Applicant and Equipment Dealer must sign the "REAP Low Disturbance Manure Injection Equipment Low Disturbance Residue Management Equipment/ Purchase Certification," (Application p12)
- New equipment shall have a REAP lifespan of **7 years**. Used equipment shall have a REAP lifespan of **3 years**.
- Used equipment sold privately must also be certified by a dealer representative to meet the above equipment criteria.
- All wear items must meet or exceed manufacturer's guidelines for wear replacement parts as certified by a qualified equipment dealer.
- The costs of operator-installed parts, repair or refurbishing of existing equipment is ineligible for REAP Tax credits

Note: Manure transport tanks, drag line, and pumping equipment are not eligible.

Low-Disturbance Residue Management Equipment

Equipment qualifications:

- Equipment must be designed for (and be capable of) cutting and sizing crop residue with minimal soil disturbance.
- Equipment must have a maximum gang angle (adjustable or fixed) of 5 degrees.
- Equipment must have a maximum working depth of 4 inches.
- Equipment with disks must use disks with no concavity.

- Equipment must be set up and operated to leave a minimum of 60% residue cover on the surface.
- Equipment should be operated at an average depth of 2 inches.
- Seed boxes that attach directly to eligible equipment are eligible.
- The use of residue management equipment (vertical tillage) must be listed in the RUSLE 2 soil loss calculations of the applicant's current Conservation Plan/Ag E&S Plan.
- The purchase of equipment must include setup by an equipment dealer.
- Applicant and Equipment Dealer must sign the "REAP Low Disturbance Manure Injection/ Low Disturbance Residue Management Equipment Purchase Certification" (*Application p12*).
- New equipment shall have a REAP lifespan of **7 years**. Used equipment shall have a REAP lifespan of **3 years**.
- Used equipment sold privately must also be certified by a dealer representative to meet the above equipment criteria. (*Application p12*)
- All wear items must meet or exceed manufacturer's guidelines for wear replacement parts as certified by a qualified equipment dealer.
- The costs of operator-installed parts, repair or refurbishing of existing equipment does not qualify for REAP tax credits.

Note: Equipment whose main function is secondary tillage, seed-bed preparation, or cultivation is not eligible.

Attachment 7

Definitions

Act 13 of 2019 (Section 1702-E)

AGRICULTURAL EROSION AND SEDIMENTATION CONTROL PLAN - A site-specific plan that:
(1) meets the requirements of the act of June 22, 1937 (P.L. 1987, No. 394), known as The Clean Streams Law, and 25 Pa. Code Ch. 102 (relating to erosion and sediment control); and
(2) identifies best management practices to minimize accelerated erosion and sediment from an agricultural operation.
AGRICULTURAL OPERATION - The property on which occur the management and use of farming resources for the production of crops, livestock or poultry or for equine activity.
ANIMAL CONCENTRATION AREAS - An exterior area of an agricultural operation subject to rainfall where livestock congregate, including a barnyard, a feedlot, a loafing area, an exercise lot or other similar animal confinement area that will not maintain a growing crop, or where deposited manure nutrients are in excess of crop needs. The term does not include areas managed as a pasture or other cropland and pasture accessways if they do not cause direct flow of nutrients to surface water or groundwater.
BEST MANAGEMENT PRACTICE - A practice or combination of practices determined by the State Conservation Commission or United States Department of Agriculture Natural Resources and Conservation Service to be effective and practical, considering technological, economic and institutional factors, to manage nutrients and sediment to protect surface water and groundwater.
BUSINESS FIRM - An entity authorized to do business in this Commonwealth and subject to the taxes imposed by Article III, IV, VI, VII, VIII, IX or XV.
COMMISSION - The State Conservation Commission.
CONSERVATION DISTRICT - A county conservation district established under the act of May 15, 1945 (P.L. 547, No. 217), known as the Conservation District Law.
CONSERVATION PLAN - A United States Department of Agriculture Natural Resources Conservation Service plan, including a schedule for implementation, that identifies site-specific conservation best management practices on an agricultural operation.
DEPARTMENT - The Department of Revenue of the Commonwealth.
ELIGIBLE APPLICANTS - Any of the following subject to the taxes imposed by Article III, IV, VI, VII, VIII, IX or XV:
(1) A business firm.
(2) An individual.
(3) Individuals filing jointly.
EQUINE ACTIVITY - The term includes the following activities:
(1) The boarding of equines.
(2) The training of equines.
(3) The instruction of people in handling, driving or riding equines.
(4) The use of equines for riding or driving purposes.
(5) The pasturing of equines.
The term does not include activity licensed under the act of December 17, 1981 (P.L. 435, No. 135), known as the Race Horse Industry Reform Act.
INDIVIDUAL - A natural person.
LEGACY SEDIMENT - Sediment that meets all the following conditions:
(1) Was eroded from upland areas after the arrival of early Pennsylvania settlers and during centuries of intensive land use.
(2) Was deposited in valley bottoms along stream corridors, burying presettlement streams, floodplains, wetlands and valley bottoms.
(3) Altered and continues to impair the hydrologic, biologic, aquatic, riparian and water quality functions of presettlement and modern environments.
MANURE MANAGEMENT PLAN - A written site-specific plan that:
(1) outlines practices for the land application of manure and agricultural process wastewaters acceptable to the commission; and
(2) is developed to meet the requirements of 25 Pa. Code § 91.36(b) (relating to pollution control and prevention at agricultural operations).
NUTRIENT MANAGEMENT PLAN - As defined under 3 Pa.C.S. Ch. 5 (relating to nutrient management and

odor management).
NUTRIENT MANAGEMENT SPECIALIST - As defined under 3 Pa.C.S. Ch. 5 (relating to nutrient management and odor management).
PASS-THROUGH ENTITY - A partnership as defined in section 301(n.0) or a Pennsylvania S corporation as defined in section 301(n.1).
QUALIFIED TAX LIABILITY - The liability for taxes imposed upon an eligible applicant under Article III, IV, VI, VII, VIII, IX or XV. The term shall not include any tax withheld by an employer from an employee under Article III.
RIPARIAN FOREST BUFFER - An area of mostly trees or shrubs which is adjacent to and up-gradient from watercourses or water bodies and which meets standards established or adopted by the commission.
TECHNICAL SERVICE PROVIDER - An individual, entity or public agency certified by the United States Department of Agriculture Natural Resources Conservation Service and placed on the approved list to provide technical services to program participants or to the United States Department of Agriculture program participants.
TOTAL MAXIMUM DAILY LOAD or (TMDL) - The sum of individual waste load allocations for point sources, load allocations for nonpoint sources and natural quality and a margin of safety expressed in terms of mass per time, toxicity or other appropriate measures.
USDA-NRCS - The United States Department of Agriculture Natural Resources and Conservation Service.

Terms not found in Act 55, as defined by the Commission:

SPONSOR- A business subject to the following Pennsylvania Taxes (personal income tax, corporate net income tax, capital stock and franchise tax, bank shares tax, title insurance company premiums tax, insurance premiums tax, and mutual thrift institutions tax) which receives a REAP Tax Credit based on the amount of funding it contributes toward eligible farm conservation projects. The business is the direct recipient of the REAP tax credits.

AGRICULTURAL OPERATION: as it relates to the $250,000/7-yr credit limit.

For purposes of evaluating REAP applications and applying tax credit limits prescribed in Section 1703-E (B) of the Act, the Commission will consider an eligible applicant as a single "agricultural operation" where …

all tracts of land, whether contiguous or non-contiguous,

are under the common ownership and or common management control of the person, whether as an individual, corporation, partnership or other legal entity, applying for the REAP tax credit and have organizational structures that include or retain the same or significantly similar ownership, management, directors, officers or shareholders

or which utilize substantially common management or production resources such as land, equipment, labor, accounting and business systems to support one or more farm enterprises, partnerships, corporations or other farm related entity.

Entities with significantly similar organizational structures or which utilize substantially common management or production resources will be considered a single "agricultural operation" for purposes of REAP tax credits.

Please note: For REAP purposes, the operator of the agricultural operation receiving REAP tax credits is considered the property owner.

Attachment 8

Cover Crops

Cover Crop
Practice Code: 340
Reportable Units: Ac.
Lifespan: Annual
Tax Credit Rate: 50%

- Applicants may apply for up to 3 years of proposed cover crop plantings. Invoices must be submitted at the end of each year's cover crop establishment. ee l a o 1 o e o e o o ee
- Tax credits are capped at $35/acre for single species plantings and $45/acre for multi-species plantings.
  - ✓ Multi-species plantings must include both a grass species **and** a broadleaf species.
- Only seed and planting costs are eligible. Herbicide/nutrient/lime applications are not eligible.
  - ✓ please refer to the NASS custom planting rates, if necessary
- Spreading of manure on the cover crop must be consistent with a current Nutrient Management Plan or Manure Management Plan.
- All seed purchased for cover crop must be tested and properly labeled in accordance with the PA Seed Law and regulations. If the grower elects to use home-grown seed, it must be tested for purity, germination, and absence of noxious weeds by a recognized seed laboratory prior to seeding.
- Cover crops harvested for grain are not eligible for credits.
- Completion of the **REAP Cover Crop Job Sheet (p14 of the REAP Application)** is required.

Purpose: Cover Crops have multiple purposes that benefit many aspects of the land.	
Reduce erosion from wind and water	Weed suppression
Increase soil organic matter content	Provide supplemental forage
Capture and recycle nutrients in the soil profile	Soil moisture management
Promote biological nitrogen fixation	Reduce particulate emissions into the a
Increase biodiversity	Minimize and reduce soil compaction

Attachment 9

REAP Equipment Trade-In/Trade-Up Policy

This policy applies to the following equipment: No-Till Planters and Drills, Low Disturbance Residue Management, Low Disturbance Manure Injection, Precision Fertilizer Application Equipment.

In some circumstances, an applicant may wish to sell or trade in a piece of equipment for which the applicant has received a REAP tax credit prior to the expiration of the required lifespan under the REAP program (7 years for new equipment, 3 years for used equipment) for a comparable or larger piece of eligible equipment. The following policy is in effect for these instances:

- The applicant must immediately make a request to the Commission in writing.

- The Commission will consider the request for a "waiver" of the lifespan requirement if the applicant is trading or selling the original piece(s) of equipment for another piece of equipment which will allow the farmer to utilize the equipment on a comparable or larger number of acres.

- An "Equipment Certification Form" must be submitted for the new piece of equipment.

- The applicant will be eligible for a REAP tax credit, up to the maximum allowed per applicant, which equals the difference between the credit received on the originally purchased piece of equipment, and the eligible credit on the new equipment. The applicant must submit a new application for these costs.

- If the applicant receives REAP tax credits for the difference between the cost of the original equipment and the cost of the new equipment, the lifespan requirement "starts over" with the new piece of equipment.

- If the applicant does not wish to apply for additional REAP tax credits, the lifespan for the original equipment will pass over to the "new equipment." The new equipment must be used until the lifespan requirement of the original piece of equipment has been met.

- If the recipient of a tax credit sells equipment for a REAP tax credit was received (prior to the expiration of the lifespan) without replacing it with a comparable piece of REAP-eligible equipment, the recipient may be required to repay a prorated portion of the tax credit.

- If the recipient of a tax credit does not provide prior written notification to the Commission that the recipient requests to trade in or sell a piece of equipment for which a REAP tax credit has been received, the recipient is subject to the provisions of the REAP statute which require the recipient to return to the Department of Revenue the full amount of the tax credit originally granted.

Attachment 10

Map Requirements

The REAP application must include*:

- A 1:24,000 scale USGS Topographic quad map showing an outline of your home farm and any other parcels that contain the BMPs requested in your application.
    - An 8.5" X 11" black and white photocopy of a USGS Quad map at 1:24,000 scale is acceptable provided it includes the name of the Quad, and a major cultural feature or map feature that is readily identifiable.
    - Be sure to include the name of the 1:24,000 Quad maps.
- Other maps or aerial photographs may be accepted at the discretion of the Commission provided that the map is of sufficient scale and clarity to clearly identify the location of the BMPs for which tax credits are sought.

*Maps are not required if applying only for equipment.

If you have any questions about where to obtain the required map, please contact:

- Your technical service provider
- The County Conservation District
- The State Conservation Commission at 717-787-8821

Frequently Asked Map Questions

Q. All I want to do is buy a no-till drill. Do I still have to provide all this mapping information?
A. No. You are exempt from this requirement.

Q. As a sponsor what do I have to submit?
A. Requirements for sponsored applications are the same as those for any other applicant. A map of the operation is required.

Q. My agricultural operation consists of five separate parcels? How should I draw them?

A. Draw them as five separate parcels unless they have common boundaries. Those parcels may be drawn with a common exterior perimeter if you desire.

Attachment 11

Tax Credit Brokers

Fallbrook Credit Finance, LLC
26610 Agoura Road, Suite 120
Calabasas, CA 91302
Phone: (818) 657-6100
(818) 657-6146 Fax
Justin Gordon
justin@fallbrookcredits.com
www.fallbrookcredits.com

KIZ Resources, LLC
1637 E Pleasant Valley Blvd
Altoona, PA 16602
Phone: 814-296-2414
Fax: 814-941-2424
Lindsey Bennett
lindseybennett@kizresources.com

Clocktower Tax Credits, LLC
2 Clock Tower Place, Suite 295
Maynard, MA 01754
Phone: 978-793-9574
Fax: 978-823-0328
Sue Ellen Idelson, Acquisitions Associate
sidelson@clocktowertc.com

Tax Credits International, Inc.
295 Palmas Inn Way
Unit C8
Humacao, PR 00791
Phone: 908-247-3087
Kenneth Blaine
KBlaine@taxcreditsint.com

MSC Business Services
PO Box 8736
Camp Hill, PA 17001
Phone: 717-731-3517
Fax: 717-731-3546
Michael Evanish, Manager
mevanish@pfb.com

Tax Credit Services, LLC
227 Jefferson Ave
Tyrone, PA 16686
Phone: 866-478-8795
Fax: 866-798-9137
John Horell
info@pataxcredits.com

Moss Adams LLP
10960 Wilshire Blvd, Suite 1300
Los Angeles, CA 90024
Phone: 818-983-6164
Jeff Jerdin, CPA
Jeff.jerdin@mossadams.com
www.mossadams.com

MVM Associates, Inc.
426 Pennsylvania Avenue Suite 110
Fort Washington, PA 19034 Phone:
215-540-8463
Fax: 215-540-8455
Michael V. McCann
mikem@mvmgrants.com
www.mvmgrants.com

The Online Incentives Exchange
2049 Century Park East, Suite 320
Los Angeles, CA 90067
Phone: 212-671-0940
Danny Bigel
db@theoix.com
www.theOIX.com

Disclaimer: This attachment is provided for informational purposes only. The Commission is aware that these private organizations provide services related to the sale of tax credits, but neither endorses these organizations, guarantees their services, nor the sale price of any tax credit. In addition, the Commission may be unaware of the existence of other organizations that provide tax credit sale services. Their exclusion from this list does not imply anything regarding their services.

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

September 4, 2019

To: Members
State Conservation Commission

From: Karl G. Brown
Executive Secretary

RE: Proposed Policy for Removal of a District Director
(Misfeasance, Malfeasance and Other Reasons)

Attached is a proposed policy regarding the process for the removal of a conservation district director from a conservation district board by the county governing body (e.g. county commissioners, county council, etc.).

Pennsylvania Conservation District Law requires the Commission to establish guidelines, policies and procedures for the removal of a district director for purposes of misfeasance or malfeasance. The Conservation District Law also allows directors to be removed by the county governing body for being absent from regular district meetings three or more times during a year without cause. In addition, the Pennsylvania County Code also allows county commissioners to remove anyone they appoint to a non-elected county board or commission upon conviction of misbehavior in office or for conviction of an infamous crime (e.g. murder, manslaughter, arson, rape, assault, kidnapping, etc.).

This proposed policy provides: 1) background related to Pennsylvania Conservation District Law and the reasons a director can be removed from office; 2) definitions and examples of "malfeasance" and "misfeasance"; and 3) a procedure for the removal of a director from office.

Staff has developed this proposed policy in cooperation with the Commission's legal counsel and has circulated this draft to county conservation districts for review and comment. A copy of the comment response document was provided to the Commission at our July meeting. Several changes were made based on comments received from conservation districts. In addition, staff has consulted with the County Commissioner's Association of Pennsylvania (CCAP) and incorporated several minor changes as recommended by CCAP.

Staff recommends the approval of the Proposed Policy for the Removal of a District Director and its distribution to conservation districts and county chief clerks.

September 4, 2019

To: Members
State Conservation Commission

From: Karl G. Brown
Executive Secretary

RE: Proposed MOU - State Conservation Commission, Department of Agriculture, and Department of Environmental Protection

Additional information pertaining to this agenda item will be provided at our September 10, 2019 Commission Meeting.

September 4, 2019

To: Members
State Conservation Commission

From: Karl G. Brown
Executive Secretary

RE: Chesapeake Bay Program Update

Additional information pertaining to this agenda item will be provided at our September 10, 2019 Commission Meeting.

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: August 28, 2019

TO: State Conservation Commission Members

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

THROUGH: Karl G. Brown
Executive Secretary

RE: Nutrient and Odor Management Programs Report

The Nutrient and Odor Management Program Staff of the State Conservation Commission offer the following report of measurable results for the time-period of July / August 2019.

For the months of July and August 2019, staff and delegated conservation districts have:

1. Odor Management Plans:
    a. 6 OMPs in the review process
    b. 9 OMPs Approved
    c. 1 OMP approval Rescinded

2. Reviewed and approved 88 Nutrient Management (NM) Plans in the 2nd quarter of 2019.
    a. Those approved NM plans covered 14,560 acres
    b. Those approved NM plans included 41,738 Animal Equivalent Units (AEUs), generating 456,663 tons of manure.

3. Managing sixteen (16) enforcement or compliance actions, currently in various stages of the compliance or enforcement process.

4. Continue to daily answer questions for NMP and OMP writers, NMP reviewers, delegated Conservation Districts, and others.

5. Assisted DEP with various functions and as workgroup members in Federal and State settings for the Chesapeake Bay Program.

6. Continue to work on updating the following
    a. NM Technical Manual
    b. NM/MM Administrative Manual
    c. Excel and Word NMP Planning Tools
    d. Excel and Word NBS Planning Tools

COMMONWEALTH OF PENNSYLVANIA
STATE CONSERVATION COMMISSION

DATE: August 27, 2019

TO: Members
State Conservation Commission

FROM: Karl J. Dymond
State Conservation Commission

SUBJECT: September 2019 Status Report on Facility Odor Management 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 July 2019 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 August 27, 2019.

The table below summarizes approved plans grouped by the Nutrient Management Program Coordinator Areas and by calendar year (minus any rescinded plans).

	Central	NE/NC	SE/SC	West	Totals
2009	7	6	28	1	42
2010	5	7	25	2	39
2011	10	12	15	2	39
2012	9	17	16	2	44
2013	10	11	38	3	62
2014	13	16	44	2	75
2015	15	15	61	2	93
2016	19	16	59	4	98
2017	25	24	44	3	96
2018	14	13	40	1	68
2019	8	5	9		22
Total	135	142	379	22	
Grand Total					678

As of August 27, 2019, there are six hundred seventy-eight **approved** plans and/or amendments, nine plans have been **denied**, thirteen plans/ amendments have been **withdrawn** without action taken, sixty-six plans/ amendments were **rescinded,** and four plans/ amendments are going through the **plan review process**.

PDA Region III Office, PO Box C, S.R. 92 S., Tunkhannock, PA 18657-0318
570-836-2181 (FAX) 570-836-6266

OMP Actions Status Report

Action	OMP Name	County	Municipality	Species	AEUs	OSI Score	Status	Amended
7/2/2019	Blank, David	Clinton	Logan Twp	Veal	90.99	49.4	Approved	
7/2/2019	Round Hill Dairy	Adams	Reading Twp	Cattle	119.25	42	Rescinded	
7/12/2019	Matter Family Farms LLC	Perry	Greenwood Twp	Duck	85.32	62.2	Approved	
7/16/2019	Pfleegor, John	Northumberland	Lewis Twp	Swine	356.71	42.1	Approved	A
7/19/2019	Stoltzfus, Jay – Swine Nursery Barn & Cattle Barn	Northumberland	Washington Twp	Swine	133.00	31.6	Approved	
8/2/2019	The Village Farm Langhorne	Bucks	Middletown Twp	Horse	0.00	32.2	Approved	A
8/5/2019	Kreider, Noah W & Sons, LLP - Donegal Facility	Lancaster	E Donegal Twp	Layers	4710.00	35.0	Approved	B
8/8/2019	Kready, Jevin - Meadow Springs Farm	Lancaster	Ralpho Twp	Broilers	367.70	42.0	Approved	A
8/14/2019	Forrestdale Farm, LLC - Swine Barn	Fulton	Licking Creek Twp	Swine	121.43	38.7	Approved	
8/19/2019	Hege, Daniel	Franklin	Quincy Twp	Layers	0.00	30.1	Approved	
8/26/2019	Long, Michael Sr - Blue Rock Farms	Lebanon	E Hanover Twp	Broilers	378.15	35.9	Approved	A

As of August 27, 2019

PENNSYLVANIA AGRICULTURAL OMBUDSMAN PROGRAM

BUILDING BRIDGES

Farmers*Municipalities*Citizens
Conservation Districts*Agribusiness

To: Members, State Conservation Commission — August 28, 2019
From: Beth Futrick, Agriculture/Public Liaison
Through: Karl G. Brown, Executive Secretary, State Conservation Commission
Re: Ombudsman Program Update – Southern Alleghenies Region

Activities: July-August 2019

- Organizing twilight pasturewalks developed for new/beginning grazers (three planned for this summer)
- Developing "multi-functional buffer" workshops to highlight growing: nut trees, herbs, fruit, cut flowers, etc. in a riparian buffer. the multi-functional riparian buffer at Natureworks Park (Planned for this fall at BCCD property)
- Assisting Dr. Machtinger, Penn State U, with a SARE grant to develop education for pest fly control in poultry facilities.
- Assisting Shelly Dehoff with developing "ombudsman" presentation in partnership with PSATS and PA Ag Law Center – to be delivered on PSATS webinars in 2019 – 2020
- Participating with Local Food Local Places project in Aliquippa PA (Beaver Co)
- Partnering with Iowa State Extension and USDA-AMR to develop core competency and local food system curriculum.
    - The goal is to increase food access and enhancing economic development and food business opportunities.

- **Meetings/Trainings/Events**
    - NRCS County workgroup (July 2)
    - Meeting with DCNR and Penn State Ext to plan multi-functional buffer workshops (July9)
    - Local Food meeting-Blair County (July 17)
    - DEP/Growing Greener Grant meeting (July 18)
    - Penn State Extension Committee meeting (Aug 7)
    - SCC phone conference – Planning 2019 Nutrient Management Conference in Clarion PA October 29 (Aug 12)
    - Meeting with Independent Living – partnering with a Vet to Farm Grant (Aug 14)
    - Pasturewalk in Huntingdon County (Aug 22)
    - Hosting a multi-functional buffer tour with Blair County Garden Club (Aug 26)
    - Local Food Local Places workshop – Butler Co (Aug 28-29)

Conflict Issues/Municipal Assistance –

- Reviewing Timber Harvest ordinances and E/S plan review requirements/permitted fees
- Clinton County – Fly complaint
- Allegheny County – manure/odor complaint
- Jefferson County -Fly complaint
- Butler County – Fly complaint

Reports & Grant Applications

--BCCD Board Report

Blair County Conservation District
1407 Blair Street, Hollidaysburg, PA 16648
Phone: 814-696-0877x113 Fax: 814-696-9981
Email: bfutrick@blairconservationdistric.org Website: www.paagombudsman.com
Funded through the Blair County Conservation District and the PA Department of Agriculture

PENNSYLVANIA AGRICULTURAL OMBUDSMAN PROGRAM

BUILDING BRIDGES

Farmers * Municipalities * Citizens
Conservation Districts * Agribusiness

To: Members
State Conservation Commission

September 10, 2019

From: Shelly Dehoff
Agriculture/Public Liaison

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

Re: Agricultural Ombudsman Program Update

Activities: Since mid-July 2019, I have taken part or assisted in a number of events, including the following:

- Helping plan LCCD legislative breakfast for early August
- Working with American Farmland Trust to help create Women for the Land Learning Circle; attended planning meeting for November event
- Events as South Central Task Force Agriculture Subcommittee Planning Specialist
  - arranging grain bin rescue kit training in Adams and Franklin Counties for Fall 2019
  - ran monthly Ag Subcommittee meetings
  - arranging speakers for monthly meetings
  - organized and facilitated meeting of 8 county CART coordinators for this SCTF region
  - working with Kay Moyer to finalize farm safety collectible cards for Plain Sect; planning to use SCTF money to print them, and distribute through 8 county region
  - starting efforts to offer "Stop the Bleed" training to the Plain Sect and English farming communities in 8-county region
- Planning webinar for PSATS with Beth Futrick to remind municipal officials of Ombudsman Program
- Continued 2019 Lanc Co Ag Week and Denim & Pearls planning efforts
- Attended and assisted at Lancaster Co. Agriculture Council meeting

Local Government Interaction: I have been asked to provide educational input regarding agriculture:
none currently

Moderation or Liaison Activities: I have been asked to provide moderation or liaison assistance with a particular situation:
None currently

Research and Education Activities:
Farm & Home Center—still working with building manager to look at safety/security preparedness and communication options for all tenants at Farm & Home Center
Multiple Counties-- Receiving "reports" of Spotted Lanternfly so I talk with them; receiving requests for info about control methods, so I provide information, but trying to refer callers to proper channels

Fly Complaint Response Coordination: I have taken complaints or am coordinating fly-related issues in:
Lancaster— received complaint about mosquitoes and flies at farm
Perry Co—fly complaint

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Funded through the Lancaster Co. Conservation District and the PA Department of Agriculture