

# **State Conservation Commission Meeting**

**January 24, 2017**

**Ramada Conference Center - State College, Pa**

## **Draft Agenda**

### **Briefing Session – 10:00am**

1. Review of Public Meeting Agenda items
2. Administrative Manual Update, Dirt, Gravel and Low Volume Road Program; Roy Richardson, SCC
3. Memorandum of Understanding between the State Conservation Commission, Pa Department of Agriculture and PA Department of Environmental Protection; Karl Brown, SCC

### **Business Session – 1:45PM – 3:45PM**

#### **A. Opportunity for Public Comment**

#### **B. Business and Information Items**

1. Approval of Minutes –
  - a. November 8, 2016 Public Mtg.(A)
  - b. December 13, 2016 Conference Call (A)
2. Nutrient Management Program
  - a. Hillandale Bailey Farm, Nutrient Management Plan Amendment; Michael Brubaker, SCC (A)
  - b. 'Interim' Standard Weights for Breeder Poultry; Frank Schneider, SCC (A)
3. Annual Conservation District Audit Report; Karen Books, DEP (A)
4. Conservation District Donations and Building Project approvals (A)
  - a. Beaver County Conservation District
  - b. Armstrong County Conservation District
  - c. Washington County Conservation District
5. 2017 Conservation District Director Appointment Update; Karl Brown, SCC (NA)
6. Chesapeake Bay Program Highlights and Special Project Announcement; Veronica Kasi, DEP (NA)
7. National Fish and Wildlife Federation (NFWF) 2017 Competitive Grants Program; Jake Reilly, Dir., Chesapeake Bay Program, National Fish & Wildlife Foundation (NA)

8. Voluntary Best Management Practice (BMP) Survey Analysis Report – Matt Royer/James Shortle, Penn State University
  - a. Farm Survey Press Release
  - b. Farm Survey Final Report
9. Pa Envirothon – Promotional Video; Karen Books, DEP & Michael Aucoin, SCC (NA)

**C. Written Reports**

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

**D. Cooperating Agency Reports Adjournment**

Next Public Meetings/Conference Calls:

February 14, 2017 - Conference Call

March 14, 2017 – PDA, Harrisburg Pa

**STATE CONSERVATION COMMISSION MEETING**  
**PA Department of Agriculture, Harrisburg, PA**  
**Tuesday, November 8, 2016 1:00 p.m.**

***Draft Minutes***

Members Present: Secretary Russell Redding, PDA; Acting Secretary Patrick McDonnell, DEP; Michael Flinchbaugh; Donald Koontz; Ron Kopp; Ross Orner; Ron Rohall; MaryAnn Warren (telecom); Dr. Richard Roush (telecom); Dr. Dennis Calvin (telecom); Sara Nicholas for Sec. Cindy Adams-Dunn, DCNR; Denise Coleman, NRCS (telecom); Denise Brinley for Secretary Dennis Davin, DCED (telecom); Brenda Shambaugh, PACD.

**A. Public Input**

There were no public comments presented.

**B. Business and Information Items**

1. a. Approval of Minutes – September 13, 2016 Public Meeting.

Ron Rohall moved to approve the September 13, 2016 public meeting minutes. Motion seconded by Ross Orner. Motion carried.

b. Approval of Minutes – October 11, 2016 Conference Call.

Michael Flinchbaugh moved to approve the October 11, 2016 conference call minutes. Motion seconded by Ron Rohall. Motion carried.

2. Approval of Proposed 2017 Public Meeting and Conference Call Dates. Each year, it is necessary to select and advertise all regularly scheduled meetings of the Commission for the next calendar year. A list of proposed dates for 2017 was provided.

Ross Orner moved to approve the 2017 public meeting and conference call dates. Motion seconded by Michael Flinchbaugh. Motion carried.

3. Appointment of Vice-Chair for 2017. Conservation district law requires that the Commission elect a Vice-Chairman for the next year at their last regularly scheduled meeting of each calendar year. Michael Flinchbaugh served as Vice-Chair for 2016. Michael has indicated that he would be willing to serve in this capacity for 2017 if requested.

MaryAnn Warren moved to re-elect Michael Flinchbaugh as the Vice-Chair for 2017. Motion seconded by Ross Orner. Motion carried.

4. 2016 Appointment to the Nutrient Management Advisory Board. Larry Baum, SCC, updated the Commission on this issue. The Nutrient Management Advisory Board (NMAB) was created by law and tasked with the duty of reviewing and commenting on proposed nutrient management program regulations. The Board also advises the Commission on general issues and concerns related to nutrient and odor management. The 16-member advisory board is comprised of individuals with specific areas of expertise, such as swine and poultry production, agronomy, veterinary nutrition, and other areas of expertise. With the resignation of Dr. Charles Cravotta, a vacancy currently exists for a “hydrologist” on the NMAB. SCC Chairman, Secretary McDonnell, has appointed Mr. Joseph Duris to fill this position. Additional details about Mr. Duris were provided by Larry Baum.

Secretary Redding moved to confirm the SCC Chairman's appointment of Mr. Joseph Duris (USGS Hydrologist) to serve as the "hydrologist" representative on the NMAB. Motion seconded by Donald Koontz. Motion carried.

5. Additional Funds Request, Reserve Account – Susquehanna County Conservation District. Johan Berger, SCC, updated the Commission on this request. In March 2015, the SCC approved a request by the Susquehanna Conservation District to create a Building Reserve Account, as provided under the Commission's Conservation District Fund Allocation Program Statement of Policy. To date, the Commission has approved two requests by the district to place funds into this reserve account for purposes of constructing a new office building. The district's building fund now contains \$154,916 in Unconventional Gas Well Funds (UGWF) allocated through the CDFAP. The district is requesting Commission approval to place additional funds (\$93,030) into this reserve in anticipation of a 2017 building project.

Michael Flinchbaugh moved to approve the request of the Susquehanna Conservation District to place an additional \$93,030 in their Building Reserve Account. Motion seconded by Ron Rohall. Motion carried with one abstention by MaryAnn Warren.

6. Proposed Changes to the Dirt, Gravel, & Low Volume Road Maintenance Program Administrative Manual. Roy Richardson, SCC, reported that the Commission and Center for Dirt and Gravel Road Studies staff, in cooperation with the Dirt, Gravel, and Low Volume Road Program's Policy and Planning Workgroup are in the final stages of reviewing the program's administrative guidance manual. This manual provides comprehensive administrative and program guidance to conservation districts that carry out the DGLVRP and was last reviewed and updated in November 2014. The workgroup is recommending that the current draft be provided to participating conservation districts for review and comment, prior to finalization of the manual changes in early 2017. Some changes include clarification on the purchase of equipment, discussion on education and outreach activities, and several technical policies.
7. Chesapeake Bay Program Update – Veronica Kasi, DEP, reported that DEP and conservation district staff continue to move forward in implementing the revised Bay strategy for Pennsylvania. DEP regional staff continue to visit farms to determine compliance with Manure Management and Agricultural E&S plan requirements. Most conservation districts participating in the CBP Technician funding program began implementing farm visits in October and will report on their inspection progress quarterly. In addition, the construction season is quickly coming to a close for BMPs that are being implemented under Growing Greener, as well as other state and federal financial assistance programs. With the 2017 mid-term evaluation and WIP 3 deadlines approaching, the pace of activities surrounding Bay program will continue to accelerate. A brief presentation regarding the CBP Expert Panel Report on Nutrient Management was given by Mark Dubin, University of Maryland and EPA CBP Agricultural Technical Advisor. The approval of this expert panel report is before the Water Quality Goal Implementation Team (WQGIT) and DEP is seeking the input and advice

of the agricultural community and the Commission regarding the treatment (credit received) for manure management plans under this amended expert panel report.)

8. Voluntary Best Management Practice (BMP) Survey Update. Dr. Richard Roush, Dean, Penn State College of Agricultural Sciences, reported that the Penn State College of Agriculture is in the final stages of data analysis for the survey (self-reporting) of best management practices (BMPs) that were voluntarily installed by farms in the Bay watershed. Nearly 7,000 farms participated in this self-reporting activity. Approximately 700 farms were visited in late summer to verify the survey results. Dr. Roush shared that 20,000 questionnaires were sent and 6,800 were received back.
  
9. Agriculture In Balance Conference Update. Dr. Richard Roush, Dean, Penn State College of Agricultural Sciences, reported that on October 12, approximately 100 individuals met to review and discuss the draft report and recommended priority initiatives for the PA In Balance Conference. Attendees identified priority initiatives within the report and worked to develop draft action plans for top four initiatives to be pursued over the next 12 months. The group also worked to identify “champions,” for these priority initiatives. These champions would be individuals or organizations willing to take a lead role in further refining and implementing these recommendations.
  
10. 2017 Priorities, Issues, Concerns, & Opportunities – Group Discussion. Given the abbreviated nature of this meeting due to the elections today, Commission staff is recommending this agenda item be postponed until the January 2017 meeting. This agenda item was, in part, to focus on the services and support to be provided under the revised DEP/PDA/SCC MOU. As of this date, the draft MOU is not yet ready for distribution to Commission members for review and comment.

### **C. Written Reports**

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

### **D. Cooperating Agency Reports**

DEP – Acting Secretary Patrick McDonnell reported that \$18 million will be spent on the Growing Greener program.

PDA – Secretary Russell Redding reported that a Green Ribbon Task Force was recently issued on forest land use in the Commonwealth and that he recently met with representatives of the Amish Community to discuss the Chesapeake Bay Strategy.

NRCS – No report

PSU – No additional comments and report was provided.

DCNR – Sara Nicholas, representing Secretary Cindy Adams-Dunn, reported that DCNR ran a very short pilot riparian forest buffer grant round from July 1 to mid-September 2016. They received 26 applications seeking \$2.3 million total for their \$500,000 in available funds. It was encouraging to see such a strong demand. They plan to make grant awards in December. About three-fourths of the applicants took on the challenge of planning to install income-producing riparian buffers, which is a new element of DCNR’s buffer program. The idea is to provide an incentive to landowners who now see giving up farmland for buffers as a shift to “unproductive” lands...this program would enable them to keep what they produce. This program is statewide. Five county conservation districts applied. DCNR will also be holding another grant round starting in January and will be sure to provide updates to the SCC through DCNR’s Drew Gilchrist to let everyone know.

DCED – No report

PACD – Brenda Shambaugh reported that the PACD fall region meetings have been completed.

**Adjournment:** Meeting adjourned at 3:54 p.m.

Next Conference Call: December 13, 2016

Next Public Meeting: January 24, 2017 at the Radisson Conference Center, State College, PA.

**STATE CONSERVATION COMMISSION CONFERENCE CALL**  
**PA Department of Agriculture, Room 405**  
**Tuesday, December 13, 2016 @ 8:30 am**

***DRAFT MINUTES***

**Members Present:** Secretary Russell Redding, PDA; Greg Hostetter, Deputy Secretary for Secretary Redding, PDA; Acting Secretary Patrick McDonnell, DEP; Kelly Heffner, Deputy Secretary, DEP; Drew Gilchrist for Secretary Cindy Dunn, DCNR; Dr. Dennis Calvin, Penn State; Donald Koontz; Michael Flinchbaugh; Ross Orner; Ron Rohall; and Ron Kopp, Glenn Seidel, Brenda Shambaugh.

**B. Information and Discussion Items**

Karl Brown, SCC

1. Butler Conservation District Staff Employment Transition Assistance. The Butler County Conservation District is transitioning from a county-based employment relationship to a district-based employment relationship. Earlier this summer, Butler County Commissioners notified the district of their intent to terminate this employment relationship effective June 30, 2017. The Butler Conservation District currently has 5 staff positions on the county payroll system which provides HR support and oversight for these district positions. Commission staff met with all three Butler County Commissioners on November 21<sup>st</sup> to discuss the transition. At least 5 other districts (Beaver, Bedford, Berks, Lebanon, and Susquehanna) have undergone similar transitions in the past 10 years. SCC staff is proposing a small reallocation (\$5,000) of Leadership Development Special Project Funds to provide assistance to the Butler Conservation District by a team of conservation district directors and staff who have skills in developing and implementing district-based employment relationships, as well as those who have previously navigated this employment transition.

*A motion was presented to reallocate \$5000 of Leadership Development program funds to cover expenses for conservation districts assisting Butler CD with the transition. The motion was carried unanimously.*

2. Chesapeake Bay Program Update: Secretary McDonnell reported that activities related to the Chesapeake Bay Program continue at a hectic pace with a “midpoint” assessment of the TMDL beginning in 2017 and a Phase 3 WIP due in August 2018. DEP has indicated they will be convening a “steering committee” in 2017 and begin soliciting input on the development of Pennsylvania’s Phase 3 Watershed Implementation Plan (WIP).
3. Pennsylvania In-Balance Update: Dr. Dennis Calvin and Karl Brown reported that the In-Balance Conference recently reconvened participants for a one-day follow-up session (October 12<sup>th</sup>) to help prioritize initiatives and to begin developing action plans for four

top priority goals. This session also led to the convening of a Strategic Funding Dialog Conference on December 13<sup>th</sup> to help Pennsylvania organizations and agencies explore strategies for collaboration on funding projects to help improve local water quality in the Commonwealth. Finally, an In-Balance Steering Committee meeting will be held December 20<sup>th</sup>.

4. PACD/SCC Winter Meeting: Program staff reviewed the events schedule for the PACD/SCC Winter Meeting scheduled for January 24-25 in State College. The Commission meeting will take place on January 24<sup>th</sup>. Barb Buckingham will be contacting appointed Commission members to assist with making reservations for this meeting.
5. CDFAP Agricultural BMP Implementation Special Project: Karl Brown reported that the State Conservation Commission entered into agreements, in early 2016, with nine (9) conservation district in Pennsylvania's Chesapeake Bay watershed as part of a special 'pilot' project for the implementation of agricultural BMPs. The participating conservation districts committed a portion of their FY2015-16 Unconventional Gas Well funds as match for cost share funds provided by the Commission under the Conservation District Fund Allocation Program for implementation of eligible BMPs. Projects are scheduled to be completed by December 31, 2016 and reported to the Commission in January 2017. Agency staff (SCC, DEP, PDA) will evaluate the pilot project and provide a report to the Commission in the first quarter of 2017. Any Commission member that is interested in participating in the pilot evaluation should contact Karl Brown.

### C. Agency/Organization Updates

1. DCNR – Drew Gilchrist, South East Regional Advisor  
Drew Gilchrist mentioned that the grant program for statewide, regional, and local recreation and conservation projects will be announced on December 15, 2016 and will open on January 23, 2017 and close on April 12, 2017.
2. DEP – Acting Secretary McDonnell and Dave Jostenski  
Acting Secretary McDonnell noted that Pennsylvania is dealing with drought issues. The biggest problems are in Eastern PA and the Delaware basin. Dave Jostenski also spoke about the drought status. He stated that a DEP task force will be evaluating drought conditions.
3. Agriculture – Deputy Secretary Greg Hostetter  
Deputy Secretary Hostetter shared that there is concern regarding the avian influenza. This flu is spreading around foreign countries. Pennsylvania is preparing with preventative measures and plans. The colder the weather, the faster the flu spreads.

4. PACD – Brenda Shambaugh

Brenda noted that the PACD is looking forward to working with the Leadership Development Committee. PACD will be the host submitting a proposal to the Leadership Development coordinator.

5 Penn State University – Dr. Dennis Calvin

Dr. Calvin was asked about the pending PSU retirements. He stated that he is waiting to hear back about these retirements and who will replace the retirees.

**D. Adjournment. The conference call was concluded at 9:03 am.**

The next meeting will be on Tuesday, January 24, 2017 @ 1:45 p.m.; Radisson Conference Center, State College, PA.



**COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION**

**DATE:** January 10, 2017

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

**FROM:** Mike Brubaker  
Nutrient Management Regional Program Coordinator

**SUBJECT:** Nutrient Management Plan Review and Requested Action

**Action Requested**

Action is anticipated on the Hillandale Gettysburg, LP Bailey Farms (Hillandale-Bailey Farms) Nutrient Management Plan (NMP) for their Concentrated Animal Operation / Concentrated Animal Feeding Operation (CAO / CAFO) located in Spring Grove, York County.

**Background**

I am in the final stages of the required review of the subject Nutrient Management Plan (NMP, or plan) listed above. Final corrections to the plan are expected by January 17, 2017 and its anticipated this NMP will be in final form ready to be acted upon at the January 24, 2017 State Conservation Commission meeting.

The operation, is considered to be both a Concentrated Animal Operation (CAO) under the PA Nutrient and Odor Management Act (Act 38 of 2005), and a Concentrated Animal Feeding Operation (CAFO) under DEP's Chapter 92 Program.

This NMP is basically the same as the one the Commission approved back in November 2015, but with Hillandale-Bailey Farms' proposed expansion project being greatly scaled back. Since the time the Commission approved their current NMP, Hillandale-Bailey Farms has made a business decision to not build their proposed Site Two, and has thus amended their NMP to show this significant change. The proposed new "house 10" on their existing Site One is still planned.

A more detailed background and farm description, along with a copy of the NMP, will be provided once the NMP is final form for consideration.



**COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION**

**DATE:** January 10, 2017

**TO:** Members  
State Conservation Commission

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

**THROUGH:** Karl G. Brown  
Executive Secretary

**SUBJECT:** Interim Standard Animal Weights for Breeder Poultry

**Action Requested**

Staff would like to ask the SCC to approved Interim Standard Animal Weights for Breeder Poultry to be used in the Act 38 Nutrient Management Program. SCC staff has noticed that some breeder poultry facilities are starting the planning process of building these types of facilities in Pa.

**Background**

The current animal weights that are used in the Act 38 Nutrient Management Plan (NMP) program were developed in 2010. The original animal weights were published in 1997 for Act 6. In 2007 a revision was made for Act 38. In 2010 the weights were again revised to better reflect current Pennsylvania agriculture. On October 28, 2016 SCC staff sent out proposed animal weights and grouping changes for a 60-day public comment period.

Please note that 83.262 (a) (1) (i) of the Act 38 regulations state:

Compute the animal weight for the agricultural operation by multiplying the average number of animals on the agricultural operation by the *standard animal weight used by the livestock industry in this Commonwealth*. The standard weights contained in guidance published by the Commission may be used to meet this requirement. Other animal weights may be used in place of those in the Commission guidance, if there is sufficient documentation to support their use. For those animal types not included in the Commission guidance, the average animal weight for the operation shall be used for this calculation, taking into account, if applicable, the range of animal weights throughout the time the animals are on the operation.

SCC staff has received multiple comments that standard animal weights are needed for breeder poultry facilities based on these types of facilities being considered for certain parts of Pennsylvania. SCC staff agrees that breeding poultry should be added to the

standard animal weights charts as part of the current update process. But at the same time, as some of these facilities are now starting the planning phase, SCC staff is asking the SCC to approved interim weights until the entire standard animal weights chart is approved.

Based on comments received and with assistance from PSU poultry experts, SCC staff is recommending the following as interim guidance until a more thorough review can be completed:

<b>Type of Animal</b>	<b>Standard Weight (lbs.) during Production (range)</b>
<b>Poultry</b>	
Breeder Layer Hen: 20-62 wk.	5.83 lbs. (4.3-7.3 lbs.)
Breeder Layer Rooster: 20-62 wk.	8.65 lbs. (6.7 – 10.6 lbs.)
Breeder Broiler Hen: 4-65 wk.	4.75 lbs. (1-8.5 lbs.)
Breeder Broiler Rooster: 4-65 wk.	6.00 lbs. (1.5-10.5 lbs.)

It is anticipated that staff will ask for an action on the new Standard Animal Weights, and any changes to these interim weights for breeding poultry, sometime in 2017 after a thorough review of those comments by staff and PSU species experts.



# pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF PLANNING AND CONSERVATION

MEMO

**TO** Karl G. Brown  
Executive Secretary  
State Conservation Commission

**FROM** Karen L. Books *KLB*  
Conservation District Support Section

**DATE** January 10, 2017

**RE** Review of District Audit Reports for Calendar Year 2015

**ACTION REQUESTED:** Accept report of district audits for calendar year 2015

## Background

Since 1999, the State Conservation Commission has required conservation district financial records to be audited under the supervision of a certified public accountant. Those audits must be independent of the County audit and completed in accordance with generally accepted auditing standards and the standards applicable to "Financial Statement" audits contained in the latest revision of *Government Auditing Standards* issued by the Comptroller General of the United States.

## Summary of Audit Findings

Since 1999, districts have consistently made positive efforts in addressing the recommendations and findings reported in their audits. Thirty-five (35) district audit reports had "no reportable findings". This is the most districts with "no reportable findings" we have ever had. Many of the more common findings identified during the initial years have been addressed; however, there are two common findings which continue to be noted. "*Lack of segregation of duties*" was noted in 21 of the audits and "*proper recording of accounts payable*" was noted in 12 of the audits. These findings comprised 75% of all findings noted. Explanations of these two findings are as follows:

"*Lack of segregation of duties*" is related to the small number of staff in some district offices. Due to this small number of staff, these districts have difficulty achieving the segregation of duties recommended for an efficient system of internal controls over their finances. As an interim measure, district auditors consistently recommend that conservation district directors take an active role in the financial functions of their

district. This involvement is intended to minimize the possibility that any errors or irregularities that could occur.

To permanently address "*Lack of segregation of duties*", districts would need to implement a policy that increases the number of district staff overseeing/reviewing district financial activities. Commission and Agency staff has been looking into this issue and plan to recommend some options in the future to help districts address these findings.

"*Proper recording of accounts payable*", this finding often occurs when a district submits an invoice to be paid in one calendar year, but does not get reimbursed until the next calendar year or when the district sets up their accounts on a cash basis, but the audit is completed on an accrual basis.

To address "*proper recording of accounts payable*", districts need to review all expenditures with the appropriate personnel to ensure all appropriate accounts payables are recorded in the correct period of benefit.

### **Summary of Compliance with the Commission's Audit Policy**

I am pleased to report that all sixty-six conservation district audit reports were independent of the County audit as required and were submitted by the December 31, 2016 deadline as stated the Commission's audit policy.

I am also pleased to report that the 2015 audits show all districts are following the guidelines approved by the Commission dealing with *Custodial Credit Risk*, for both bank deposits and investments. In 2015 there were no districts with unsecured funds exposed to *Custodial Credit Risk*. Over the past couple of years, districts have been addressing this issue. In 2013 there were six districts with a total of \$1,704,134 in unsecured funds that are exposed to *Custodial Credit Risk* and in 2014 two districts had \$413,822 in unsecured funds exposed to *Custodial Credit Risk*.

For new Commission members and those that need a refresher, the following is an explanation of *Custodial Credit Risk*.

*Custodial Credit Risk* is the risk a district assumes when its deposits over a certain federally insured amount, currently \$250,000, may or may not be available in the event of failure of the financial institution that has pledged securities as collateral to protect these funds. These deposits, in excess of \$250,000, are not covered by federal depository insurance, but are protected by collateral securities held by a pledging financial institution.

These securities are typically not held under the district's name and in the event that the pledging institution would fail, the district may not be able to recover the full value of its investment or collateralized securities that are in possession of this institution.

To minimize the risk to bank deposits and investments that fall under the category of *Custodial Credit Risk*, the Commission recommended that districts follow the guidelines presented on the second page of the investment *Model Policy* approved by the Commission in May 2010 and distributed to all districts. The guidelines are as follows:

The Conservation District board should assure that:

- The District has a written agreement with the institution regarding the collateral pledge;
- The pledge is approved by the institution's board of directors or loan committee, and such approval is reflected in the institution's minutes and is kept continuously as an official record of the institution;
- The market value (not just the face value) of the pledged securities is tested frequently and is at least equal to the amount of the deposits plus accrued interest;
- The pledged securities are U.S. Government Securities; and
- The District receives, from the bank, monthly reports on the amount of this deposit, the identity of the collateral and the market value of the collateral.

**DATE:** January 12, 2017

**TO:** Members  
State Conservation Commission

**FROM:** Karl G. Brown, Executive Secretary

**RE:** Agenda Item B.4.a & b  
Conservation District Donations

Information pertaining to these agenda items is not available for inclusion in the mailing packet but will be provided to the Commission members as soon as that information becomes available.

**DATE:** January 12, 2017  
**TO:** Members  
State Conservation Commission  
**FROM:** Johan E. Berger  
Financial, Certification and Conservation District Programs  
**RE:** Request for Approval  
Washington County Conservation District Building Project

**Action Requested**

Approve a request from the Washington County Conservation District allowing the district to enter into necessary contractual arrangements (construction, lease or otherwise) to complete a building project.

**Background**

For the past 5 years, the Washington County Conservation District has been co-located with the USDA offices (Farm Service Agency and the Natural Resources Conservation Service) in leased office space. The building has recently changed ownership and the current owner informed USDA and the District that their respective lease would not be renewed at the end of 2016. The present owner has agreed to allow the District and USDA agencies to continue operation, on a month to month lease, until the District and USDA acquire new office space.

The District proposes to renovate and expand an existing unused county-owned office building to provide office space for the District, the Farm Service Agency and Natural Resources Conservation Service. This project will be accomplished in cooperation with Washington County Commissioners.

**Recommendation**

Under current policy regarding powers and duties granted to the State Conservation Commission (Commission) under the Conservation District Law (Act of May 15, 1945, P.L. 217), certain matters require approval by the Commission or the Executive Secretary, as authorized by the Commission. When conservation districts enter into contracts, where the estimated project cost exceeds \$250,000, the conservation district must seek approval from the Commission to enter into such contracts.

Please find attached a description of the building project and a request from the Washington County Conservation District to enter into the necessary contractual arrangements (construction, lease or otherwise) for completion of the district's building project. Gary Stokum, District Manager for the Washington County Conservation District will provide a presentation on the District's building project at the January 24, 2017 public meeting.

Attachments (3)



**Washington County Conservation District**

2800 No. Main St., Suite 105  
Washington, PA 15301  
Phone: 724-705-7098  
Fax: 724-249-2519  
e-mail: washcocd@yahoo.com

Agenda Item B.4.c.i

**67 Years**

1947 - 2014

January 9, 2017

Karl Brown  
Executive Secretary  
State Conservation Commission  
2301 North Cameron Street, Rm. 311  
Harrisburg, PA 17110-9408

Dear Karl:

The Washington County Conservation District respectfully requests that the State Conservation Commission approve our proposed new office building project. We will be completing this building project in cooperation with the County of Washington. Attached is a brief description of the terms and scope of the project. We also request that the State Conservation Commission permit our Conservation District to enter into any necessary contractual arrangements necessary to complete the project. Thank you in advance for your consideration of our request.

Sincerely,

A handwritten signature in cursive script that reads "Gary Stokum".

Gary Stokum  
District Manager

## Washington County Conservation District Proposal

### Washington County Conservation Center

**Proposal:** The Washington County Conservation District proposes to renovate and expand an existing unused County office building to provide space for the Conservation District office, the USDA Farm Service Agency and the USDA Natural Resources Conservation Service.

**Necessity of Project:** This project will be accomplished in cooperation with Washington County. For the past 5 years the Conservation District has been collocated with the USDA offices in the front office portion of an existing factory building. The factory was owned by Crouse Hinds but was purchased in early 2016 by Eaton Company. Eaton informed the USDA and the Conservation District that at the end of 2016 they would not be renewing our leases. Our agencies had to find new office space.

**Options evaluated:** We then proceeded with exploring our options which included:

1. Locating new office space to rent. We did find office space at \$17 per square foot. Presently we pay \$9.10 per square foot.
2. Purchasing land and constructing a new office building to house all three agencies. This was estimated to cost in excess of two million dollars.
3. The third option was offered by our County Commissioner Director. The County owned a small office building adjacent to the County Fair Grounds that had once been used at the County Juvenile Detention Center. It was being used by Tyler Industries, the company that was completing the County wide property reassessment. Their lease would also terminate at the end of 2016. Our Board of Directors chose to pursue this option.

Our estimates indicated that although the initial cost of pursuing the third option of building and renovating was higher than renting the long-term costs would be significantly lower. Over the course of 20 years the cost of renting or building is close to even. However, over the course of 40 years the cost of renting would be approximately 2.7 million dollars higher than pursuing the building project.

Our Board of Directors also determined that due to the solid base structure of the present building it would be less expensive to renovate and expand the building rather than build an entirely new building. Adding to this was the additional benefit that the County would be providing the building and land rent free and funding 50% of the building costs.

**Terms of agreement with Washington County:** The present building is approximately 4,940 square feet in size with 13 parking spaces. Our project will excavate the hillside behind the building and adjacent to the Washington County Health Center. This will allow us to expand the building to 9,478 square feet and provide 50 parking spaces for staff and visitors. The following terms are included in the lease with Washington County:

1. Initial term of the lease is 20 years with two additional 20 year renewal options for a total of 60 years.
2. The USDA will sublet their office space from the Conservation District at the rate of \$16 per square foot.

3. Half or 50% of the rent from the USDA will be transferred to Washington County.
4. The Conservation District will not be required to pay any rent to Washington County.
5. The Conservation District will be responsible for all maintenance, cleaning and utilities on the building.
6. Washington County will provide an interest free loan for 50% of the total cost of construction for the renovation and expansion of the building. The loan is to be paid back in equal yearly installments over a 5 year period.
7. Washington County will bid the project and oversee the construction of the project.

**Funding for the project:** For the past decade a tremendous amount of Marcellus Shale gas drilling has taken place in Washington County. Although Conservation Districts do not process permits for drilling pads, gathering lines or compressor stations there are many industries related to Marcellus Shale drilling that do require permits from Conservation Districts such as transmission lines, processing plants, trucking firms, hotels and road improvements. For many years now our Conservation District has experienced record levels of plan review and permit fees. Normally we would use these fees to cover the costs of employing staff but with the advent of the Act 13 funds we found ourselves with excess money. We used the Act 13 funds and some of our permit and plan review fees to expand our staff. Over the past five years we have hired two new Agricultural Technicians and a Dirt, Gravel and Low Volume Road Coordinator. But even with the addition of the cost of new staff we still were accumulating excess funds. At present our District can dedicate \$1.4 million dollars towards this project. By cooperating with Washington County, we can easily pay for the project and still maintain funds in reserve for emergencies.

**Present status of the Project:**

1. Our lease with the USDA has been approved by their Washington D.C. office.
2. Our District has signed the lease with the Washington County Commissioners.
3. The engineering firm that the County has on retainer has prepared the site grading plan, E&S control plan, stormwater control plan and the NPDES permit for the site. The permit, as per the DEP Pittsburgh Regional Office instructions, is being processed through the Greene County Conservation District office. It would not be appropriate for our District to process the NPDES permit for our project.
4. The County Engineer has obtained the necessary approvals from the local municipality.
5. The Architect for this same engineering firm is presently preparing the detailed construction drawings. His target date for completion is early February of 2017.
6. We plan to have the County purchasing department bid the project in February-March and go to construction as soon as possible.
7. Our present landlord has agreed to allow us to continue operation on a month to month lease until our building is completed.
8. Our hopes are to be able to move into our new offices by the fall of 2017.

**Advantages of this project:**

1. We create in essence an agricultural service center where we are able to keep the Conservation District and the USDA offices together. The new building is adjacent to the Washington County Fair Grounds. An excellent location for our agricultural producers.
2. Long term security of office space for both the Conservation District and the USDA. A 60 year lease is extraordinary.

3. We are pursuing the most long term affordable option with the least cost to the tax payers of Washington County.
4. The new office will have plenty of space for all three agencies, a large conference room for meetings, plenty of parking spaces, excellent location at the center of the County and close to major interstate highways, adjacent to the Washington County Fair Grounds and be all new, fresh, energy efficient with extra room for additional staff if necessary.
5. Everyone wins! Washington County makes good use of their building plus eliminates the cost of maintaining an empty building. The Conservation District and USDA get a permanent home in a great location. Everyone will save money over the long term.

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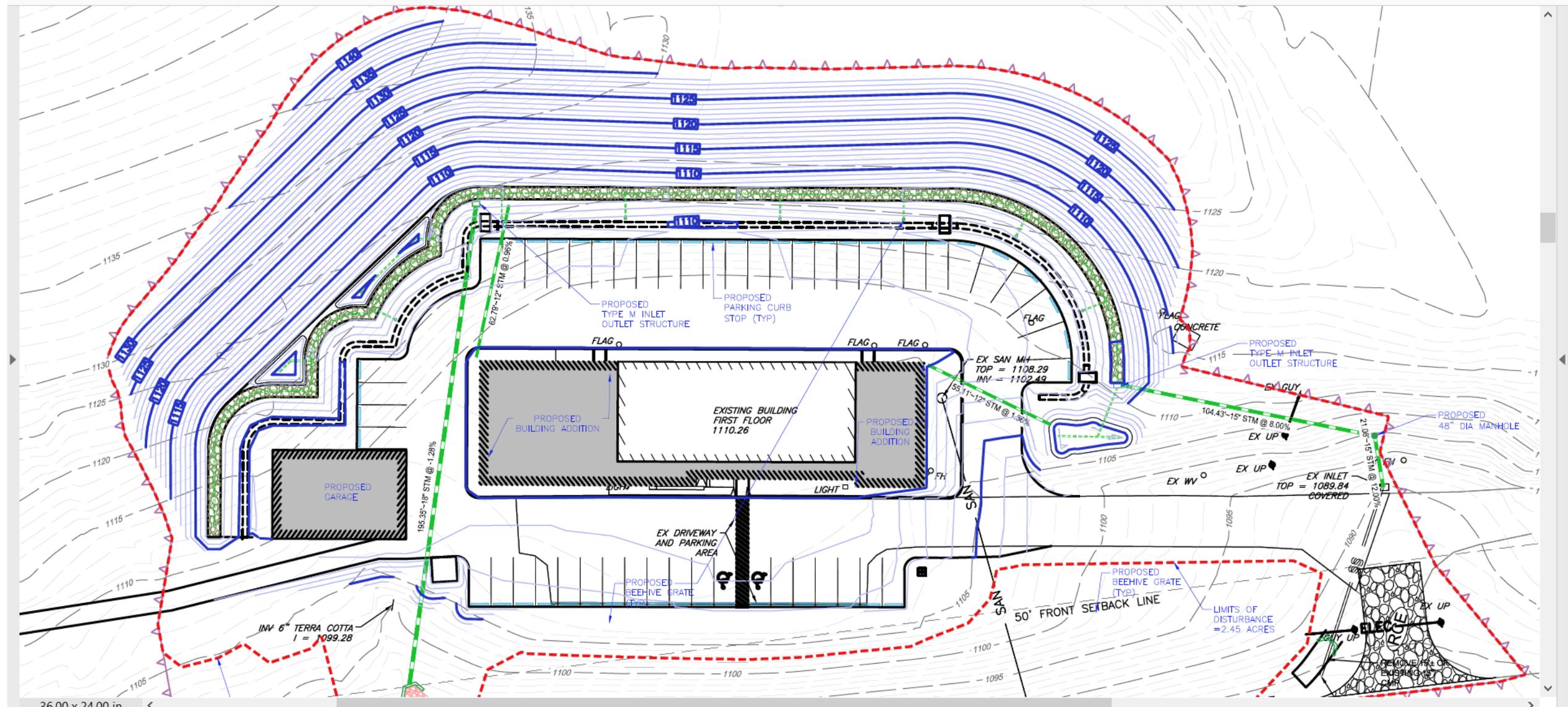
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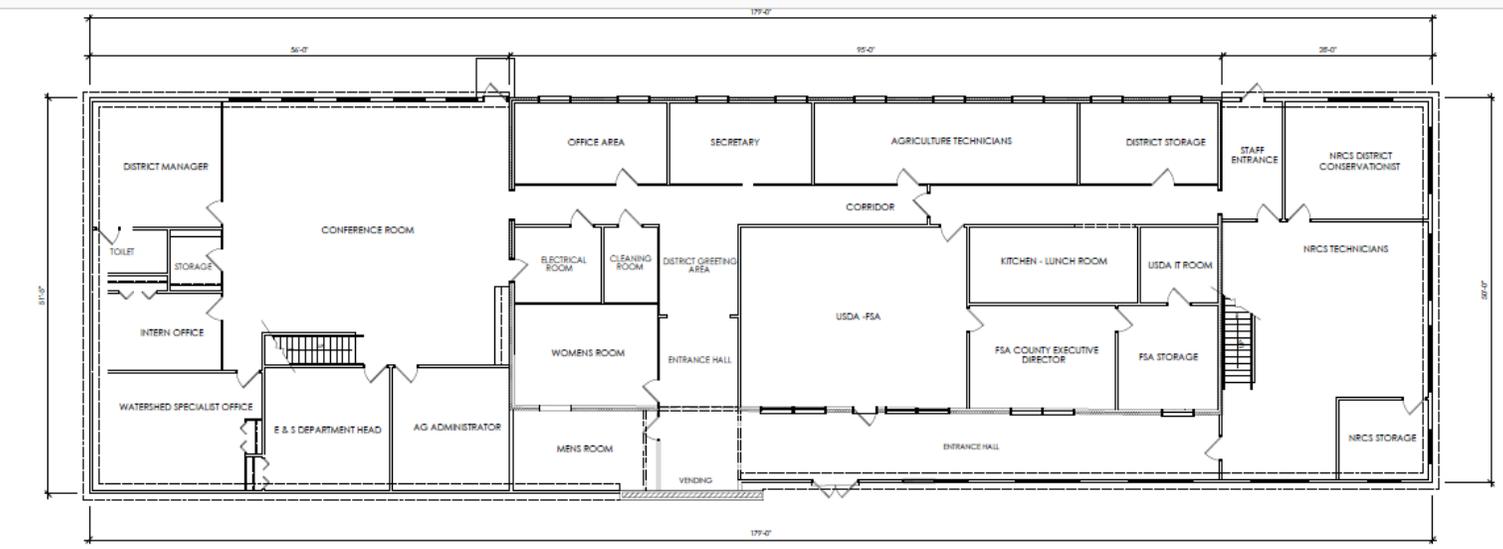




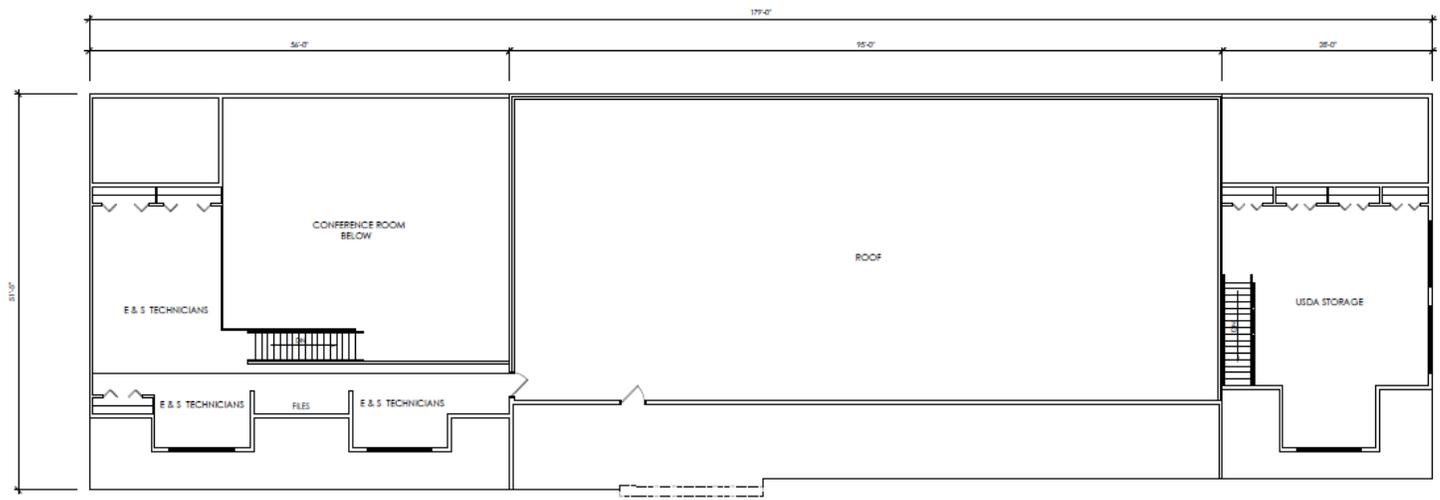
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FIRST FLOOR PLAN



**Date:** January 9, 2017

**To:** Members  
State Conservation Commission

**From:** Karl G. Brown, Executive Secretary

**RE:** 2017 Conservation District Director Appointments

As of January 9, 2017, Chief Clerks from 56 counties (85% of all counties) have submitted their county's list of Conservation District Director appointments for 2017 to the State Conservation Commission. Those counties noted below with an asterisk are those counties where appointments have not yet been received by the Commission. Reminder letters will be mailed in February to those counties that have not submitted their director appointments to the Commission.

- |                |                |                    |                  |
|----------------|----------------|--------------------|------------------|
| 1. Adams       | 18. Clinton    | 35. Lackawanna*    | 52. Potter       |
| 2. Allegheny*  | 19. Columbia*  | 36. Lancaster      | 53. Schuylkill   |
| 3. Armstrong   | 20. Crawford   | 37. Lawrence       | 54. Snyder       |
| 4. Beaver      | 21. Cumberland | 38. Lebanon        | 55. Somerset     |
| 5. Bedford     | 22. Dauphin    | 39. Lehigh*        | 56. Sullivan     |
| 6. Berks       | 23. Delaware*  | 40. Luzerne*       | 57. Susquehanna  |
| 7. Blair       | 24. Elk        | 41. Lycoming*      | 58. Tioga        |
| 8. Bradford    | 25. Erie       | 42. McKean         | 59. Union        |
| 9. Bucks       | 26. Fayette    | 43. Mercer         | 60. Venango      |
| 10. Butler     | 27. Forest     | 44. Mifflin        | 61. Warren       |
| 11. Cambria    | 28. Franklin   | 45. Monroe         | 62. Washington   |
| 12. Cameron*   | 29. Fulton     | 46. Montgomery*    | 63. Wayne        |
| 13. Carbon     | 30. Greene     | 47. Montour        | 64. Westmoreland |
| 14. Centre     | 31. Huntingdon | 48. Northampton    | 65. Wyoming*     |
| 15. Chester    | 32. Indiana    | 49. Northumberland | 66. York         |
| 16. Clarion    | 33. Jefferson  | 50. Perry          |                  |
| 17. Clearfield | 34. Juniata    | 51. Pike           |                  |

**DATE:** January 12, 2017

**TO:** Members  
State Conservation Commission

**FROM:** Karl G. Brown, Executive Secretary

**RE:** Chesapeake Bay Program Highlights

Veronica Kasi, Program Manager, Chesapeake Bay Program Office will provide information on Special Project Funds, the 2017 Chesapeake Bay Program Conservation District and PA Agency Staff Meeting and other program highlights during the January 24, 2017 public meeting.

Information pertaining to this agenda item was not available for inclusion in the mailing packet but will be provided to the Commission members as soon as that information becomes available.

**DATE:** January 11, 2017

**TO:** Members  
State Conservation Commission

**FROM:** Karl G. Brown, Executive Secretary

**RE:** 2017 Request for Proposal Announcement  
Chesapeake Bay Stewardship Fund, NFWF

The National Fish and Wildlife Foundation's (NFWF) Chesapeake Bay Stewardship Fund is dedicated to protecting and restoring the Bay by helping local communities clean up and restore their polluted rivers and streams. Working in partnership with government agencies and private corporations, the Stewardship Fund awards \$8 million to \$12 million per year through two competitive grant programs and directed technical assistance for advancement of cost-effective and creative solutions to Bay restoration efforts.

Jake Reilly, Director, Chesapeake Bay Programs for NFWF will provide a brief presentation and announcement regarding 2017 competitive grants under the Chesapeake Bay Stewardship Fund.

**DATE:** January 11, 2017

**TO:** Members  
State Conservation Commission

**FROM:** Karl G. Brown, Executive Secretary

**RE:** Pa Farm Conservation Practices Inventory Report  
Environment and natural Resources Institute, Penn State University

In early 2016, the Penn State Survey Research Center administered a survey asking farmers across Pennsylvania to inventory voluntary implementation of water quality best management practices. The survey stemmed from agricultural leaders' desire to document measures Pennsylvania farmers have taken on their own, without federal or state funding, to reduce nitrogen and sediment levels in local streams, rivers and lakes. The survey was developed collaboratively by Penn State college of Agricultural Sciences, Pennsylvania Farm Bureau, PennAg Industries Association, Pennsylvania Farmers Union, Pennsylvania Association for Sustainable Agriculture, Professional Dairy Managers of Pennsylvania, the Pennsylvania Department of Agriculture, the Pennsylvania State Conservation Commission, the Pennsylvania Association of Conservation Districts and DEP.

A total of 6,782 farmers in 41 counties in the Chesapeake Bay watershed completed the survey, and researchers analyzed the responses. To verify response accuracy, researchers then randomly selected more than 700 of the respondents for farm visits in August by dozens of trained and experienced Penn State Extension staff.

The Penn State Agriculture and Environment Center recently released the report '*An Analysis of the Pennsylvania Farm Conservation Practices Inventory for Purposes of Reporting Practices to the Chesapeake Bay Program*' summarizing the data collected by the survey. Matt Royer, Director and Jim Shortle, Professor of Agricultural and Environmental Economics for the Environment and Natural Resources Institute will present a summary of the survey information and conclusions drawn during the verification and analysis of the information collected. Excerpts from the report are attached for your information.

Attachments (2)

## Farm Survey Report Press Release

=====  
Penn State Ag Sciences News 12/15/2016  
=====

Survey finds Pa. farmers have done much to protect Chesapeake Bay water quality

UNIVERSITY PARK, Pa. -- Many Pennsylvania farmers in the Chesapeake Bay watershed have voluntarily implemented, at their own expense, practices aimed at improving water quality, according to newly released survey research conducted by Penn State's College of Agricultural Sciences.

The study -- built around a survey that nearly 7,000 farmers responded to -- presents the first comprehensive inventory of farmers' voluntary use of water-quality best management practices. The study stemmed from agricultural leaders' desire to document measures Pennsylvania farmers have taken on their own, without federal or state funding, to reduce nitrogen and sediment levels in local streams, rivers and lakes.

The state Department of Environmental Protection, which funded the research along with Penn State, expressed interest in having the study done.

The study began with the Penn State Survey Research Center administering a survey in early 2016. A total of 6,782 farmers in 41 counties in the Chesapeake Bay watershed completed the survey, and researchers analyzed the responses. To verify response accuracy, researchers then randomly selected more than 700 of the respondents for farm visits in August by dozens of trained and experienced Penn State Extension staff.

Respondents reported implementing and covering the cost of the following water-quality best management practices:

- 475,800 acres of nutrient/manure management.
- 97,562 acres of enhanced nutrient management.
- 2,164 animal-waste storage units.
- 2,106 barnyard runoff-control systems.
- 55,073 acres of agricultural erosion and sedimentation control plans.
- 228,264 acres of conservation plans.
- More than 1.3 million linear feet of streambank fencing.
- 1,757 acres of grass riparian buffers.
- 5,808 acres of forested riparian buffers.

The verification component of the survey confirmed that farmers were accurate in their reporting, according to Matthew Royer, director of the Penn State Agriculture and Environment Center, who oversaw the survey project.

"This survey is extremely valuable in reporting voluntary practices that, to date, have not been adequately captured and reported for credit," he said. "The cumulative numbers of conservation practices on the ground are significant and reveal a large amount of conservation being implemented by

farmers outside of government cost-share programs. They have put a lot of their dollars and resources into conservation, so they should get credit for that."

Each year, DEP tracks agricultural conservation practices that are implemented to reduce pollution -- many of which are government-funded and reported by state and federal agencies to the U.S. Environmental Protection Agency and the Chesapeake Bay Program Partnership to document the commonwealth's progress toward improving local water quality and restoring the Chesapeake Bay. However, many Pennsylvania farmers want to ensure that the measures they install voluntarily, without state or federal cost-share, also are credited by the Chesapeake Bay Program Partnership.

Nevertheless, Royer said, "It doesn't mean that agriculture as a whole, or all farmers, have implemented what they need to meet water quality goals -- clearly more needs to be done."

The survey results were provided to DEP and presented today (Dec. 15) to the Chesapeake Bay Program's Agriculture Workgroup, which approved the survey process and was expected to recommend that EPA incorporate the results as part of this documentation and verification effort.

Penn State is pleased to have taken the lead in documenting best management practices implemented by farmers, said Rick Roush, dean of the College of Agricultural Sciences. "We place a high priority on research and extension programs aimed at improving the Chesapeake Bay and working with our partners to develop new strategies for accelerating agriculture's efforts to meet water-quality goals while continuing to support a vibrant and viable ag economy."

The survey approach reflects the Chesapeake Bay Restoration Strategy announced by Gov. Tom Wolf in January, which calls for public and private collaboration to maintain the quality of local waters in Pennsylvania through technical and financial assistance, technology, expanded data gathering, improved program coordination and capacity, and stronger enforcement and compliance measures when necessary.

The survey was developed collaboratively by Penn State, Pennsylvania Farm Bureau, PennAg Industries Association, Pennsylvania Farmers Union, Pennsylvania Association for Sustainable Agriculture, Professional Dairy Managers of Pennsylvania, the Pennsylvania Department of Agriculture, the Pennsylvania State Conservation Commission, the Pennsylvania Association of Conservation Districts and DEP.

### EDITORS: Contact Matthew Royer at 717-460-3612 or by email at [mzr154@psu.edu](mailto:mzr154@psu.edu).

The Department of Environmental Protection will hold a webinar on the Chesapeake Bay farm survey results at 10 a.m. on Friday, Dec. 16. DEP Acting Secretary Patrick McDonnell, Agriculture Secretary Russell Redding, and experts from Penn State and the Environmental Protection Agency's Chesapeake Bay Program Office will discuss the study results.

They'll explain what the findings mean for farmers' contributions to local water quality protection as well as state efforts to reach EPA-mandated pollution reduction targets to help restore the health of the Chesapeake Bay. The webinar includes a short Q&A opportunity for accredited media.



# **An Analysis of the Pennsylvania Farm Conservation Practices Inventory for Purposes of Reporting Practices to the Chesapeake Bay Program**

**Matt Royer**  
Director  
Agriculture and Environment Center  
Environment and Natural Resources Institute

**Jim Shortle**  
Professor of Agricultural and Environmental Economics  
Director  
Environment and Natural Resources Institute

**Aaron Cook**  
Research Assistant  
Environment and Natural Resources Institute  
Penn State College of Agricultural Sciences

**Prepared for the Commonwealth of Pennsylvania,  
Department of Environmental Protection**

**December 15, 2016  
Final Report**



**PennState**  
College of Agricultural Sciences

# **An Analysis of the Pennsylvania Farm Conservation Practices Inventory for Purposes of Reporting Practices to the Chesapeake Bay Program**

## **Executive Summary**

A survey of Pennsylvania farmers in the Chesapeake Bay watershed was conducted to provide them an opportunity to self-report conservation practices implemented on their farms. The survey especially sought data on “voluntary,” non-cost shared practices. The survey instrument and procedures were developed in collaboration by survey research experts in Penn State’s Survey Research Center, and subject matter experts from state agencies and agriculture. The survey development and implementation process was led and managed by the Agriculture and Environment Center (AEC), Penn State University, College of Agricultural Sciences.

The survey was mailed to approximately 20,000 farmers in late January 2016, with returns accepted until the end of April 2016. A total of 6,782 were completed and returned.

To assess the reliability of the self-reporting, approximately 10 percent of returns were selected randomly for on-farm verifications conducted by trained and experienced Penn State Extension staff. Statistical analyses of the data reject systematic under or over reporting in the sample data for the majority of relevant conservation practices, but means and 95% confidence intervals reveal a trend toward under reporting for the vast majority of practices. For several of these practices our analysis reveals a systematic under reporting by farmers. These include pasture acres in nutrient management plans, dairy manure storages, barnyard runoff controls, and stream bank fencing. Systematic over reporting was detected in only one practice, riparian buffers. We believe the cause of over reporting for riparian buffers was a difference between how the survey questions were asked for stream bank fencing and riparian buffers and how Penn State Extension agents were trained to record these practices during farm visits. In the case of riparian buffers, adjustments can be made to remove the resulting bias.

In order to ensure the numbers provided to the Commonwealth for reporting to the Chesapeake Bay model eliminate any potential for over reporting, we recommend applying our statistical analysis to adjust only for systematic over reporting of riparian buffers, and not for the other practices where systematic under reporting was evident. With this adjustment, farmers responding to the survey have implemented the following non-cost shared and/or previously unreported practices: 475,800 acres of nutrient/manure management; 97,562 acres of enhanced nutrient management; 2,164 animal waste storage units; 2,106 barnyard runoff control systems; 55,073 acres of agricultural E&S plans; 228,264 acres of conservation plans; 1,336,100 linear feet of stream bank fencing; 1,757 acres of grass riparian buffers; and 5,808 acres of forest riparian buffers.

## Introduction

There is much interest in the extent of the use of water quality protection practices in Pennsylvania agriculture. Conservation practice adoption is well-documented for practices that are implemented with federal or state financial assistance. Yet, while it is known that farmers adopt water quality protection practices without public financial support, there is no systematic accounting for these investments. In consequence, these self-financed practices are not accounted for in tracking the progress towards water quality goals, including cleaning up the Chesapeake Bay.

There are several initiatives that have been implemented to address this data gap. Here we report on the results of a sample survey of water quality practice adoption by Pennsylvania farmers located in the Chesapeake Bay watershed conducted early in 2016. The survey was conducted by the Penn State Agriculture and Environment Center with funding from the Pennsylvania Department of Environmental Protection (DEP), and with collaboration from the Pennsylvania Farm Bureau, Penn Ag Industries, Professional Dairy Managers of Pennsylvania, the Pennsylvania Department of Agriculture, the Pennsylvania State Conservation Commission, Pennsylvania Association of Conservation Districts, and Penn State Extension. The survey was designed specifically to provide data on self-funded high priority practices.

## Survey Methodology

The survey instrument was developed by a set of topic experts with technical assistance from the Penn State Survey Research Center (SRC). The survey asks questions to determine the use of a set of priority conservation practices, the funding sources for the practices, and farm operation characteristics. To control the length and complexity of the survey, the set of practices addressed in the survey was limited to the following practices that provide high levels of nutrient and sediment reductions, are practices accepted by the Chesapeake Bay Program for credit toward meeting nutrient and sediment load allocations, and are likely to have high levels of voluntary adoption:

- Nutrient/manure management plans
- Enhanced nutrient management
- Manure transport
- Animal waste storage systems
- Barnyard runoff controls
- Agricultural E&S plans and conservation plans
- No till and minimum till
- Cover crops
- Stream bank fencing
- Riparian buffers

Questions determine whether the practices are present on a farm, and if so, determine the level of implementation using units compatible with the Chesapeake Bay model, the funding source, and whether they meet definitions acceptable to the Chesapeake Bay Program. A copy of the survey instrument is provided in Appendix A.

The survey was mailed by the SRC to approximately 20,000 potential respondents located in the Chesapeake Bay watershed in Pennsylvania in January 2016. The sample frame was provided by Penn State Extension and was gathered from Extension's extensive statewide programming for farmers. The mailing included a letter from Pennsylvania Secretary of Agriculture Russell Redding, Dean Richard Roush of the Penn State College of Agricultural Sciences, and Richard Ebert, President of Pennsylvania Farm Bureau, inviting farmers to respond, explaining the reasons for and the importance of the survey, describing the uses of the data, and describing data management procedures that assured the confidentiality of farmers' responses.

Respondents were provided both web and mail options for returning the survey. Postcard reminders and a second copy of the survey were mailed to non-respondents during the survey period. The survey closed April 30, 2016.

To help boost response rates, partnering farm and agency organizations promoted the survey at winter farmer meetings and other events, through periodic press releases, in publications such as Lancaster Farming, and within their memberships.

The SRC accepted all returns via business reply envelopes and website and processed all returns. Returns were checked for duplicates, machine scanned and coded by the SRC. In its administration of the survey, the SRC assigned a unique ID number to each respondent. The SRC retained as confidential all data which links the ID numbers to names and addresses of respondents. A total of 6,782 individual survey returns were received and processed. The returns were analyzed to determine conservation practices implemented by respondents. Results are reported cumulatively in aggregate in this report and can also be reported cumulatively by county, the Commonwealth's preferred method for reporting BMP implementation data to the Chesapeake Bay Program.

## **Farm Visit Verification Methodology**

Reported BMPs may differ from actual BMPs for various reasons. In order to assess the reliability of the results, a subsample of 10% of the respondents was randomly selected for farm visits by Penn State Extension agents. Given DEP's preference for reporting results by county, the subsample was drawn by taking a random sample of 10% of the responses in each of the sampled counties. The on-farm visits were conducted by 42 Penn State Extension Agents with expertise in relevant disciplines such as agronomy, livestock operations, nutrient management, horticulture and cropping systems, and extensive experience working with farmers.

Participating agents were trained by staff from DEP, PA State Conservation Commission, Chesapeake Bay Program and the Lancaster County Conservation District. The trainings provided information on biosecurity protocols, overviews of the survey and the farm visit form to be used during farm visits, and information on how to use DEP checklists for determining the existence of manure management plans and agricultural E&S plans and Chesapeake Bay Program Resource Improvement (RI) practice standards for applicable structural BMPs.

Farm visits were conducted in August and September 2016. Agents were assigned farmers from the subsample. The agents were responsible for setting up the visits with participating farmers. The

instructions for the survey indicated the possibility that respondents might be chosen for a farm visit, which limited surprise and maximized farmer cooperation in agreeing to host farm visits. Agents contacted the farmers chosen for visits by letter and by phone to schedule visits. Consistent with the confidentiality of the survey responses and to eliminate potentials for bias, the agents were not provided participating farmers' survey responses. A total of 711 farms were visited, 10.48% of the total population of respondents.

A form was developed by the survey development team for use by the agents to record their findings. The questions mirrored those asked on the survey about the presence and extent of practices, but additional information was sought in the visits to determine whether the practices were installed and functioning sufficient to meet Bay Program standards. Specifically, the agents were trained on the visual indicators for meeting RI practice standards for applicable structural best management practices. If these indicators were not met, the practice was not counted. Extension agents were also trained on the essential substantive elements of manure management plans and agricultural E&S Plans. If the farmer was not able to produce a plan and the plan did not contain these essential elements, it was not counted. A copy of the farm visit report form is provided in Appendix B.

The completed farm visit reports were submitted by the agents to the AEC data analysis team for coding. Unique ID numbers on the farm visit reports allowed researchers to link each farm visit report with the corresponding farm survey responses, and systematically compare the answers as described more fully in the next section.

## Reliability Data Analysis

The reliability analysis involves comparison of the conservation practices reported by survey respondents selected for the 10% subsample with the implemented practices recorded in the farm visits. For the analysis, the difference between the "reported" values from the farm survey and the "verified" value from the farm visits is computed for each practice. Systematic under reporting or over reporting of BMP types can be determined statistically by testing whether the mean of the differences across farms for the BMP type is not significantly different than zero. We look at the overall mean to make this determination, but we also break down the analysis according to how much of the sample falls into the following categories:

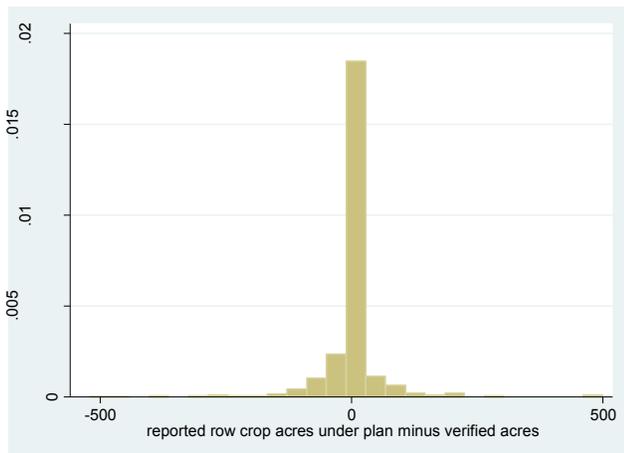
	0 (acres) indicated in the farm visit report	> 0 (acres) indicated in the farm visit report
0 (acres) indicated in the original mail/web survey	Category 0	Category 2
> 0 (acres) indicated in the original mail/web survey	Category 1	Category 3

This breakdown is intended to supplement the analysis of the overall mean differences. Response pairs in categories 1 and 2 represent qualitative errors, whereas category 3 could more likely represent a quantitative error. Ultimately we believe it makes the most sense to base our conclusions of bias on the overall mean differences, but it is interesting to note the proportion of farms that fall into these four categories for the various BMPs. Our analysis is summarized in Appendix C (“BMP Survey Verification Summary”).

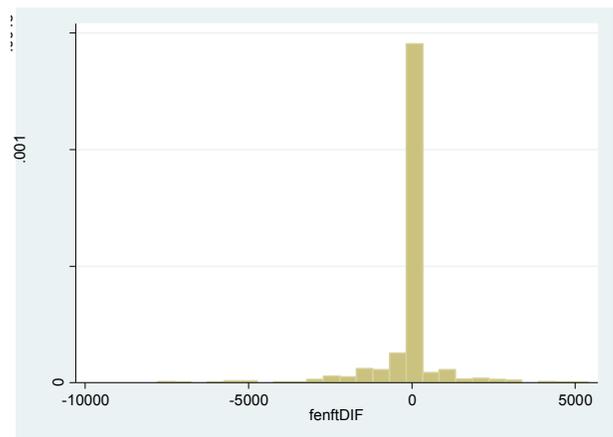
In addition to the analysis of means, histograms are presented for each practice to give a visual representation of the distribution of the “difference” variables. In some cases, dropping one or two observations has a large impact on the means and variances. We show results for the summary statistics both with and without some of these outliers, but the histograms exclude these outliers. (See Appendix C).

By way of example, Figures 1 and 2 are histograms for acres of row crops under nutrient management plans and number of barnyard runoff control systems, respectively. All other histograms are provided in Appendix C.

**Figure 1. Histogram plotting mean differences between reported and verified acres of row crops under nutrient management.**



**Figure 2. Histogram plotting mean differences between reported and verified linear feet of stream bank fencing.**



For each conservation practice analyzed, several sources of data from the survey and the farm visits were used to determine “reported” and “verified” values. These sources, and specifically how they relate to particular survey questions in the original survey and the farm visit report, are described for each practice in Appendix C.

## Results

Statistical analysis of the survey data compared to farm visit data in the aggregate reveals a statistically significant reliability in the data for all conservation practices for which the Commonwealth seeks to use these survey results to report newly documented practices to the Chesapeake Bay Program. These include:

- Nutrient/manure management plans
- Enhanced nutrient management
- Animal waste storage systems
- Barnyard runoff controls
- Agricultural E&S plans and conservation plans
- Stream bank fencing
- Riparian buffers

For all of these practices, cumulative results are reported in the aggregate with associated means and 95% confidence intervals.

Another practice, manure transport, did not have a large enough subsample to analyze for statistical accuracy. Accordingly, raw data numbers documenting manure transport between counties are provided without associated means and 95% confidence intervals.

For all of these practices, data was analyzed to ensure practices met relevant standards and definitions under the Chesapeake Bay Program and to ensure certain practices were not double counted. For example, only those practices for which the farmer indicated that no government cost share funding was utilized were reported. The only exceptions to this are manure management plans and agricultural E&S plans, for which there is currently no documented reporting even if cost share is provided for plan development.

Table 1 is a summary of all cumulative results of relevant practices eligible for reporting to the Chesapeake Bay Program, with the exception of manure transport.

**Table 1. Cumulative results by conservation practice from reported farm surveys**

Practice	Amount Implemented			
Nutrient/manure management plans <sup>1</sup>	335,250 ac row crops	37,243 ac pasture	103,307 ac hay	
Enhanced nutrient management	97,562 ac			
Animal Waste Management Storages	1,598 dairy units	194 beef units	213 swine units	159 poultry units
Barnyard Runoff Controls	2,106 systems			
Agricultural E&S plans	40,170 ac row crops	4,930 ac pasture	9,973 ac hay	
Conservation plans	173,481 ac row crops	17,239 ac pasture	37,544 ac hay	
Stream bank fencing	1,336,100 linear feet			
Watercourse Access Controls <sup>2</sup>	Grass 10-35 ft width: 324 ac	Grass >35 ft width: 471 ac		
Riparian buffers	Grass 10-35 ft width: 455 ac	Grass >35 ft width: 826 ac	Forest 10-35 ft width: 1,131 ac	Forest >35 ft width: 6,601 ac

Manure transport numbers are reported as annual tons or gallons of manure by type transported from one county to another. The survey data allows us to report manure transport by county of origin and designation, and by specific manure type (dairy, beef, swine or poultry), and whether the farmer worked with a manure hauler or broker. Counties importing and/or exporting manure and the net change in manure from these reported activities are provided in Appendix D, expressed in tons, where all reported liquid gallons were converted to tons using Penn State Extension's recommended conversion factor.

Figure 3 shows Chesapeake Bay counties exporting manure to another county. Figure 4 shows counties importing manure from a Bay county. Note that Jefferson County (NY), which is outside of the Bay watershed, does not appear on the map but received 2000 tons of poultry manure from Lancaster County.

<sup>1</sup> Here we report non-cost shared nutrient management plans and all manure management plans in the aggregate. However, since Act 38 and 590 nutrient management plans are sufficiently tracked and reported through regulatory programs in the Commonwealth, we plan to net these out of the final data set reported to avoid double counting.

<sup>2</sup> Because the survey did not ask farmers to specify vegetation type inside stream bank fencing, we assume the watercourse access control buffer area is grass for all acres reported.

Figure 3: Counties exporting manure (in tons)

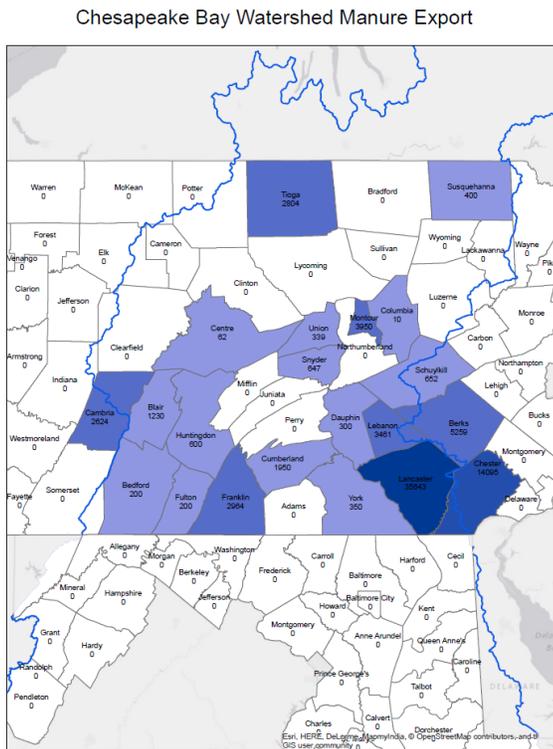
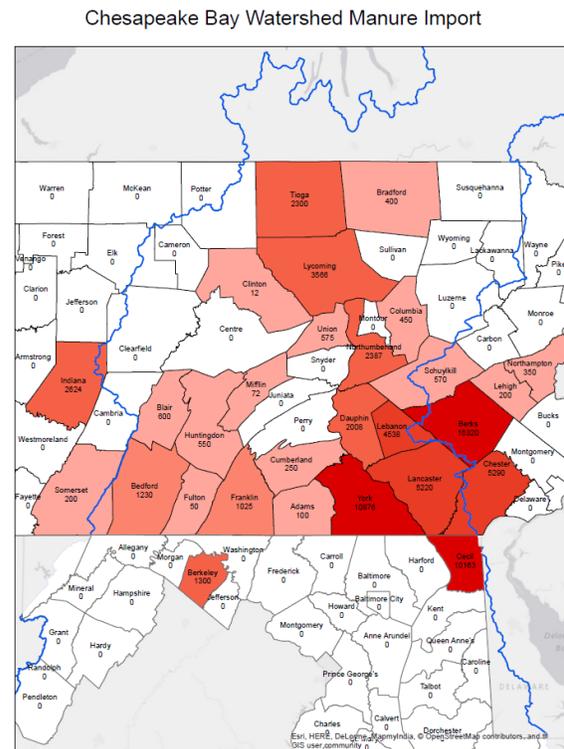


Figure 4: Counties importing manure (in tons)



## Discussion

For all results of practices reported cumulatively in Table 1, means and 95% confidence intervals were developed. These were calculated following the reliability data analysis methods described above. For all practices except riparian buffers, the 95% confidence interval either straddles the reported number, or the lower and upper bound and the mean is higher than the reported number, indicating a trend toward under reporting by farmers.

With respect to riparian buffers, the mean is lower than the reported number as is the lower and upper bound of the 95% confidence interval, indicating a systematic over reporting by farmers. While the data does not definitively indicate the reason for this, we believe it may be caused, not by actual over reporting by farmers, but rather by differences between how the farm survey questions were asked with respect to stream bank fencing and riparian buffers and how Extension agents were trained in verifying buffers during farm visits. The questions on the survey related to riparian buffers were designed to have farmers report *all* acres of buffers in answer to the riparian buffer question, including those acres resulting from stream bank fencing. In contrast, Extension agents were trained on Resource Improvement practices RI-4a, 4b, 5, 6 and RI-7, 8, 9, 10 and were instructed to record watercourse access controls in response to the stream bank fencing question, and other buffers not requiring livestock access controls in response to the riparian buffer question. This may have led farmers to report all buffer acres in response to the riparian buffer question, while Extension agents did not record any buffer acres resulting from stream bank fencing in response to that same question.

Because the data on riparian buffers reveals a statistically significant over reporting, adjustment of the numbers downward using the mean is warranted to account for this over reporting. This would adjust the total of 9,013 reported acres to 6,770 reported acres, with corresponding adjustments to the buffer categories reported based on width and vegetation. These adjustments were calculated as follows: reported value - (mean deviation per farm)n, where n = total number of farms with survey returns (6,782). See Appendix E for details on this calculation.

In addition, adjustments can be made to all reported practices using the mean deviation between reported and verified practices for each practice, to account for systematic under or over reporting as revealed by the data analysis. Again, this can be computed for each practice as follows: reported value - (mean deviation per farm)n, where n = total number of farms returning surveys (6,782). Lower and upper 95% confidence bounds on this number can also be calculated in similar fashion using the two ends of the 95% confidence intervals developed for each practice. See Appendix E for a sample calculation (using riparian buffers) to demonstrate how these numbers were achieved.

Table 2 displays the cumulative results for each conservation practice, the adjusted cumulative number using the calculation described above (which we classify as the “expected” results), and the lower and upper bounds of the 95% confidence interval applied to the cumulative results.

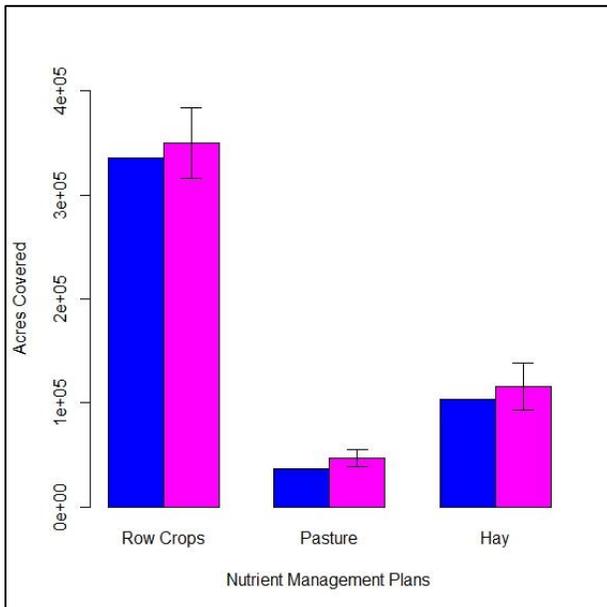
**Table 2. Cumulative reported results and expected (adjusted) cumulative results by conservation practice, bounded by 95% confidence lower and upper bounds as applied to the cumulative results.**

Practice	Reported Results	Lower 95% Bound	Expected Results	Upper 95% Bound
Nutrient Management Plans	335,250 ac row crops 37,243 ac pasture 103,307 ac hay	316,193 ac row crops 16,693 ac pasture 92,795 ac hay	350,103 ac row crops 40,769 ac pasture 115,514 ac hay	384,081 ac row crops 64,845 ac pasture 138,234 ac hay
Enhanced Nutrient Mgt	97,562 ac	38,898 ac	82,303 ac	123,640 ac
Animal Waste Management Storages	1,598 dairy 194 beef 213 swine 159 poultry	1,879 dairy 174 beef 193 swine 130 poultry	2,113 dairy 299 beef 318 swine 207 poultry	2,347 dairy 425 beef 444 swine 284 poultry
Barnyard Runoff Controls	2,106 systems	2,139 systems	2,364 systems	2,588 systems
Agricultural E&S Plans	40,170 ac row crops 4,930 ac pasture 9,973 ac hay	28,437 ac row crops 4,455 ac pasture 13,907 ac hay	60,380 ac row crops 13,068 ac pasture 26,521 ac hay	92,323 ac row crops 21,749 ac pasture 39,136 ac hay
Conservation Plans	173,481 ac row crops 17,239 ac pasture 37,544 ac hay	104,372 ac row crops 15,883 ac pasture 42,224 ac hay	229,636 ac row crops 23,818 ac pasture 59,450 ac hay	354,831 ac row crops 31,685 ac pasture 76,608 ac hay
Stream Bank Fencing	1,336,100 linear feet	1,590,818 linear feet	2,293,651 linear feet	2,996,483 linear feet
Watercourse Access Control	795 ac	867 ac	1730 ac	2591 ac
Riparian Buffers	9,013 ac	4,823 ac	6,770 ac	8,716 ac

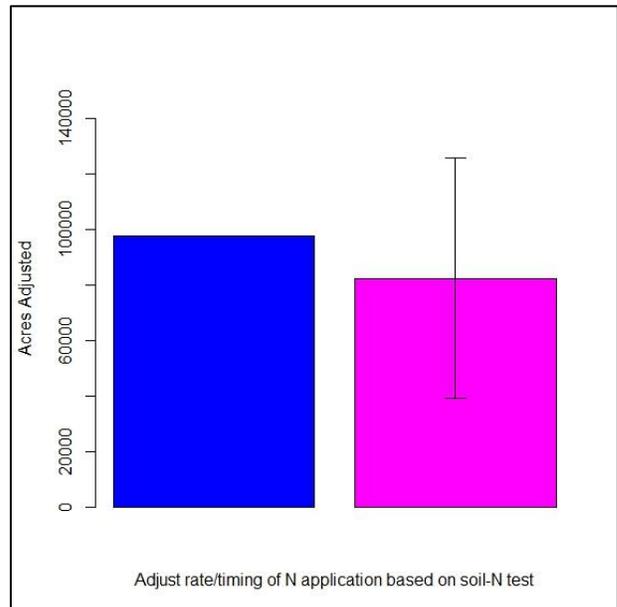
Figures 5 through 13 display the reported cumulative results for each conservation practice compared to the mean with the 95% confidence interval applied as an upper and lower range on the data. For each graph, blue bars display the reported values from the survey, while the magenta bars are the expected values based on means with error bars showing the range of the 95% confidence interval.

We note that nutrient and manure management plans are reported here in the aggregate, but Act 38 and 590 nutrient management plans, which are sufficiently tracked and reported through regulatory programs in the Commonwealth, can be netted out from the final set of data reported to avoid double counting.

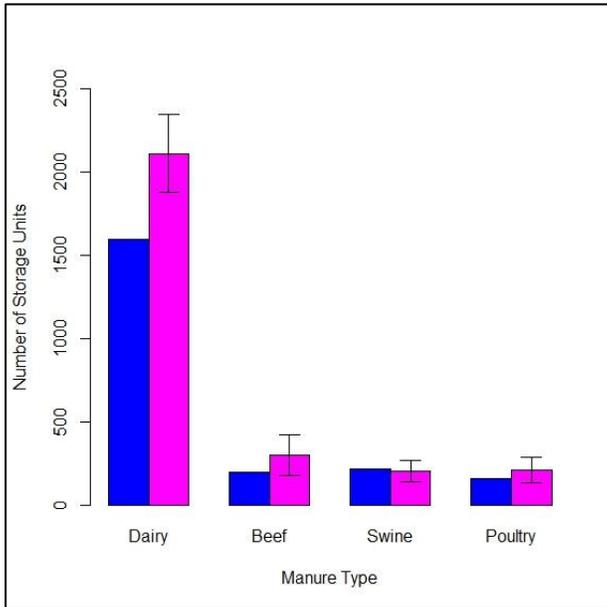
**Figure 5. Nutrient Management Plans: reported (blue) v. expected (magenta) results with 95% confidence intervals**



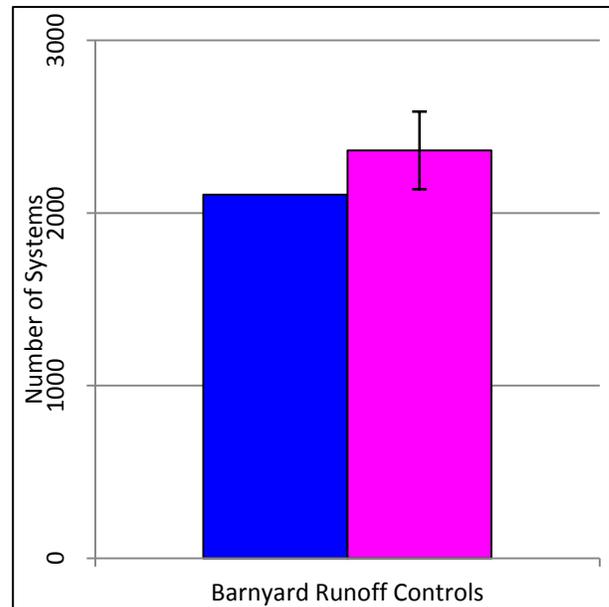
**Figure 6. Advanced Nutrient Management: reported (blue) v. expected (magenta) results with 95% confidence intervals**



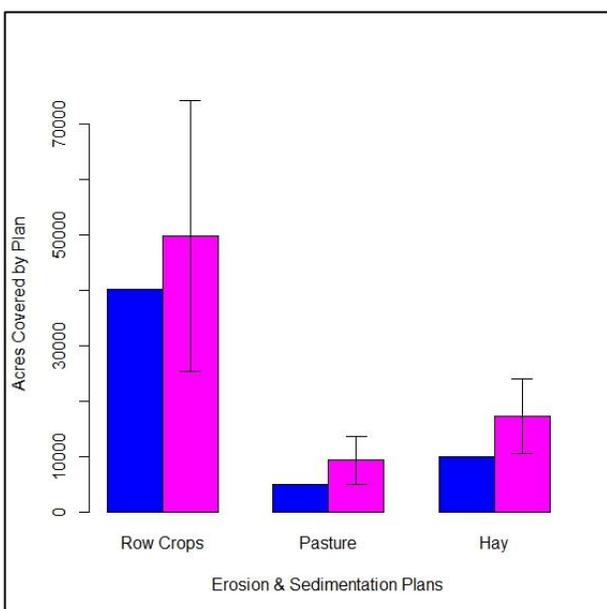
**Figure 7. Animal Waste Storages:**  
**reported (blue) v. expected (magenta) results**  
**with 95% confidence intervals**



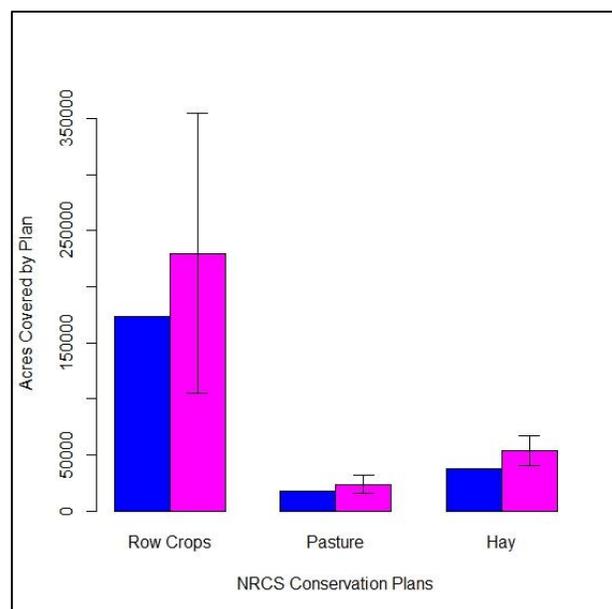
**Figure 8. Barnyard Runoff Controls:**  
**reported (blue) v. expected (magenta) results**  
**with 95% confidence intervals**



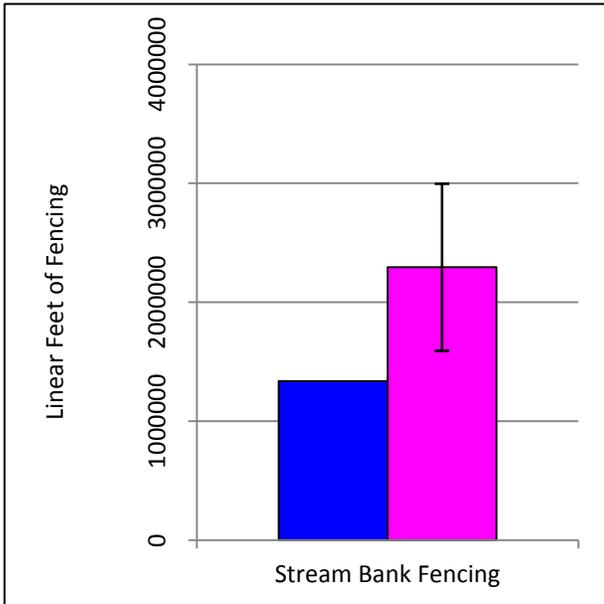
**Figure 9. Agricultural E&S Plans:**  
**reported (blue) v. expected (magenta) results**  
**with 95% confidence intervals**



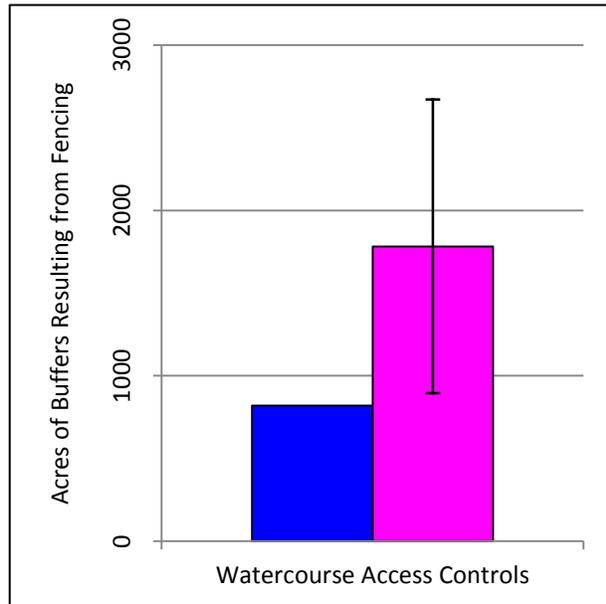
**Figure 10. Conservation Plans:**  
**reported (blue) v. expected (magenta) results**  
**with 95% confidence intervals**



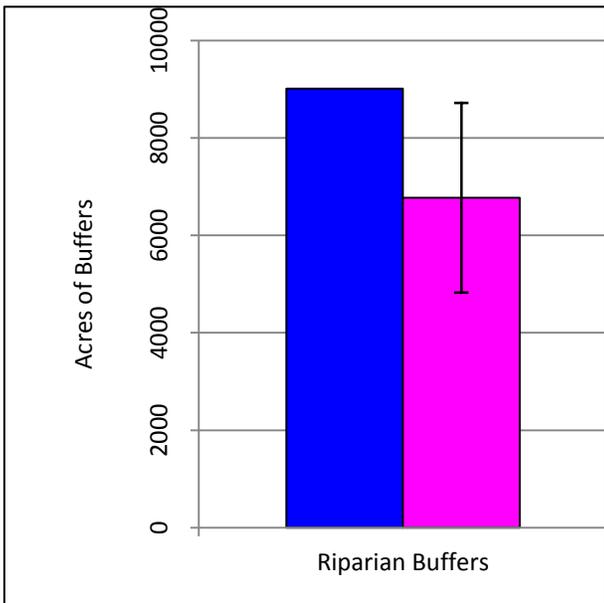
**Figure 11. Stream Bank Fencing:**  
 reported (blue) v. expected (magenta) results  
 with 95% confidence intervals



**Figure 12. Watercourse Access Controls:**  
 reported (blue) v. expected (magenta) results  
 with 95% confidence intervals



**Figure 13. Riparian Buffers:**  
 reported (blue) v. expected (magenta) results  
 with 95% confidence intervals



Statistical analysis of the aggregate dataset using the subsample developed through the verification farm visits allows us to conclude the farm survey results are accurate. However, we note that in their assessment report of our study, Tetra Tech recommends additional analysis to determine county-to-county variability of accuracy. In response to this recommendation, we explored potential regional differences in reporting to see if this may possibly make county based division of the aggregate data less reliable. County based reporting of data is the Commonwealth's preferred method of reporting to the Chesapeake Bay Program.

Preliminary county based analysis revealed that, for the vast majority of practices in the vast majority of counties, the sample size was too small to make any statistically significant conclusions. As an alternative, we grouped the data into multiple counties based on river basin designation as shown in Table 3.

**Table 3. River basin regions used for geographic statistical analysis**

River Basin	Counties	# Farms Visited
Potomac	Somerset, Bedford, Fulton, Franklin, Adams	96
Juniata	Huntingdon, Mifflin, Juniata, Blair, Perry	70
Upper Susquehanna	Potter, Tioga, Bradford, Susquehanna, Wayne, Wyoming, Lackawanna, Luzerne, Columbia, Montour, Union, Sullivan, Lycoming, Clinton, Centre, Clearfield, Cameron, Elk, McKean, Cambria, Indiana, Jefferson	226
Lower Susquehanna	Snyder, Northumberland, Dauphin, Schuylkill, Berks, Lebanon, Lancaster, Chester, Cumberland, York	318

Because sample size in each river basin varies for each practice depending on whether the farm visited reported the practice, small sample sizes continued to contribute to challenges in analyzing the data for statistical reliability. For some regions, statistically significant results were obtained for pasture acres in nutrient management, dairy and beef manure storages, barnyard runoff controls, hay acres in agricultural E&S and conservation plans, and stream bank fencing. For all of these practices, systematic under reporting in river basins was confirmed, which is consistent with the aggregate data results. Also statistically significant and consistent with the aggregate data results is a systematic over reporting of riparian buffers in two of the four river basins. Given the consistency of data where we were able to determine statistical significance, we do not find evidence of any regional variability from the aggregate data results.

Figures 14 through 21 display the per farm mean differences between the reported and verified data for the aggregate data compared to river basin specific data in all cases where data was statistically significant. The error bars represent the ranges of the 95% confidence intervals. The graphs reveal no significant geographic variability from the aggregate data.

Figure 14. Mean differences for aggregate data for nutrient management plans compared to Lower and Upper Susquehanna county data

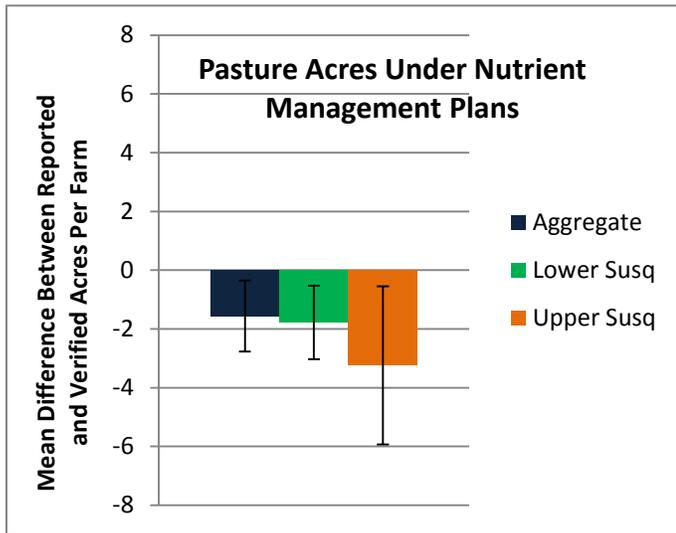


Figure 15. Mean differences for aggregate data for dairy manure storages compared to Lower Susquehanna county data

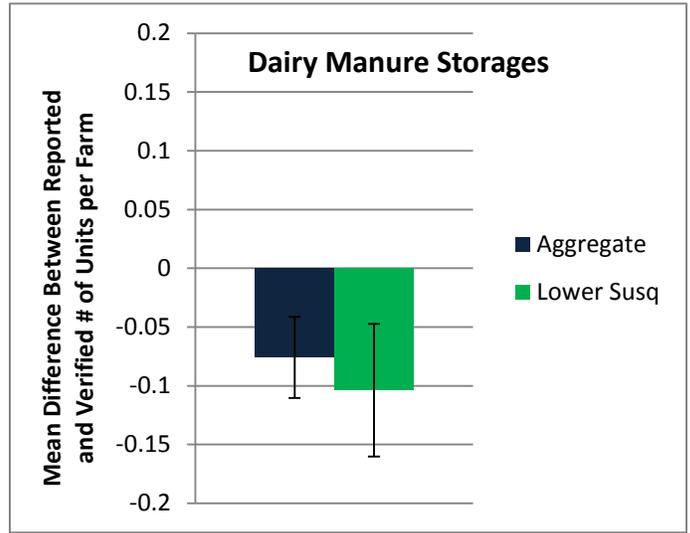


Figure 16. Mean differences for aggregate data for beef manure storages compared to Lower Susquehanna county data

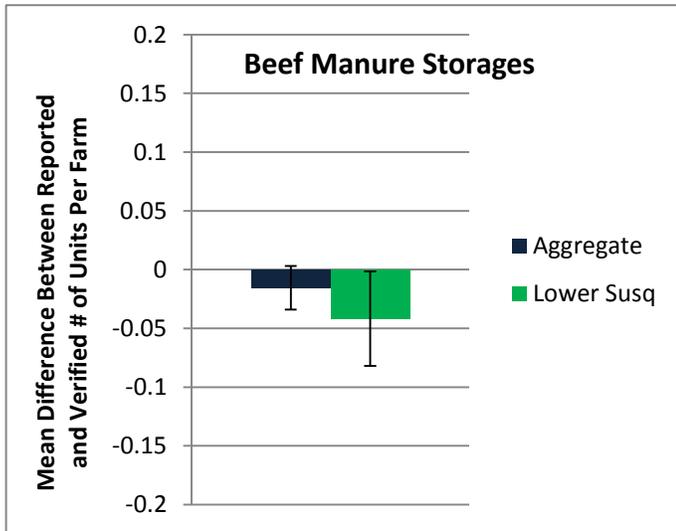


Figure 17. Mean differences for aggregate data for barnyard runoff control systems compared to Upper Susquehanna county data

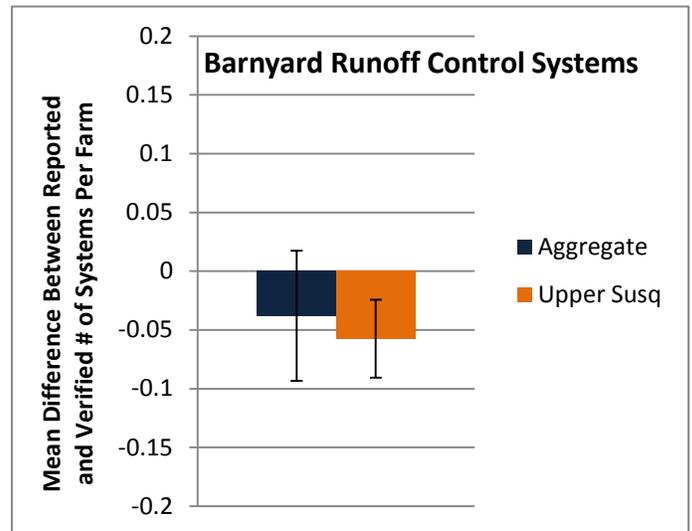


Figure 18. Mean differences for aggregate data for Ag E&S Plans compared to Upper Susquehanna county data

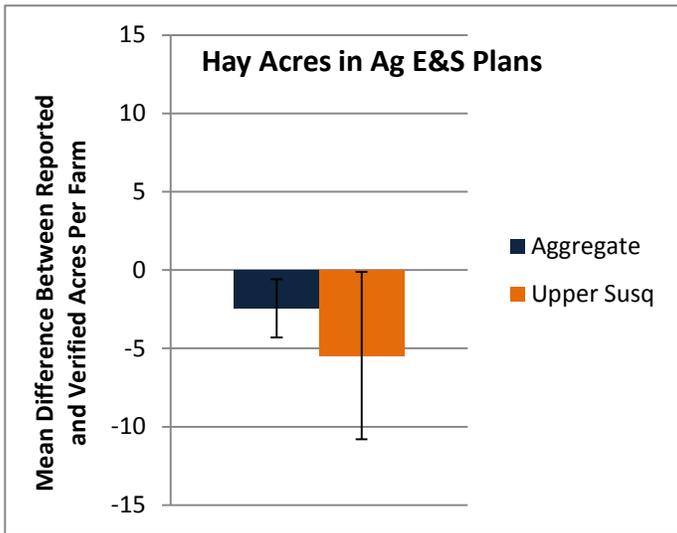


Figure 19. Mean differences for aggregate data for Conservation Plans compared to Upper Susquehanna county data

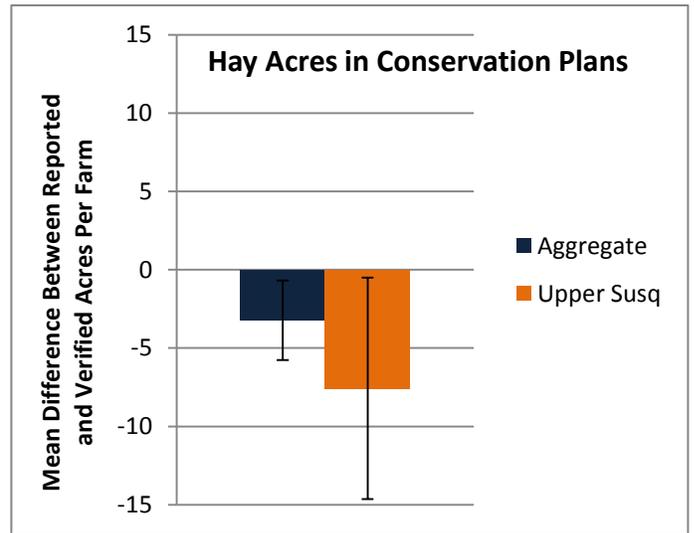


Figure 20. Mean differences for aggregate data for stream bank fencing compared to Upper Susquehanna county data

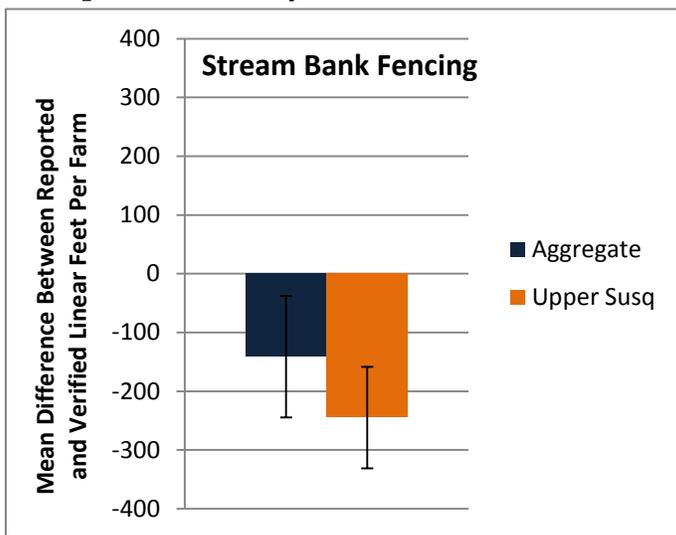
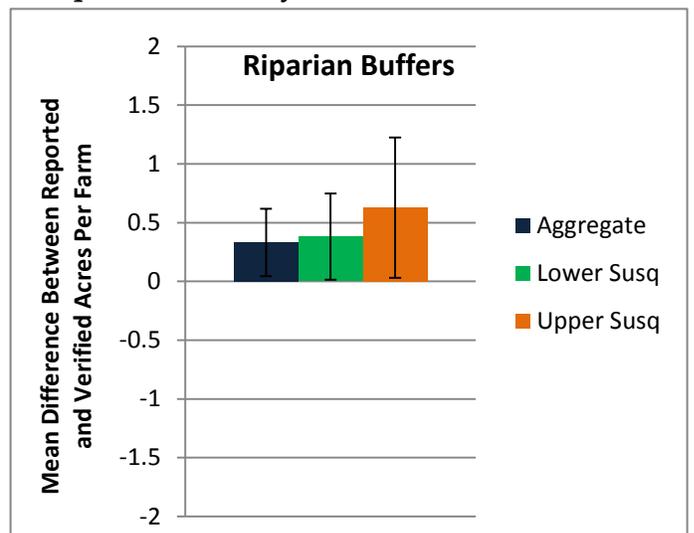


Figure 21. Mean differences for aggregate data for riparian buffers compared to Lower and Upper Susquehanna county data



Because river basin analysis reveals no evidence of regional variability, our analysis of the aggregate data supports reporting of the cumulative data on the relevant conservation practices reported in the 6,782 survey returns, and we are comfortable with this data being reported to the Bay Program on a county basis.

To address and account for the most accurate reporting for credit in the Bay model, we apply an appropriate factor to address under reporting and over reporting, as also recommended in the Tetra Tech report. This is most appropriately accomplished by using the mean per farm deviation between reported and verified numbers as our adjustment factor, with the adjustment calculated as described above and represented by the magenta bar in Figures 5-13. With this adjustment, cumulative practices are summarized in Table 4.

**Table 4. Cumulative results by conservation practice from reported farm surveys as adjusted to account for systematic under and over reporting**

Practice	Amount Implemented			
Nutrient/manure management plans	350,103 ac row crops	40,769 ac pasture	115,514 ac hay	
Enhanced nutrient management	82,303 ac			
Animal Waste Management Storages	2,113 dairy units	299 beef units	318 swine units	207 poultry units
Barnyard Runoff Controls	2,364 systems			
Agricultural E&S plans	60,380 ac row crops	13,068 ac pasture	26,521 ac hay	
Conservation plans	229,636 ac row crops	23,818 ac pasture	59,450 ac hay	
Stream bank fencing	2,293,651 linear feet			
Watercourse access controls	Grass 10-35 ft width: 684 ac	Grass >35 ft width: 994 ac		
Riparian buffers	Grass 10-35 ft width: 342 ac	Grass >35 ft width: 620 ac	Forest 10-35 ft width: 850 ac	Forest >35 ft width: 4,958 ac

## Conclusion

This survey has shown to be a statistically reliable method for gathering data on implemented conservation practices through farmer self-reporting. It has proven extremely valuable in reporting voluntary, non-cost shared practices that, to date, have not been adequately captured and reported for credit in the Chesapeake Bay model. The cumulative numbers reveal a large amount of conservation being implemented by farmers outside of government cost share programs, so capturing this data is not insignificant.

We have shown that our statistical analysis allows us to confidently adjust reported numbers to account for systematic under reporting and over reporting. However, in order to ensure the numbers provided to the Commonwealth for reporting to the Chesapeake Bay model eliminate all possible potential for over reporting, we recommend applying our statistical analysis to adjust only for systematic over reporting of riparian buffers, and not adjusting numbers for the other practices where systematic under reporting was evident. Following this adjustment, Table 5 summarizes the final cumulative practices we recommend for reporting to the Chesapeake Bay Program:

**Table 5. Cumulative results by conservation practice to be reported to Chesapeake Bay Program (adjusted only for systematic over reporting of riparian buffers)**

Practice	Amount Implemented			
Nutrient/manure management plans	335,250 ac row crops	37,243 ac pasture	103,307 ac hay	
Enhanced nutrient management	97,562 ac			
Animal Waste Management Storages	1,598 dairy units	194 beef units	213 swine units	159 poultry units
Barnyard Runoff Controls	2,106 systems			
Agricultural E&S plans	40,170 ac row crops	4,930 ac pasture	9,973 ac hay	
Conservation plans	173,481 ac row crops	17,239 ac pasture	37,544 ac hay	
Stream bank fencing	1,336,100 linear feet			
Watercourse Access Controls	Grass 10-35 ft width: 324 ac	Grass >35 ft width: 471 ac		
Riparian buffers	Grass 10-35 ft width: 342 ac	Grass >35 ft width: 620 ac	Forest 10-35 ft width: 850 ac	Forest >35 ft width: 4,958 ac

With a total sample size of 6,782 surveys providing valuable information on farming operations and conservation practices, this is an extremely rich dataset. While this report addresses and we have concentrated on only those non-cost shared practices not previously reported by the Commonwealth for credit in the Chesapeake Bay model, a great deal of further analysis of the data is warranted. Further analysis will allow us to explore many questions, such as questions related to trends in conservation practice adoption and cost share program participation, including variability in trends between regions, farm types and sizes, and types of practices. We hope this further analysis will be of great value to the conservation and agricultural community in setting future priorities and objectives and allocating limited resources to achieve the greatest conservation results.

## Appendix A: Farm Survey

### Pennsylvania Farm Conservation Practices Inventory

#### Instructions

Thank you for agreeing to participate in this inventory of conservation practices on Pennsylvania farms. Please have the individual with the best knowledge of the conservation practices used in your operations complete the inventory.

The inventory will be used to determine the amount of conservation practice adoption on Pennsylvania farms. Cumulative results will be provided to the Pennsylvania Department of Environmental Protection to document the practices that Pennsylvania farmers are doing to conserve soil and water, and protect water quality. Ten percent of the participants in this inventory will be randomly selected for farm visits by Penn State Extension to assess the accuracy of the overall inventory.

**Please be assured that your responses will be kept completely confidential and your results will never be associated with your name or locational information.** The results reported to the Department of Environmental Protection will be provided in summary form and will not include any names or locations of inventory participants. Names and addresses will be removed from all inventory and farm visit results to prevent identification of participants.

Please answer each question to the best of your knowledge. Where the question asks you to fill in a circle, please fill the circle completely. Where the question asks you to write an answer, please print legibly.

The first part of this inventory asks basic questions about your farming operations. The second part of the inventory asks whether you are practicing certain conservation practices in your farming operations, and then asks some additional questions about each practice. Some of the practices listed may not be applicable to your operation. If you do not utilize a practice, answer "No" and continue on to the next question.

Please submit your completed inventory to the Penn State Survey Research Center by April 30, 2016.

## About Your Farming Operations

1. Please provide your name and the physical address of your farming operation.

<b>First Name</b>	<b>I</b>	<b>Last Name</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Number &amp; Street Address</b>		
<input type="text"/>		
<b>City</b>	<b>State</b>	<b>Zip Code</b>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Municipality (township, borough, etc.)</b>	<b>County</b>	
<input type="text"/>	<input type="text"/>	
Watershed, if known: <input type="radio"/> Delaware <input type="radio"/> Erie <input type="radio"/> Genessee <input type="radio"/> Ohio <input type="radio"/> Potomac <input type="radio"/> Susquehanna		

2. How many acres is your farming operation? For purposes of answering this question and filling out the remainder of the survey, your farming operation includes all land which you manage for agricultural activities, including owned ground and rented ground.

				Number of acres
--	--	--	--	-----------------

3. For calendar year 2015, please indicate what crops you grew, how many acres of each, whether they were grown on owned or rented ground, and whether any of the acres grown were a double crop.

Crop	Acres on Owned Ground	Acres on Rented Ground	Acres Grown as a Double Crop
Corn Grain	<input type="text"/>	<input type="text"/>	<input type="text"/>
Corn Silage	<input type="text"/>	<input type="text"/>	<input type="text"/>
Soybeans	<input type="text"/>	<input type="text"/>	<input type="text"/>
Wheat	<input type="text"/>	<input type="text"/>	<input type="text"/>
Rye	<input type="text"/>	<input type="text"/>	<input type="text"/>
Barley	<input type="text"/>	<input type="text"/>	<input type="text"/>
Alfalfa	<input type="text"/>	<input type="text"/>	<input type="text"/>
Hay	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other (please specify): _____	<input type="text"/>	<input type="text"/>	<input type="text"/>

**4. Do you raise animals as part of your farming operation?**

No → Please proceed to Question 5.

Yes → 4a. For calendar year 2015, please indicate what types of animals you had and the total annual head of each.

Animal	Number	Animal	Number	Animal	Number	Animal	Number
Broilers		Nursery Pigs		Veal Calves		Beef Cattle	
Layers		Finisher Pigs		Dairy Heifers (12 mos. & younger)		Horses	
Turkeys		Sows		Dairy Heifers (older than 12 mos.)		Other _____	
Ducks		Boars		Cows (Milking and dry)		Other _____	

**Your Conservation Practices**

**5. Do you have a nutrient management plan or manure management plan for your farming operations?**

No → Please proceed to Question 6.

Yes → 5a. What type of plan do you have?

Act 38 Nutrient Management Plan

NRCS 590 Nutrient Management Plan or Comprehensive Nutrient Management Plan

Manure Management Plan

5b. When was it written or last updated?   /     Month/Year

5c. Were any county, state or federal government funds used to develop your plan?  No  Yes

5d. From whom or where did you get information to assist you in preparing the plan? (select all that apply)

Conservation District one-on-one assistance

Conservation District workshop

USDA NRCS

Penn State Extension

Private sector/nutrient management planner

Certified crop advisor

None

Other (please specify): \_\_\_\_\_

5e. Indicate how many acres are covered by your nutrient management plan:

Land Type	Acres
Row Crops (corn, beans, small grains)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Pasture	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Hay	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

**6. Do you perform nitrogen tests such as the Pre-side dress Nitrate Test (PSNT), Corn Stalk Nitrate Test (CSNT), Illinois Soil Nitrogen Test (ISNT), Fall Soil Nitrate Test (FSNT), or Variable N rate application?**

No → Please proceed to Question 7.

Yes → 6a. Do you use the test results to change nitrogen application rates and/or timing?

No

Yes → 6b. On how many acres of cropland do you use these nitrogen test methods to adjust recommendations?       Acres

7. Is any manure produced from your farming operation transported out of the county in which your farming operations are located?

- No → Please proceed to Question 8.
- Yes, and I know to which county or counties my manure is transported
- Yes, but I don't know the county or counties to which my manure is transported; a hauler or broker handles this for me.

7a. If you know to which county or counties your manure is transported, please list the top three counties and/or states that receive your manure. Indicate the type of manure transported, the county(ies) and state(s) to which your manure is transported, the approximate annual amount that is transported to each location, and whether you worked with a manure hauler or broker to transport your manure.

County and State to which manure is transported	Manure Type	Approximate annual amount transported	Unit	Did you work with a hauler or broker?
1.	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry		<input type="radio"/> Tons <input type="radio"/> Gallons	<input type="radio"/> No <input type="radio"/> Yes
2.	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry		<input type="radio"/> Tons <input type="radio"/> Gallons	<input type="radio"/> No <input type="radio"/> Yes
3.	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry		<input type="radio"/> Tons <input type="radio"/> Gallons	<input type="radio"/> No <input type="radio"/> Yes

8. Do you have any animal waste storage systems (manure storages) for your farming operations?

- No → Please proceed to Question 9.
- Yes → 8a. For each manure storage you have, indicate the type of manure it stores, the date it was constructed, the months of storage it provides, whether any county, state or federal government funds were used to construct it, and whether runoff from the storage is being controlled.

	Manure Type	Month/Year Constructed	# of Months of Storage Provided	Were county, state or federal funds used to construct your storage?	Is runoff controlled from your storage system?
1	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry	□□ / □□□□	□□	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
2	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry	□□ / □□□□	□□	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
3	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry	□□ / □□□□	□□	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
4	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry	□□ / □□□□	□□	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
5	<input type="radio"/> Dairy <input type="radio"/> Swine <input type="radio"/> Beef <input type="radio"/> Poultry	□□ / □□□□	□□	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes

9. Do you have any barnyards?

- No → Please proceed to Question 10.
- Yes → 9a. Do you have any barnyard runoff controls on these barnyards? (This includes practices such as roof runoff control, diversion of clean water from entering the barnyard, and control of runoff from barnyard areas.)
  - No → Please proceed to Question 10.
  - Yes → 9b. Indicate what kind of runoff control practices you have, when they were built, and whether any county, state or federal government funds were used to construct them.

Runoff Control Practice	Do you have this practice?	Month/Year Constructed	Were county, state or federal funds used to construct the practice?
Roof runoff structures (gutters, downspouts, outlets)	<input type="radio"/> No <input type="radio"/> Yes	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes
Concrete barnyards	<input type="radio"/> No <input type="radio"/> Yes	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes
Curbs	<input type="radio"/> No <input type="radio"/> Yes	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes
Collection system and/or pumps	<input type="radio"/> No <input type="radio"/> Yes	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes
Barnyard runoff filter strip	<input type="radio"/> No <input type="radio"/> Yes	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes

10. Do you have any Agricultural Erosion & Sedimentation Control Plans (E&S Plans) or Conservation Plans for your farming operations?

- No → Please proceed to Question 11.
- Yes → 10a. For each plan you have, indicate the type of plan, when it was written or last updated, whether any federal government funds were used to develop your plan, and the acres of each land type covered by your plan:

Plan Type	Month/Year Written or Updated	Were Federal funds used to develop your plan?	Type and Number of Acres Covered by Plan			
			Land Type	# of Acres	Land Type	# of Acres
1 <input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes	Row Crops	□□□□	Hay	□□□□
			Pasture	□□□□	Barnyard	□□□□
2 <input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes	Row Crops	□□□□	Hay	□□□□
			Pasture	□□□□	Barnyard	□□□□
3 <input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes	Row Crops	□□□□	Hay	□□□□
			Pasture	□□□□	Barnyard	□□□□
4 <input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes	Row Crops	□□□□	Hay	□□□□
			Pasture	□□□□	Barnyard	□□□□
5 <input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan	□□ / □□□□	<input type="radio"/> No <input type="radio"/> Yes	Row Crops	□□□□	Hay	□□□□
			Pasture	□□□□	Barnyard	□□□□

**11. Did you practice no till or minimum till in calendar year 2015?**

No → Please proceed to Question 12.

Yes → 11a. Indicate how many acres meet the following amounts of residue left in the field at the time of planting:

Amount of Residue	Acres
60% or greater	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
30% or greater, but less than 60%	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

11b. How many of your acres have been in continuous no till for the last five years?  Acres

**12. Did you plant cover crops in calendar year 2015?**

No → Please proceed to Question 13.

Yes → 12a. Fill out the chart below to indicate what species you planted, when they were planted, number of acres for each, whether they received a nutrient application, and whether you harvested or plan to harvest them:

Species	Date of Planting	Acres Planted	Nutrient Application?	Harvesting?
Rye	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Wheat	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Barley	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Oats	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Annual Rye grass	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Annual Legumes	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Triticale	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Mixture (specify):	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes
Other (specify):	<input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> 1 5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Yes

**13. Is there any stream bank fencing on land that is part of your farming operation?**

No → Please proceed to Question 14.

Yes → 13a. How many total linear feet of stream bank fencing do you have? (If fencing is on both sides of the stream, include each side as part of this total.)  feet

13b. What is the average distance from the stream to the fence?  feet

13c. Were any county, state or federal government funds used to construct this fencing?

No → Please proceed to Question 14.

Yes → 13d. How many linear feet of stream bank fencing was funded using county, state or federal government funds?

feet

**14. Do you have any streamside riparian buffers on land that is part of your farming operation?**

No → Please proceed to Question 15.

Yes → 14a. How many acres is the buffer?      acres

14b. What is the average width of the buffer?     feet

14c. Are trees and/or shrubs growing in the buffer?  No  Yes

14d. Were any county, state or federal government funds used to construct this buffer?

No → Please proceed to Question 15.

Yes → 14e. How many acres of buffer was funded using county, state or federal government funds?      acres

**15. Excluding any riparian buffers identified in your answer to Question 14, have you retired any cropland from your farming operation to permanent vegetation such as perennial grasses, trees or shrubs?**

No → Please proceed to Question 16.

Yes → 15a. Indicate what year you retired your cropland, how many acres have been retired, and whether trees and/or shrubs are growing in the retired acreage.

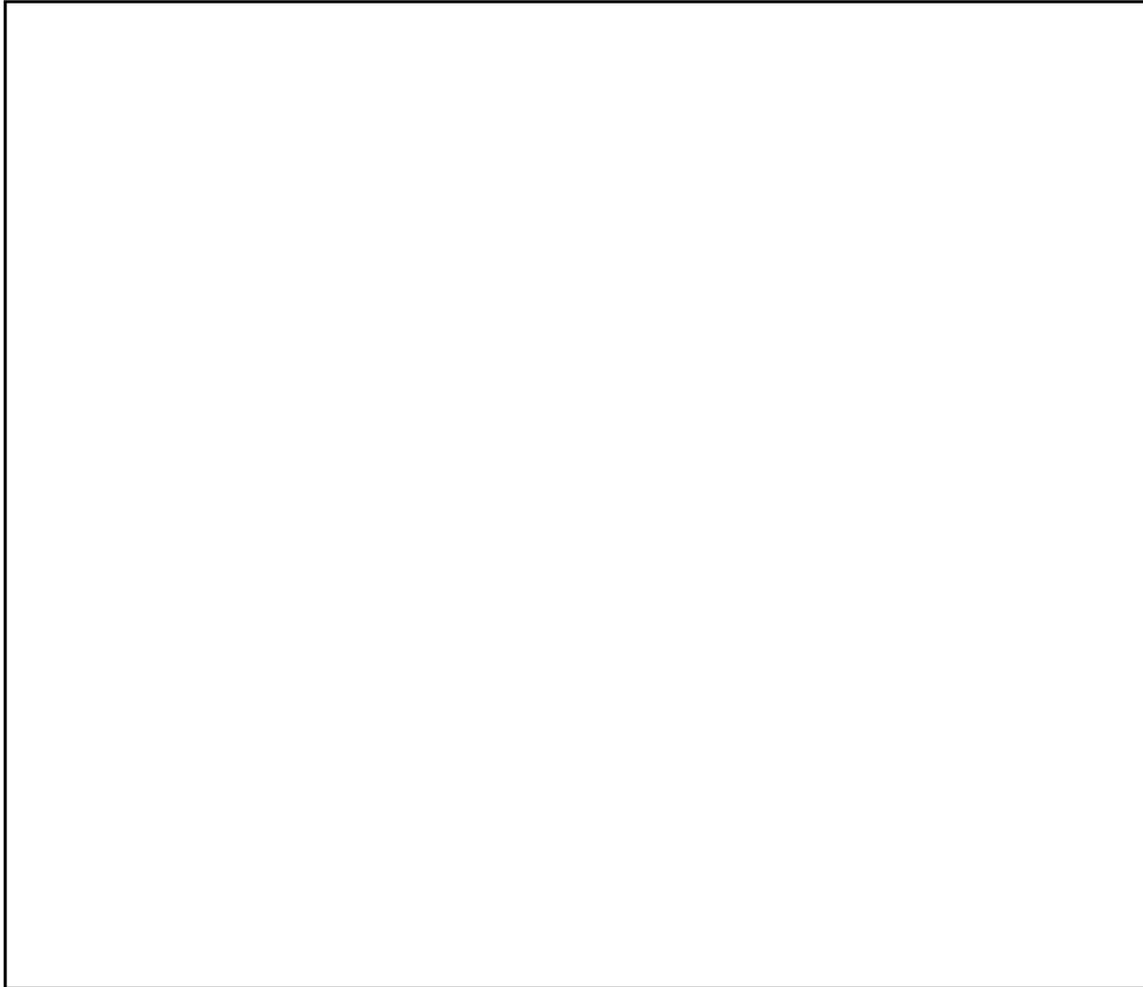
Year	Acres	Are trees and/or shrubs growing?
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="radio"/> No <input type="radio"/> Yes

15b. Were any county, state or federal government funds used to retire this acreage?

No → Please proceed to Question 16.

Yes → 15c. How many acres of retired cropland was funded using county, state or federal government funds?      acres

16. Please feel free to share any comments, thoughts or questions you may have.



Survey

\*\*\*\*\*END OF SURVEY\*\*\*\*\*  
Please place survey in postage paid envelope and return to  
Penn State Survey Research Center  
105 The 330 Building  
University Park, PA 16802  
  
Thank You!



9846232767



## Appendix B: Farm Visit Report

Name of Individual Completing Report: \_\_\_\_\_

Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_ Date: \_\_\_\_\_

### Pennsylvania Farm Conservation Practices Inventory Farm Visit Report

Unique ID #: \_\_\_\_\_ Is this farm in the Chesapeake Bay Watershed?  Yes  No

**1. Does the operator have a nutrient management plan or manure management plan?**

No → Please proceed to question 2.

Yes → **1a. What type of plan?**

- Act 38 Nutrient Management Plan
- NRCS 590 Nutrient Management Plan or Comprehensive Nutrient Management Plan
- Manure Management Plan
- Other (specify) \_\_\_\_\_

**1b. When was it written or last updated?** \_\_\_\_\_ (Month/Year)

**1c. Was the plan written by a certified writer and/or planner?** \_\_\_\_\_ (Name)

**1d. Were any county, state or federal government funds used to develop the plan?**

- No
- Yes →  County funds  State funds  Federal funds (check all that apply)

**1e. From whom or where did the operator get information to assist in preparing the plan? (Select all that apply)**

- Conservation District one-on-one assistance
- Conservation District workshop
- Penn State Extension
- Private sector/nutrient management planner
- Certified crop advisor
- None
- Other \_\_\_\_\_

**1f. Indicate how many acres are covered by the nutrient management or manure management plan:**

Land Type	Acres
Row Crops (corn, beans, small grains)	
Pasture	
Hay	

**2. Does the operator perform nitrogen tests such as the Pre-side dress Nitrate Test (PSNT), Corn Stalk Nitrate Test (CSNT), Illinois Soil Nitrogen Test (ISNT), Fall Soil Nitrate Test (FSNT), or Variable N rate application?**

No → Proceed to question 3.

Yes → **2a. Does the operator use the test results to change nitrogen application rates and/or timing?**

- No
- Yes → **2b. On how many acres of cropland does the operator use these nitrogen test methods to adjust recommendations?** \_\_\_\_\_ acres

**NOTE: Use the PADEP Manure Management Plan (MMP) Administrative Completeness Review Guide (i.e., checklist) to determine whether operator's MMP meets the definition of an MMP. If it does not meet the definition of an MMP, do not count it as such.**

3. Is any of the manure produced from the farming operation transported out of the county in which the farming operations are located?

- o No → Please proceed to question 4.
- o Yes, and the operator knows which county or counties the manure is transported.
- o Yes, but the operator doesn't know the county or counties to which manure is transported because a hauler or broker handles this.

3a. If the operator knows to which county or counties manure is transported, list the top three counties and state that receive manure. Indicate the type of manure transported, the counties and states to which the manure is transported, the approximate annual amount to each location, and whether the operator worked with a hauler or broker.

County and State to which manure is transported	Manure Type	Approximate annual amount transported	Unit	Work with a hauler or broker?
	o Dairy o Swine o Beef o Poultry o Equine o Other		o Tons o Gallons	o No o Yes
	o Dairy o Swine o Beef o Poultry o Equine o Other		o Tons o Gallons	o No o Yes
	o Dairy o Swine o Beef o Poultry o Equine o Other		o Tons o Gallons	o No o Yes

3b. (This question only applies to farms in Berks, Cambria, Cameron, Chester, Clearfield, Elk, Indiana, Jefferson, Luzerne, Lackawanna, McKean, Potter, Schuylkill, Somerset and Wayne Counties). Is any of the manure produced from the farming operation transported out of the Chesapeake Bay watershed?

- o No → Please proceed to question 4.
- o Yes → Indicate the type of manure transported, the approximate annual amount transported out of the Chesapeake Bay watershed, and whether the operator worked with a hauler or broker.

Manure Type	Approximate annual amount transported	Unit	Work with a hauler or broker?
o Dairy o Swine o Beef o Poultry o Equine o Other		o Tons o Gallons	o No o Yes

4. Does the operator have any animal waste storage systems (manure storages)?

- o No → Please proceed to question 5.
- o Yes → 4a. For each manure storage, indicate the type of manure it stores, the date it was constructed, the storage capacity (in months and tons/gallons), the number of animals producing the manure stored, whether any county, state or federal government funds were used to construct it, whether runoff from the storage is being controlled, whether the storage is for stackable (dry) or liquid manure, and certified engineer/company who designed/built the storage system (if known).

**NOTE: For stackable (dry) storages, if the storage was not funded with government funds, use the Chesapeake Bay Program Resource Improvement Practices (RI) Appendix H RI-1 Dry Waste Storage Structure Example Checklist to verify if the structure meets the definition of a stackable (dry) manure storage. If it does not meet all applicable visual indicators, do not count it as a storage.**

Manure Type	Date Constructed (Month/Year)	Storage Capacity	# of Animals	Were county, state or federal funds used to construct your storage?	Runoff controlled?	Stackable or Liquid?	Certified engineer/co.?
<input type="radio"/> Dairy <input type="radio"/> Beef <input type="radio"/> Swine <input type="radio"/> Equine <input type="radio"/> Other _____		_____ months  _____ tons or gallons		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> S <input type="radio"/> L	<input type="radio"/> No <input type="radio"/> Yes  Name: _____
<input type="radio"/> Dairy <input type="radio"/> Beef <input type="radio"/> Swine <input type="radio"/> Equine <input type="radio"/> Other _____		_____ months  _____ _ tons or gallons		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> S <input type="radio"/> L	
<input type="radio"/> Dairy <input type="radio"/> Beef <input type="radio"/> Swine <input type="radio"/> Equine <input type="radio"/> Other _____		_____ months  _____ _ tons or gallons		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> S <input type="radio"/> L	
<input type="radio"/> Dairy <input type="radio"/> Beef <input type="radio"/> Swine <input type="radio"/> Equine <input type="radio"/> Other _____		_____ months  _____ _ tons or gallons		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> S <input type="radio"/> L	
<input type="radio"/> Dairy <input type="radio"/> Beef <input type="radio"/> Swine <input type="radio"/> Equine <input type="radio"/> Other _____		_____ months  _____ _ tons or gallons		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes	<input type="radio"/> S <input type="radio"/> L	

\*Sources of funds could be Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

4b. For all stackable (dry) manure storages which are not funded using government funds, all visual indicators and the definition provided by CBP RI-1 (Dry Waste Storage) have been met.

No                       Yes

5. Does the operator have any barnyards?

- o No → Please proceed to question 6.
- o Yes → 5a. Have any barnyard runoff controls (roof runoff control, diversion of clean water from entering barnyard, and control of runoff from barnyard areas) been implemented?
  - o No → Please proceed to question 6.
  - o Yes → 5b. Indicate what kind of runoff control practices have been implemented, the date they were built, whether any county, state or federal government funds were used to construct them, and the certified engineer/company who designed/built the practice(s) (if known).

**NOTE: For barnyard runoff controls, if the controls were not funded with government funds, use the Chesapeake Bay Program Resource Improvement Practices (RI) Appendix H RI-16 Barnyard Clean Water Diversion Example Checklist to verify if the structure meets the definition of barnyard runoff controls. If the runoff control practice does not meet all applicable visual indicators, do not count it as an implemented practice.**

Runoff Control Practice	Is this practice implemented?	Date Constructed (Month/ Year)	Were county, state or federal funds used to construct the practice?	Certified engineer/company?
Roof runoff structures (gutters, downspouts, outlets)	<input type="radio"/> No <input type="radio"/> Yes		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes  Name: _____
Concrete barnyards	<input type="radio"/> No <input type="radio"/> Yes		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes  Name: _____
Curbs	<input type="radio"/> No <input type="radio"/> Yes		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes  Name: _____
Collection system and/or pumps	<input type="radio"/> No <input type="radio"/> Yes		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds  Source of funds if known* _____	<input type="radio"/> No <input type="radio"/> Yes  Name: _____
Barnyard runoff filter strip	<input type="radio"/> No <input type="radio"/> Yes		<input type="radio"/> No <input type="radio"/> Yes, county funds <input type="radio"/> Yes, state funds <input type="radio"/> Yes, federal funds	<input type="radio"/> No <input type="radio"/> Yes  Name: _____

			Source of funds if known* _____	
--	--	--	------------------------------------	--

\*Sources of funds could be Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

5c. For all barnyard runoff controls which are not funded using government funds, all visual indicators and the definition provided by CBP RI-16 (Barnyard Clean Water Diversion) have been met.

- No
- Yes

6. Does the operator have any Agricultural Erosion & Sedimentation Control Plans (E&S Plans) or Conservation Plans for the farming operations?

- No → Please proceed to question 7.
- Yes → 6a. For each plan that the operator has, indicate the type of plan, when it was written or last updated, whether any federal government funds were used to develop the plan, and the acres of each land type covered by the plan.

**NOTE: Use the PADEP Agricultural Erosion and Sediment (Ag E&S) Control Plan Administrative Review Guide (i.e., checklist) to determine whether operator's E&S Plan meets the definition of an E&S Plan. If it does not meet the definition of an E&S Plan, do not count it as such.**

Plan Type	Month/Year Written or Updated	Were federal funds used to develop plan?	Type and Number of Acres Covered by Plan
<input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan		<input type="radio"/> No <input type="radio"/> Yes	Row Crops _____ ac Hay _____ ac Pasture _____ ac Barnyard* _____ ac
<input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan		<input type="radio"/> No <input type="radio"/> Yes	Row Crops _____ ac Hay _____ ac Pasture _____ ac Barnyard* _____ ac
<input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan		<input type="radio"/> No <input type="radio"/> Yes	Row Crops _____ ac Hay _____ ac Pasture _____ ac Barnyard* _____ ac
<input type="radio"/> E&S Plan <input type="radio"/> NRCS Conservation Plan		<input type="radio"/> No <input type="radio"/> Yes	Row Crops _____ ac Hay _____ ac Pasture _____ ac Barnyard* _____ ac

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\*This will typically be in the tenths of an acre

6b. Were your plans written by a qualified individual? \_\_\_\_\_ (Name)

6c. From whom or where did the operator get information to assist in preparing the plan(s)? (select all that apply)

- Conservation District one-on-one assistance
- Conservation District workshop
- USDA NRCS
- Penn State Extension
- Private sector/certified planner
- Certified Crop Advisor
- None
- Other (please specify): \_\_\_\_\_

7. Did the operator practice no till or minimum till in calendar year 2015?

- No → Please proceed to question 8.
- Yes → 7a. Indicate how many acres meet the following amounts of residue left in the field at the time of planting:

**NOTE: Use the conservation tillage visual guidance document to make determinations on amount of residue.**

Amount of Residue	Acres
60% or greater	
30% or greater but less than 60%	

7b. How many of the operator's acres have been in continuous no till for the last five years?  
\_\_\_\_\_ acres

7c. Were any county, state or federal government funds used to implement the tillage practice?

- County funds
- State funds
- Federal funds

What were the source of funds used, if known? \_\_\_\_\_

**Example.** Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

8. Did the operator plant cover crops in calendar year 2015?

- No → Please proceed to question 9.
- Yes → 8a. Indicate what species were planted, the date they were planted, how many acres of each, whether they received a nutrient application, and whether the operator harvested them:

Species	Date of Planting (Month)	Acres Planted	Nutrient Application?	Harvesting?
Rye			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Wheat			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Barley			<input type="radio"/> No <input type="radio"/> Fall	<input type="radio"/> No

			<input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> Yes
Oats			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Annual Ryegrass			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Annual Legumes			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Triticale			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Mixture (specify: _____ _____ _____)			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes
Other (specify: _____ _____)			<input type="radio"/> No <input type="radio"/> Fall <input type="radio"/> Yes <input type="radio"/> Spring	<input type="radio"/> No <input type="radio"/> Yes

8b. Were any county, state or federal government funds used to implement the cover crops?

- No
- Yes →  County funds  State funds  Federal funds

What were the source of funds used, if known? \_\_\_\_\_

Example. Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

9. Is there any stream bank fencing on land that is part of the operator’s farming operation?

- No → Please proceed to question 10.
- Yes →

9a. How many linear feet is the stream bank fencing? (If fencing is on both sides of the stream, include each side as part of this total) \_\_\_\_\_ feet

9b. What is the average distance from the top of stream bank to the fence? \_\_\_\_\_ feet

9c. Were any county, state or federal government funds used to construct this fencing?

- No
- Yes →  County funds  State funds  Federal funds

How many linear feet of stream bank fencing was funded using these funds? \_\_\_\_\_ feet

What were the source of funds used, if known? \_\_\_\_\_

Example. Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

9d. What month/year(s) was the stream bank fencing installed? \_\_\_\_\_

9e. Is the area inside the fence predominantly in grass, or in trees and/or shrubs?

- Grass
- Trees and/or shrubs

9e. Was the area between the fence and stream grazed after the fence was installed?

- No
- Yes → How often was the area grazed during the year?
  - Continuous
  - One a year (length of time \_\_\_\_\_)
  - Twice a year (length of time \_\_\_\_\_)
  - Other \_\_\_\_\_

9e. For all stream bank fencing which is not funded using government funds, all visual indicators and the definitions provided by CBP RI-4a, 4b, 5, 6 (Watercourse Access Control) as applicable have been met.

- No  Yes

**NOTE: For stream bank fencing, if the fencing was not funded with government funds, use the Chesapeake Bay Program Resource Improvement Practices (RI) Appendix H RI-4a, 4b, 5, 6 Watercourse Access Control Example Checklist to verify if the fencing meets the definition. If it does not meet all applicable visual indicators, do not count it as stream bank fencing.**

10. Are there streamside riparian buffers on land that is part of the operator's farming operation?

- No → Please proceed to question 11.
- Yes → 10a. How many linear feet is the buffer? \_\_\_\_\_ feet

**NOTE: For grass riparian buffers, if the buffer was not funded with government funds, use the Chesapeake Bay Program Resource Improvement Practices (RI) Appendix H RI-7,8 Grass Nutrient Exclusion Area or Buffer on Watercourse Example Checklist to verify if the buffer meets the definition of a grass riparian buffer. For unfunded forest riparian buffers, use RI-9,10 Forest Exclusion Area or Buffer on Watercourse Example Checklist. If the practice does not meet all applicable visual indicators, do not count it as a riparian buffer.**

10b. What is the average width of the buffer from top of stream bank? \_\_\_\_\_ feet

10c. What month/year(s) was the riparian buffer(s) installed? \_\_\_\_\_

10d. Is the riparian buffer in grass, or in trees and/or shrubs?

- Grass
- Trees and/or shrubs

10e. What was the prior land use in the buffer?

- Pasture
- Cropland

10f. Were any county, state or federal government funds used to install the buffer?

- No
- Yes →  County funds       State funds       Federal funds

How many acres of buffer was funded using these funds? \_\_\_\_\_ acres

What were the source of funds used, if known? \_\_\_\_\_

Example. CREP, CRP, Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

10g. For all buffers which were not funded using government funds, all visual indicators and the definitions provided by CBP RI-7,8 (Grass Buffers) or RI-9,10 (Forest Buffers) as applicable have been met.

- No
- Yes

11. Excluding any riparian buffers identified in the answer to question 10, has the operator retired any cropland from his farming operation to permanent vegetation such as perennial grasses, trees or shrubs?

- No
- Yes → 11a. Indicate what year the operator retired the cropland, how many acres have been retired, and whether trees and/or shrubs are growing in the retired acres.

Year	Acres	Are trees and/or shrubs growing in the retired acres?
		<input type="radio"/> Yes
		<input type="radio"/> No
		<input type="radio"/> Yes
		<input type="radio"/> No
		<input type="radio"/> Yes
		<input type="radio"/> No

11b. Were any county, state or federal government funds used to retire the acreage?

- No
- Yes →  County funds       State funds       Federal funds

How many acres of retired cropland was funded using these funds? \_\_\_\_\_ acres

What were the source of funds used, if known? \_\_\_\_\_

Example. CRP, Growing Greener, EQIP, Chesapeake Bay, PennVest, REAP, Section 319, NFWF, etc.

## Appendix C: BMP Survey Verification Summary

### Explanation of Sources of Data Used to Develop "Reported" and "Verified" Values

#### Nutr Mgmt Plan Acres

Acres under nutrient management plans were analyzed separately for plans covering three land types: row crops, pasture, and hay.

The columns labeled "reported" include farm-level answers to question 5e. (acres covered by a nutrient management plan) of the original mail/web survey, for each land type.

The columns labeled "verified" includes each respondents' answer to question 1f. (acres covered by a nutrient management plan) of the farm visit report, for each land type.

The columns labeled "difference" subtract "verified" from "reported".

#### Nutr Mgmt Plan Acres by Plan Type

In this sheet, we break down the responses further according to the type of nutrient management plan employed and whether the plan was developed using any public funds (except for Manure Management Plans). Acres under nutrient management plans were analyzed separately for Act 38 Nutrient Management Plans, NRCS 590 Nutrient Management Plans, and Manure Management Plans. Acres were further separated according to whether the plans applied to row crops, pasture, and hay.

#### *Act 38 Nutrient Management Plans*

Reported: question 5e. of the original mail/web survey conditional on selecting "Act 38 Nutrient Management Plan" in question 5a. and on selecting "No" (public funds) in question 5c. of the same survey.

Verified: question 1f. of the farm visit report conditional on selecting "Act 38 Nutrient Management Plan" in question 1a. and selecting "No" (public funds) in question 1d. of the same survey.

#### *NRCS 590 Nutrient Management Plans*

Reported: question 5e. of the original mail/web survey conditional on selecting "NRCS 590 Nutrient Management Plan" in question 5a. and on selecting "No" (public funds) in question 5c. of the same survey.

Verified: question 1f. of the farm visit report conditional on selecting "NRCS 590 Nutrient Management Plan" in question 1a. and selecting "No" (public funds) in question 1d. of the same survey.

#### *Manure Management Plans*

Reported: question 5e. of the original mail/web survey conditional on selecting "Manure Management Plan" in question 5a of the same survey.

Verified: question 1f. of the farm visit report conditional on selecting "Manure Management Plan" in question 1a of the same survey.

#### Enhanced Nutrient Management

Reported: question 6b. of the original mail/web survey (acres on which nitrogen application is adjusted based on a soil nitrogen test)

Verified: question 2b. of the farm visit report (acres on which nitrogen application is adjusted based on a soil nitrogen test)

#### Manure Transport

Due to the scarcity of farms that transported any particular manure type, original responses were simply listed alongside their corresponding farm visit report without any statistical analysis.

In the excel sheet, plain text represents responses from the original mail/web survey, while bold text represents the reports from the farm visits.

#### Manure Storage Unit

We analyzed manure storage units separately for dairy manure, beef manure, swine manure, and poultry manure.

Reported: total number of manure storage units (of a particular type) reported in question 8a. of the original mail/web survey

Verified: total number of manure storage units (of the corresponding type) reported in question 8a. of the farm visit report

#### Barnyard Runoff Control

We defined a "barnyard runoff control system" as a barnyard that had at least one of the following practices: roof runoff structures, curbs, collection systems and/or pumps, or barnyard runoff filter strips.

Reported: equal to 1 if the farm reported having a "barnyard runoff control system" in question 9b. of the original mail/web survey

Verified: equal to 1 if question 4a. of the farm visit report indicated that the farm had a "barnyard runoff control system"

In addition to analyzing the reporting accuracy of "barnyard runoff control systems," we also analyzed the reporting accuracy of each of the five individual runoff control practices included in the survey: roof runoff

structures, concrete barnyards, curbs, collection systems and/or pumps, barnyard runoff filter strips.

Reported: equal to 1 if the farm reported having the practice in question 9b. of the original mail/web survey

Verified: equal to 1 if question 4a. of the farm visit report indicated that the farm had the practice

#### Erosion and Sedimentation Plans

Acres covered by agricultural erosion and sedimentation control plans were analyzed separately for four land types: row crops, pasture, hay, and barnyard. We included acres here whether or not the farmer received government funds.

Reported: question 10a. (acres under plan, by land type) conditional on selecting "E&S Plan"

Verified: question 6a. (acres under plan, by land type) conditional on selecting "E&S Plan"

#### NRCS Conservation Plans (privately funded)

Acres covered by NRCS conservation plans were analyzed separately for four land types: row crops, pasture, hay, and barnyard. Here we included acres only if the farm did not indicate that they received federal funds.

Reported: question 10a. (acres under plan, by land type) conditional on selecting "NRCS Conservation Plan" and on selecting "No" for whether federal funds were used to develop the plan

Verified: question 6a. (acres under plan, by land type) conditional on selecting "NRCS Conservation Plan" and on selecting "No" for whether federal funds were used to develop the plan

#### Stream Bank Fencing

##### *Fencing Length*

Reported: Linear feet of fencing reported in question 13a. of the original mail/web survey

Verified: Linear feet of fencing reported in question 9a. of the farm visit report

##### *Distance from Stream to Fence*

Reported: average distance (feet) from the stream to the fence reported in question 13b. of the original mail/web survey

Verified: average distance (feet) from the top of the stream bank to the fence as reported in question 9b. of the farm visit report

*Privately Funded Fencing Length*

Reported: Linear feet of fencing reported in question 13a. of the original mail/web survey minus that reported in question 13d. (the amount constructed using government funds)

Verified: Linear feet of fencing reported in question 9a. of the farm visit report minus that reported in question 9c. (linear feet constructed using county, state, or federal funds)

*Acres of Buffer (fencing length x distance to stream)*

Reported: the linear feet of fencing reported in question 13a. times the average distance between the stream and the fence reported in question 13b. divided by 43560 (square feet per acre)

Verified: the linear feet of fencing reported in question 9a. times the average distance between the stream and the fence reported in question 9b. divided by 43560

*Acres of Privately Funded Buffer (fencing length x distance to stream)*

Reported: the linear feet of privately funded fencing computed above times the distance between the stream and the fence reported in question 13b. divided by 43560 (square feet per acre)

Verified: the linear feet of privately funded fencing computed above times the average distance between the stream and the fence reported in question 9b. divided by 43560

Riparian Buffers

*Buffer Acres*

Reported: buffer acres indicated in question 14a of the original mail/web survey

Verified: buffer acres indicated in question 10a of the farm visit report

*Privately Funded Buffer Acres*

Reported: buffer acres indicated in question 14a minus acres of publicly funded buffers indicated in question 14e

Verified: buffer acres indicated in question 10a minus acres of publicly funded buffers indicated in question 10f.

*Buffer Width*

Reported: buffer width reported in question 14b of the original mail/web survey

Verified: buffer width reported in question 10b of the farm visit report

Categories of Reports

For some of the practices verified, I classify reports by four types--

**Category 0:** zero acres (or other units) reported in mail/web survey, zero acres (or other units) reported in farm visit

**Category 1:** positive acres reported in mail/web survey, but zero acres reported in farm visit

**Category 2:** zero acres reported in mail/web survey, but positive acres reported in farm visit

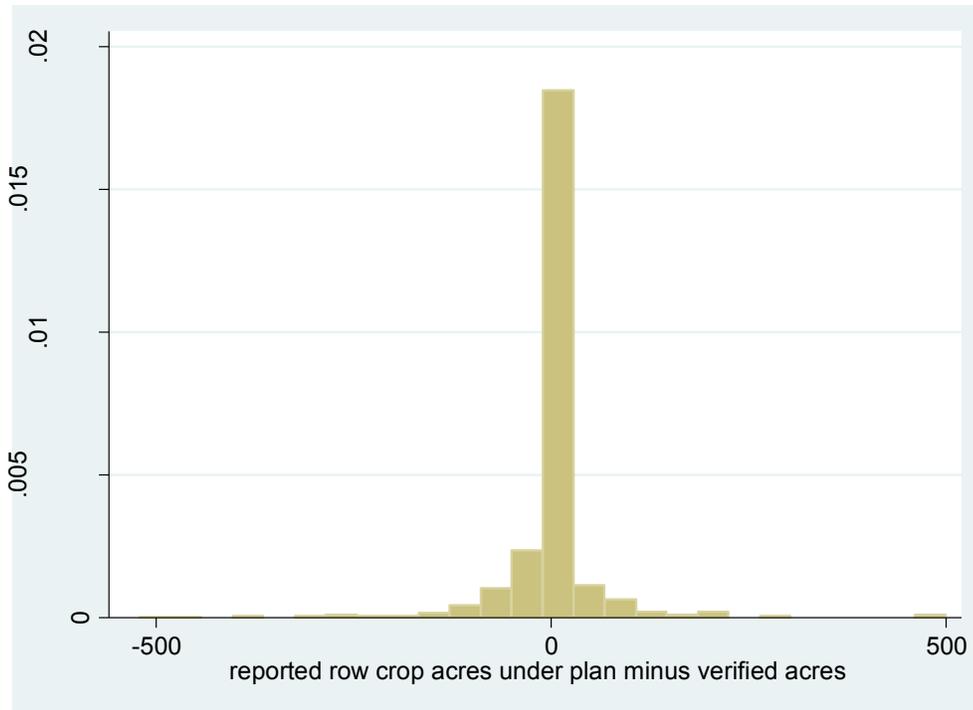
**Category 3:** positive acres reported in both mail/web survey and farm visit

Practice by Practice Statistical Analysis and Histograms

Nutr Mgmt Plan Acres

ROW CROP ACRES (reported with and without a large outlier of +11000)

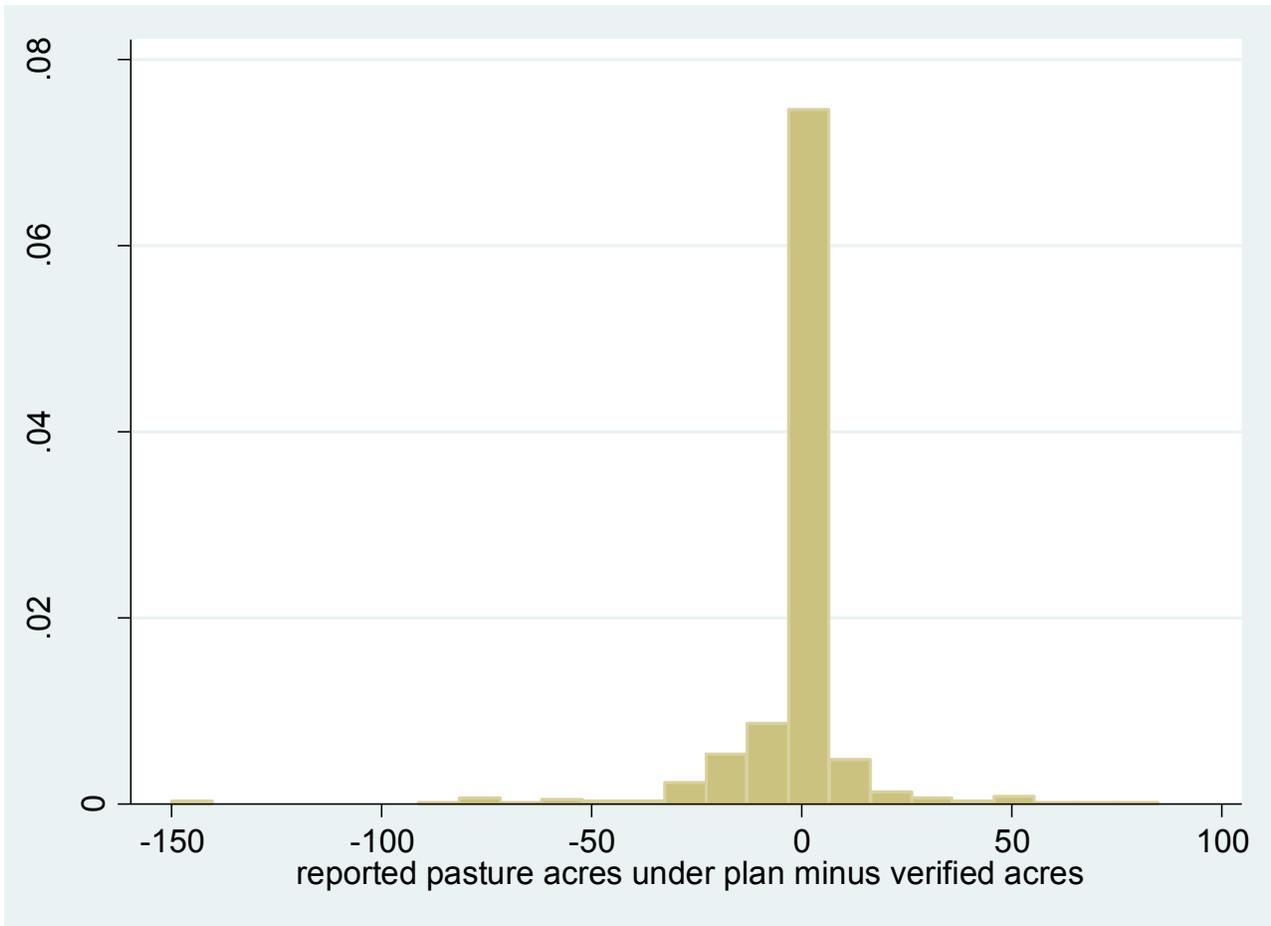
	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>372</b>	<b>52</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>34</b>	<b>5</b>	<b>79.05</b>	<b>10.26</b>	
w/ +11000	35	5	391.08	312.19	
<b>Category 2</b>	<b>70</b>	<b>10</b>	<b>-71.45</b>	<b>9.85</b>	
<b>Category 3</b>	<b>234</b>	<b>33</b>	<b>3.22</b>	<b>6.24</b>	<b>(-9.05, 15.51)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>-2.19</b>	<b>2.55</b>	<b>(-7.20, 2.81)</b>
w/ +11000	711	100	13.28	15.68	(-17.51, 44.07)



(graph excludes +11000)

*PASTURE ACRES* (reported with and without outliers of -400 and +1137.6)

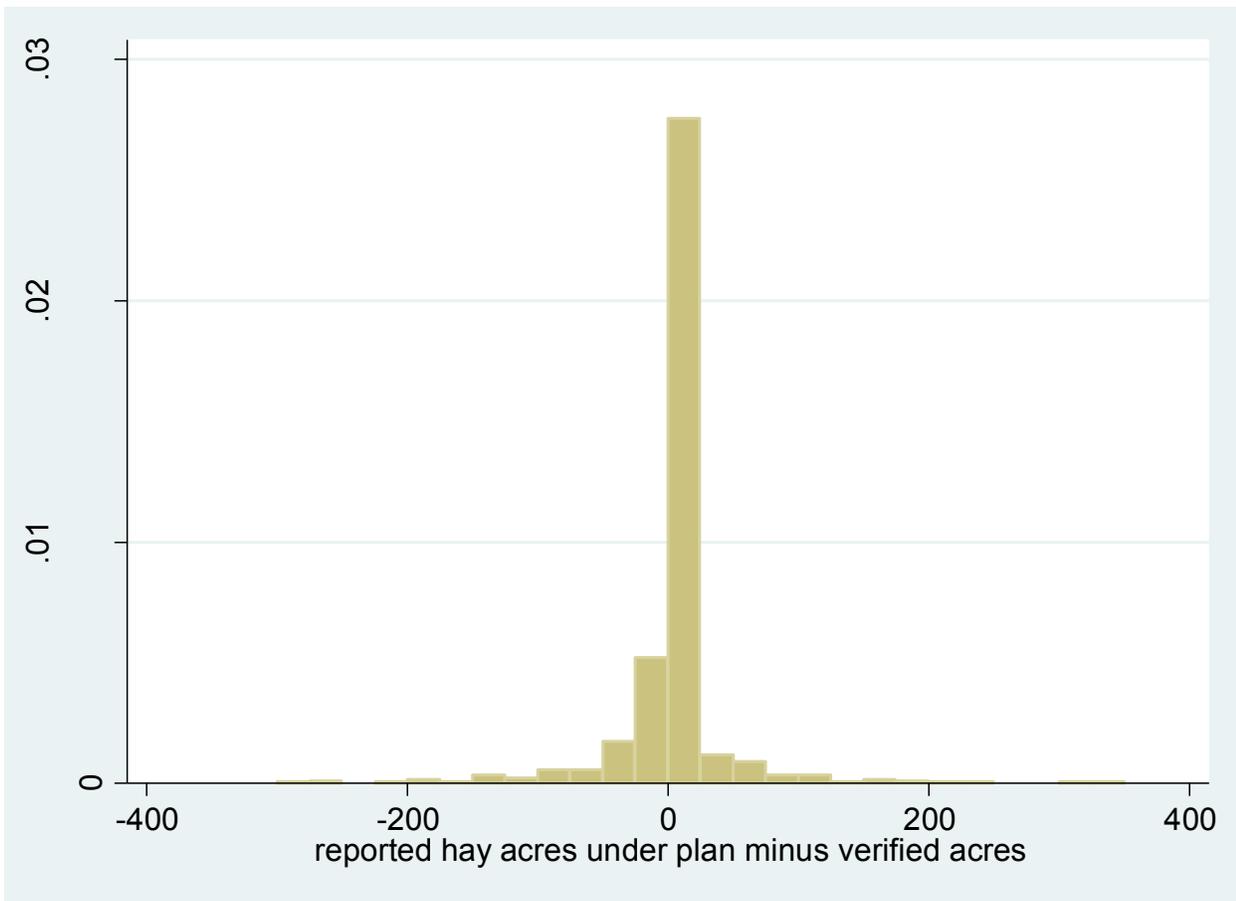
	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>411</b>	<b>58</b>	<b>0</b>	---	
<b>Category 1</b>	<b>37</b>	<b>5</b>	<b>20.81</b>	<b>3.15</b>	
<b>Category 2</b>	<b>100</b>	<b>14</b>	<b>-21.68</b>	<b>2.70</b>	
w/ -400	101	14	-25.42	4.60	
<b>Category 3</b>	<b>161</b>	<b>23</b>	<b>1.80</b>	<b>1.15</b>	<b>(-0.46, 4.07)</b>
w/ +1137.6	162	23	8.81	7.10	(-5.21, 22.84)
<b>Total</b>	<b>709</b>	<b>100</b>	<b>-1.56</b>	<b>0.62</b>	<b>(-2.77, -0.35)</b>
w/ outliers	711	100	-0.52	1.81	(-4.07, 3.03)



(graph excludes outliers)

*HAY ACRES*

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>393</b>	<b>55</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>55</b>	<b>8</b>	<b>60.45</b>	<b>9.44</b>	
<b>Category 2</b>	<b>87</b>	<b>12</b>	<b>-53.94</b>	<b>6.77</b>	
<b>Category 3</b>	<b>176</b>	<b>25</b>	<b>0.50</b>	<b>3.64</b>	<b>(-6.68, 7.68)</b>
<b>Total</b>	<b>711</b>	<b>100</b>	<b>-1.80</b>	<b>1.70</b>	<b>(-5.15, 1.55)</b>



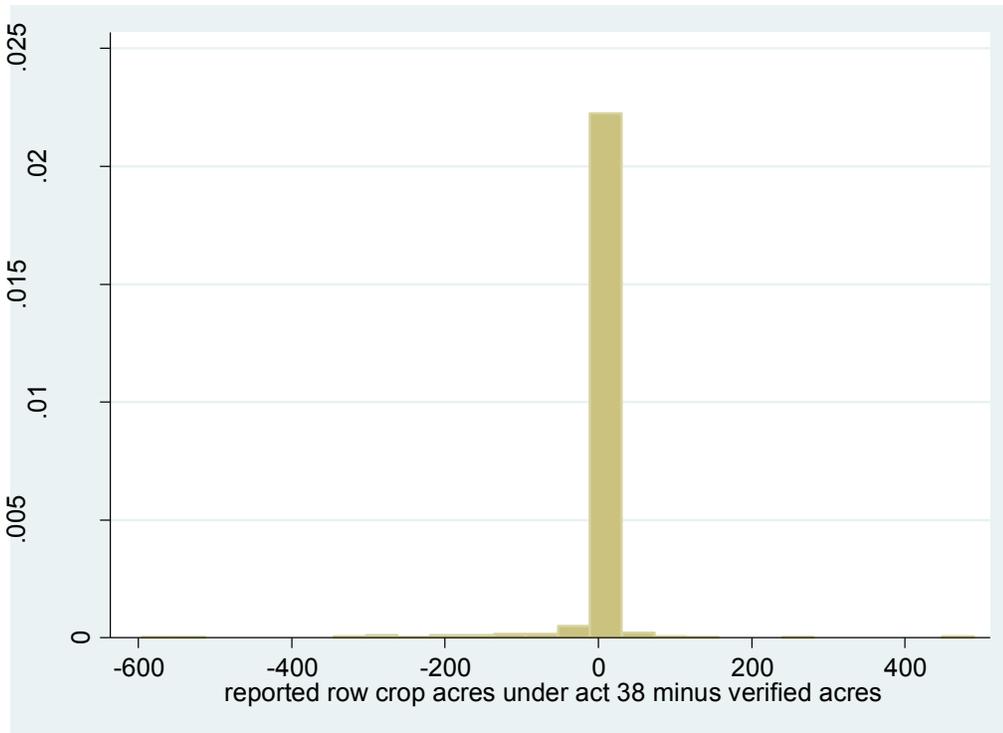
*PRIVATELY FUNDED ACT 38 ROW CROP ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
proopr_act38DIF	7.82	15.90	(-23.40, 39.04)

<b>Drop +11000</b>	Mean	Std. Err.	95% Conf. Int.
prowprv_act38DIF	-7.66	3.64	(-14.80, -0.52)

<b>Drop +11000, -2170</b>	Mean	Std. Err.	95% Conf. Int.
prowprv_act38DIF	-4.61	1.99	(-8.51, -0.71)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>649</b>		<b>0</b>		
<b>Category 1</b>	<b>10</b>		<b>95.80</b>	<b>45.32</b>	
w/+11000	11		1087.09	992.14	
<b>Category 2</b>	<b>36</b>		<b>-135.63</b>	<b>22.59</b>	
w/-2170	37		-189.17	57.87	
<b>Category 3</b>	<b>13</b>		<b>60.82</b>	<b>44.49</b>	<b>(-36.11,</b>
<b>157.75)</b>					
<b>Total</b>	<b>709</b>		<b>-4.61</b>	<b>1.99</b>	<b>(-8.51, -0.71)</b>
w/outliers	711		7.82	15.90	(-23.40, 39.04)

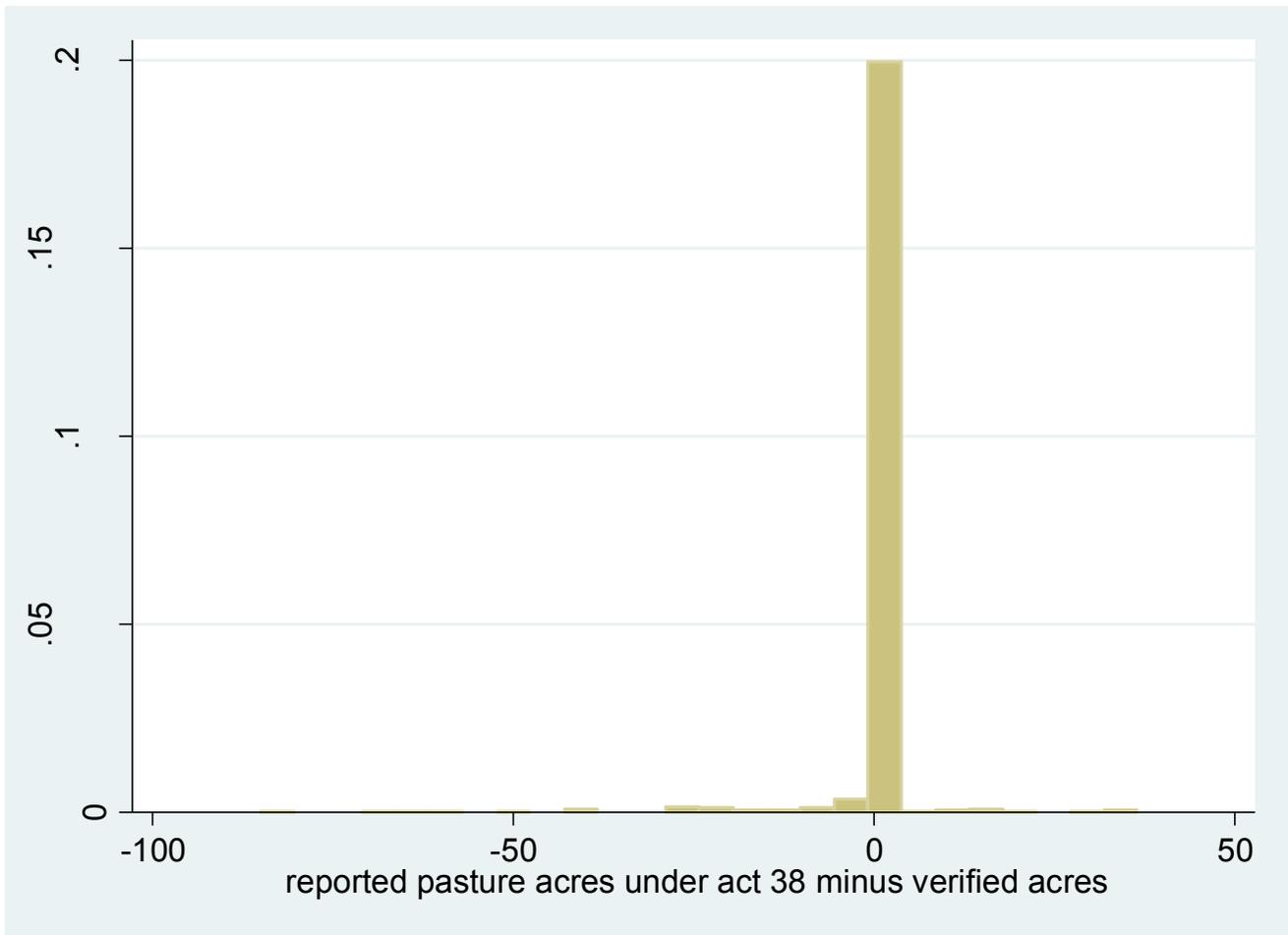


(graph excludes outliers)

*PRIVATELY FUNDED ACT 38 PASTURE ACRES*

Raw variable	Mean	Std. Err.	95% Conf. Int.
ppasprv_act38DIF	-0.85	0.27	(-1.39, -0.31)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>660</b>		<b>0</b>		
<b>Category 1</b>	<b>9</b>		<b>16.78</b>	<b>3.02</b>	
<b>Category 2</b>	<b>36</b>		<b>-22.13</b>	<b>3.57</b>	
<b>Category 3</b>	<b>6</b>		<b>6.77</b>	<b>6.02</b>	<b>(-8.72, 22.25)</b>
<b>Total</b>	<b>711</b>		<b>-0.85</b>	<b>0.27</b>	<b>(-1.39, -0.31)</b>

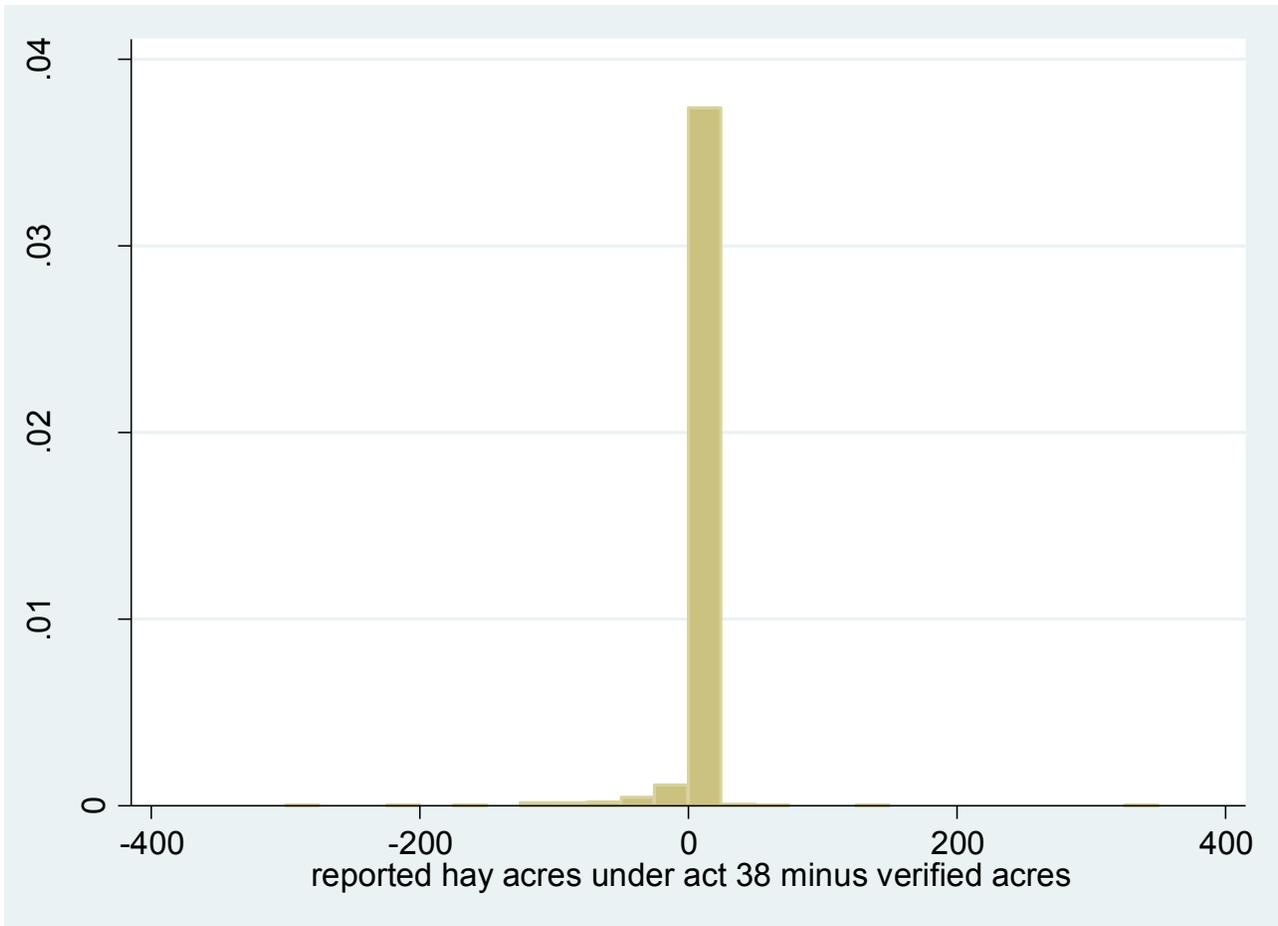


*PRIVATELY FUNDED ACT 38 HAY ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
phayprv_act38DIF	-2.04	0.90	(-3.81, -0.28)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>659</b>		<b>0</b>		

Category 1	9	72.44	37.14	
Category 2	39	-51.51	10.07	
Category 3	4	-24.25	26.74	(-109.36, 60.86)
<b>Total</b>	<b>711</b>	<b>-2.04</b>	<b>0.90</b>	<b>(-3.81, -0.28)</b>

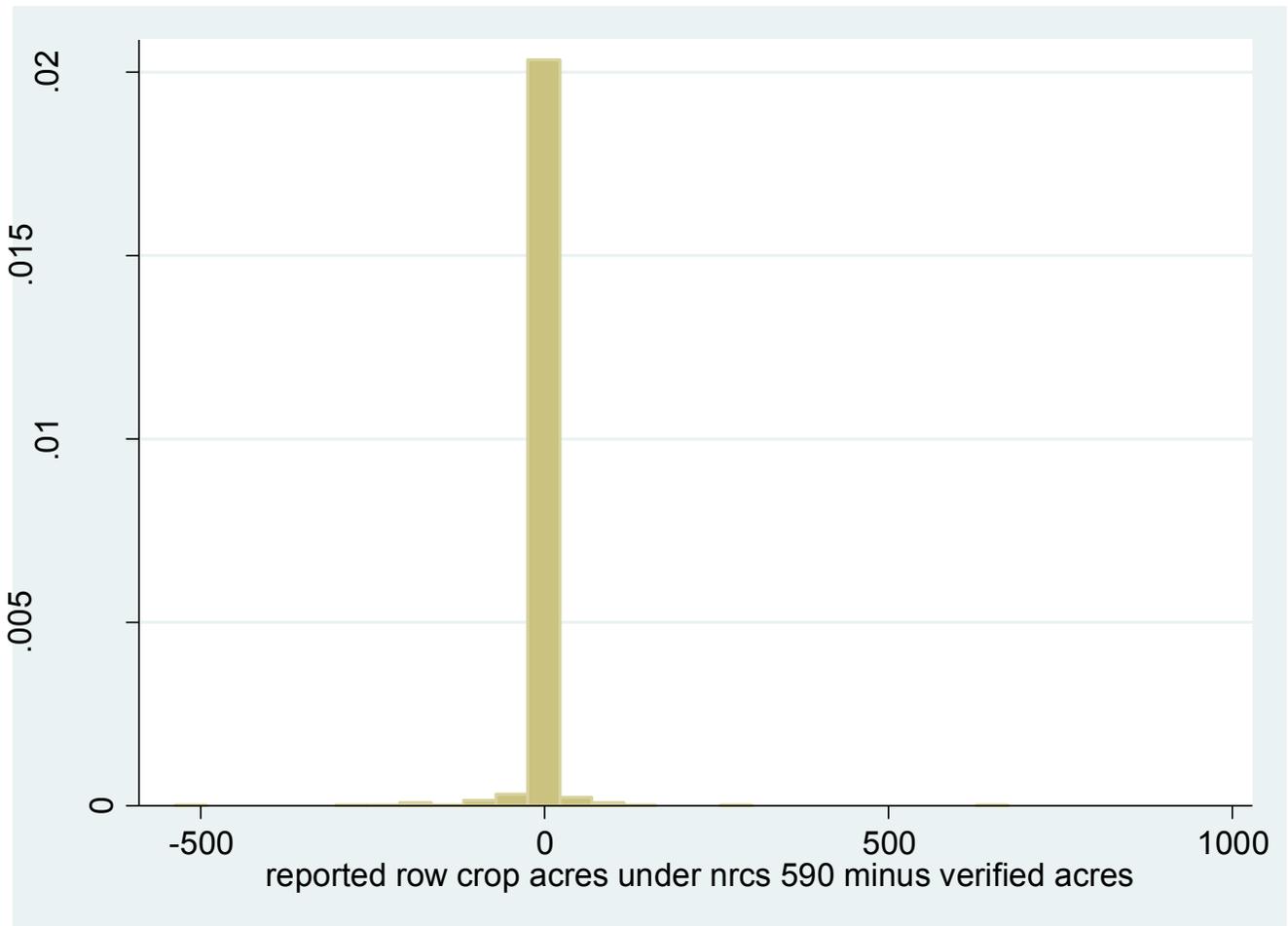


*PRIVATELY FUNDED NRCS 590 ROW CROP ACRES*

Raw variable	Mean	Std. Err.	95% Conf. Int.
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proprv\_nracs590DIF      -1.24      1.55      (-4.29, 1.80)

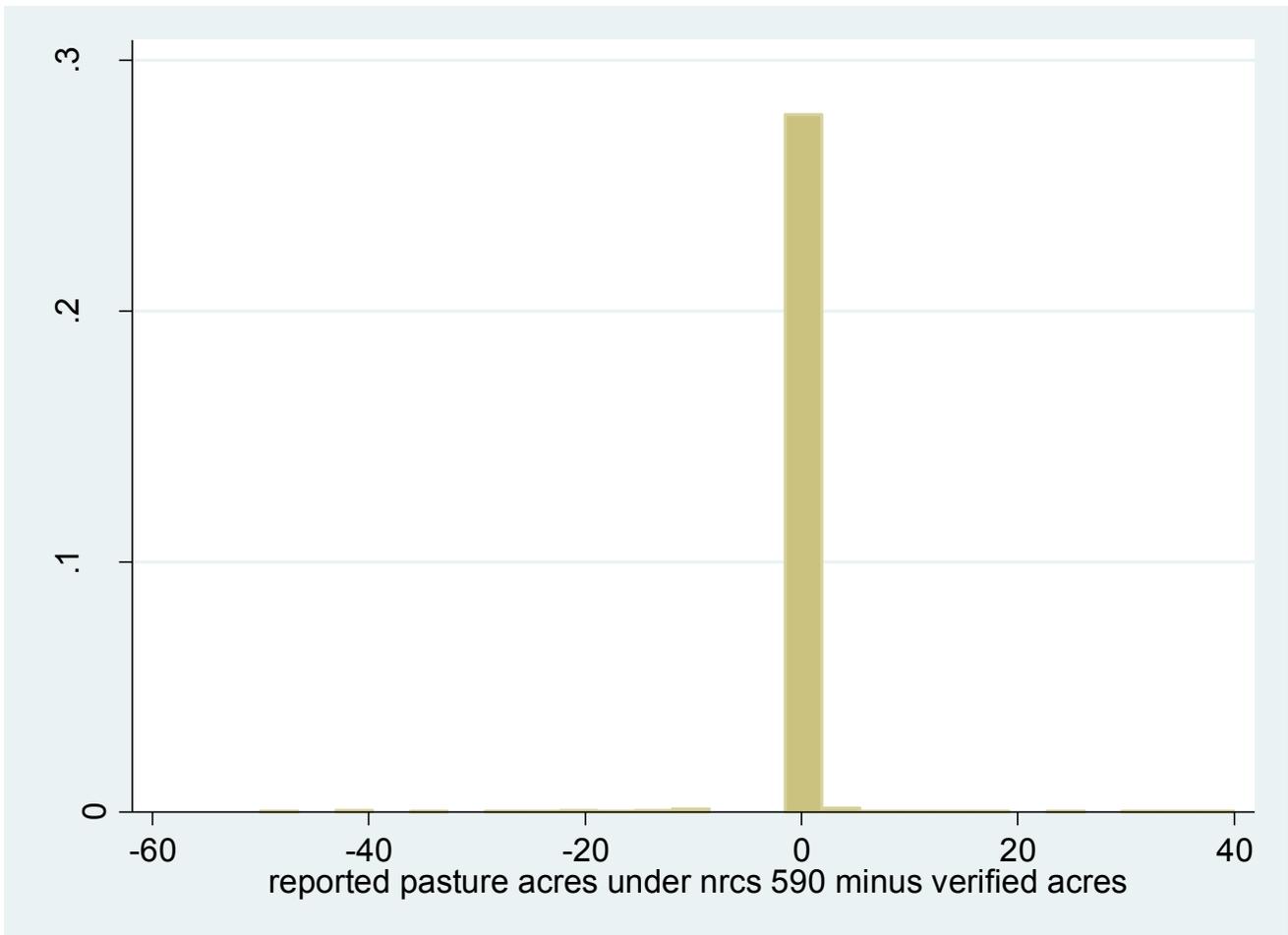
	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>670</b>		<b>0</b>		
<b>Category 1</b>	<b>13</b>		<b>125.66</b>	<b>50.51</b>	
<b>Category 2</b>	<b>22</b>		<b>-117.62</b>	<b>25.30</b>	
<b>Category 3</b>	<b>6</b>		<b>11.5</b>	<b>17.16</b>	<b>(-32.61, 55.61)</b>
<b>Total</b>	<b>711</b>		<b>-1.24</b>	<b>1.55</b>	<b>(-4.29, 1.80)</b>



*PRIVATELY FUNDED NRCS 590 PASTURE ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
ppasprv_nracs590DIF	0.08	0.33	(-0.57, 0.73)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>684</b>		<b>0</b>		
<b>Category 1</b>	<b>10</b>		<b>37.18</b>	<b>18.53</b>	
<b>Category 2</b>	<b>13</b>		<b>-24.03</b>	<b>3.72</b>	
<b>Category 3</b>	<b>4</b>		<b>0</b>	<b>8.50</b>	<b>(-27.04, 27.04)</b>
<b>Total</b>	<b>711</b>		<b>0.08</b>	<b>0.33</b>	<b>(-0.57, 0.73)</b>



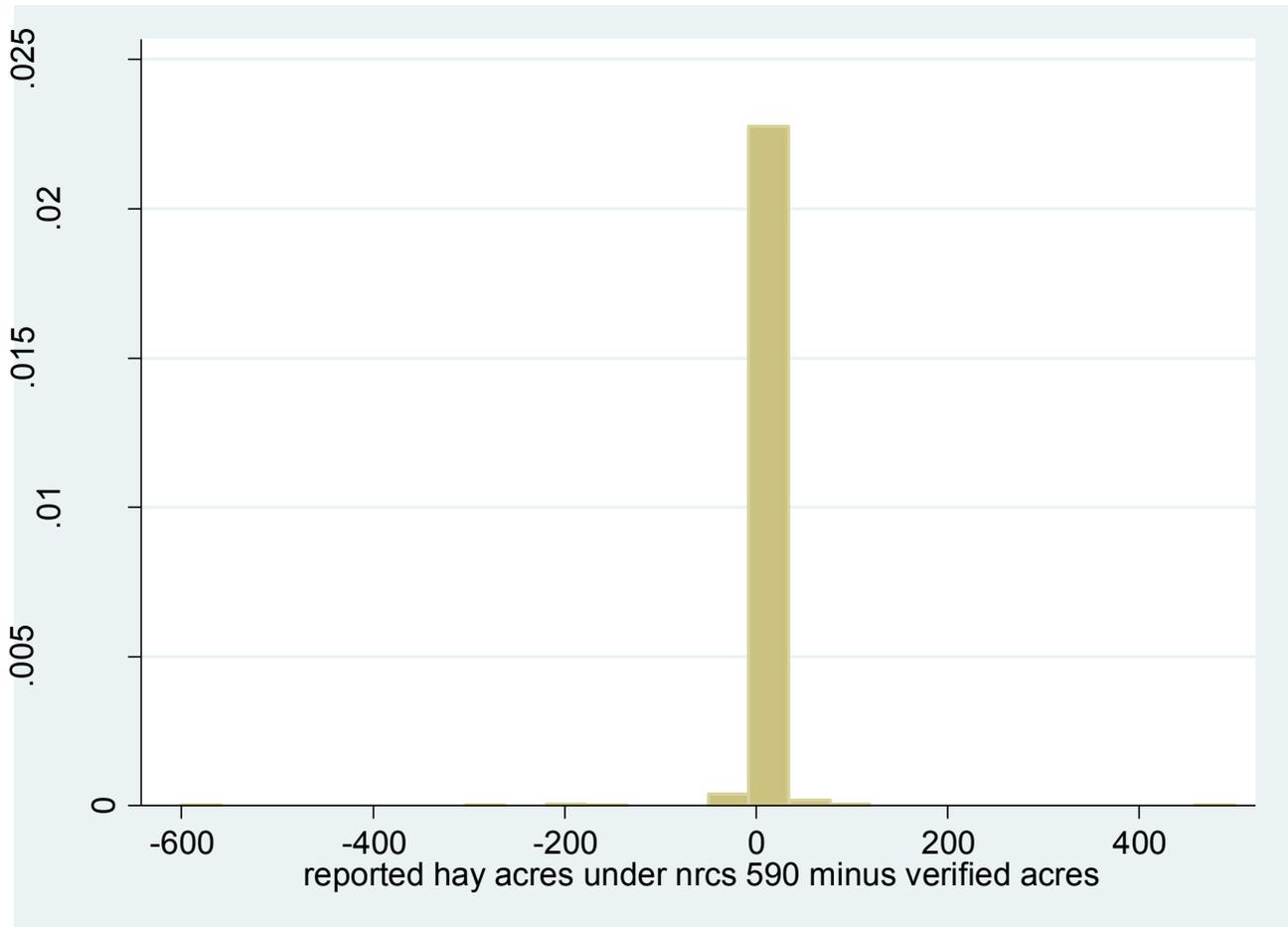
(graph excludes observation at +200)

*PRIVATELY FUNDED NRCS 590 HAY ACRES*

Raw variable	Mean	Std. Err.	95% Conf. Int.
phayprv_nracs590DIF	-0.86	1.30	(-3.41, 1.69)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>674</b>		<b>0</b>		

Category 1	15	74.13	31.44	
Category 2	17	-102.47	37.58	
Category 3	5	3.4	4.19	(-8.23, 15.03)
Total	711	-0.86	1.30	(-3.41, -1.69)



*MANURE MANAGEMENT PLANS ON ROW CROP ACRES*

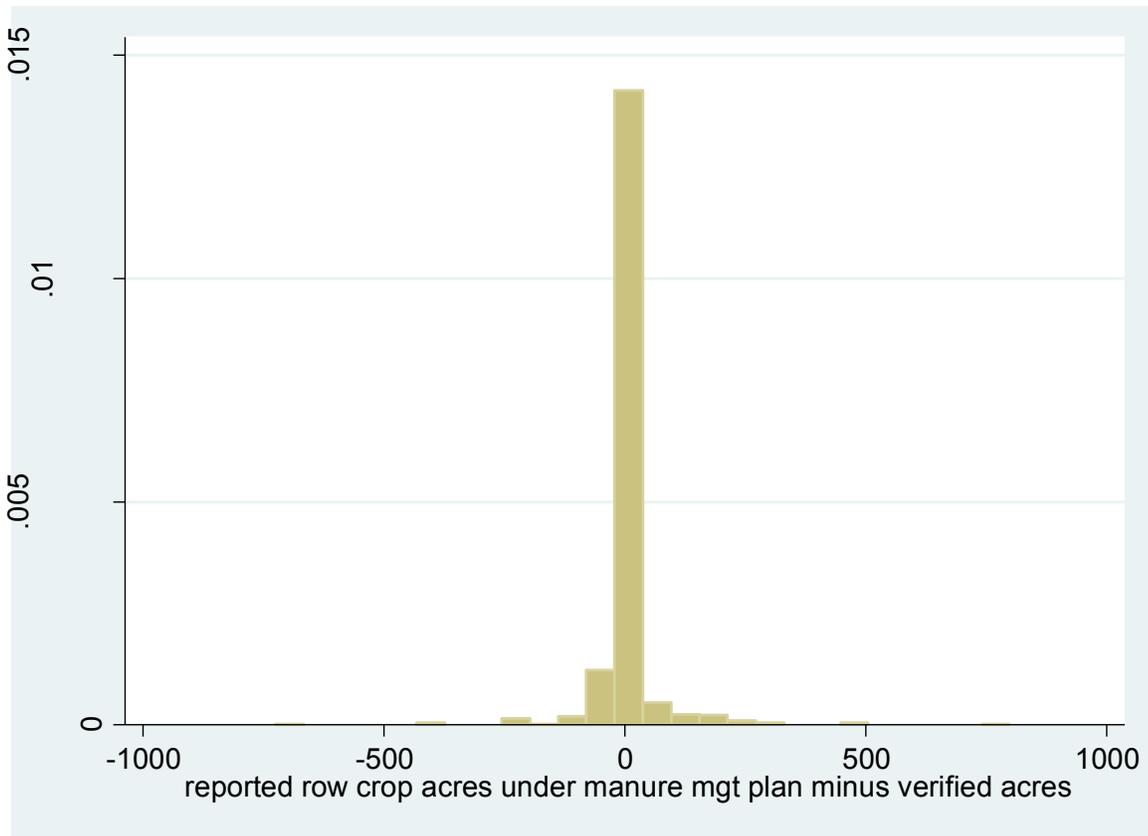
Raw variable	Mean	Std. Err.	95% Conf. Int.
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pro\_w\_mnrmgtDIF            7.06            4.97            (-2.69, 16.81)

**Drop +3000**            Mean            Std. Err.            95% Conf. Int.

pro\_w\_mnrmgtDIF            2.84            2.63            (-2.32, 8.00)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>506</b>		<b>0</b>		
<b>Category 1</b>	<b>56</b>		<b>119.23</b>	<b>17.80</b>	
w/+3000	57		169.77	53.48	
<b>Category 2</b>	<b>57</b>		<b>-81.84</b>	<b>15.19</b>	
<b>Category 3</b>	<b>91</b>		<b>0.07</b>	<b>8.50</b>	<b>(-16.82, 16.96)</b>
<b>Total</b>	<b>710</b>		<b>2.84</b>	<b>2.63</b>	<b>(-2.32, 8.00)</b>
w/+3000	711		7.06	4.97	(-2.69, 16.81)

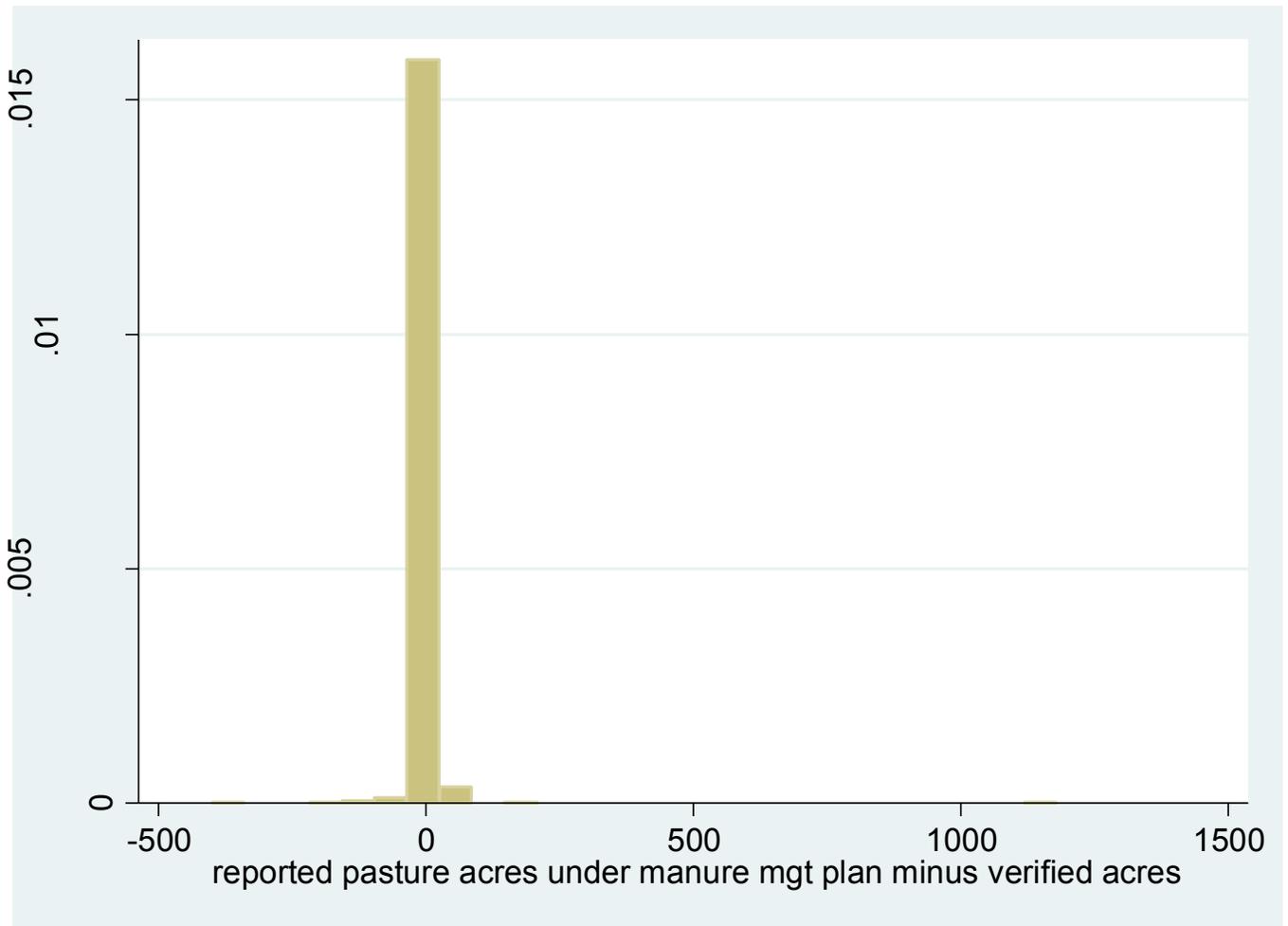


(graph excludes observation at +3000)

*MANURE MANAGEMENT PLANS ON PASTURE ACRES*

Raw variable	Mean	Std. Err.	95% Conf. Int.
ppas_mnrmgtDIF	0.44	1.85	(-3.20, 4.08)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	530		0		
<b>Category 1</b>	45		50.33	25.98	
<b>Category 2</b>	69		-29.14	6.82	
<b>Category 3</b>	67		0.89	1.34	(-1.78, 3.56)
<b>Total</b>	711		0.44	1.85	(-3.20, 4.08)

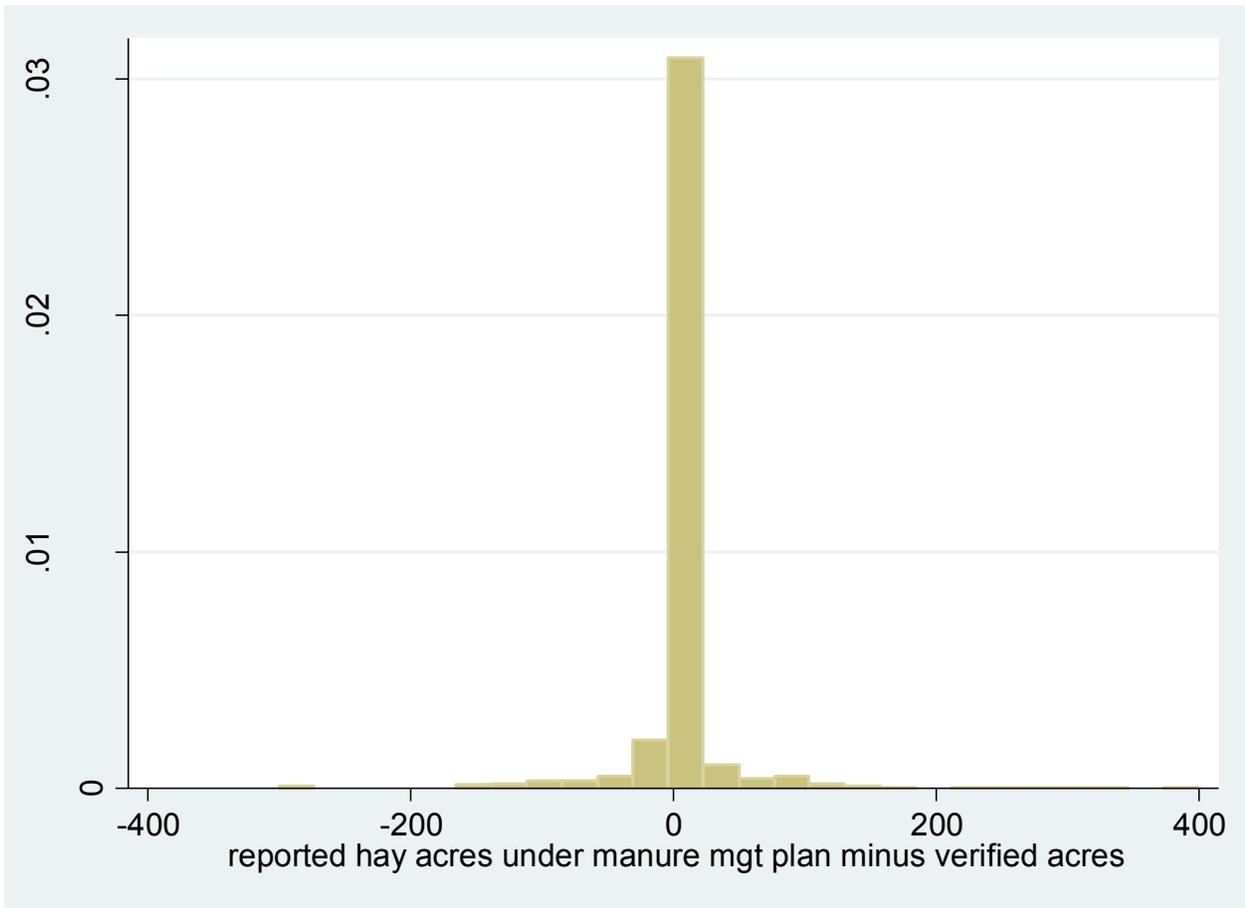


MANURE MANAGEMENT PLANS ON HAY ACRES

Raw variable	Mean	Std. Err.	95% Conf. Int.
phay_mnrmgtDIF	2.25	1.54	(-0.78, 5.27)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
Category 0	529		0		

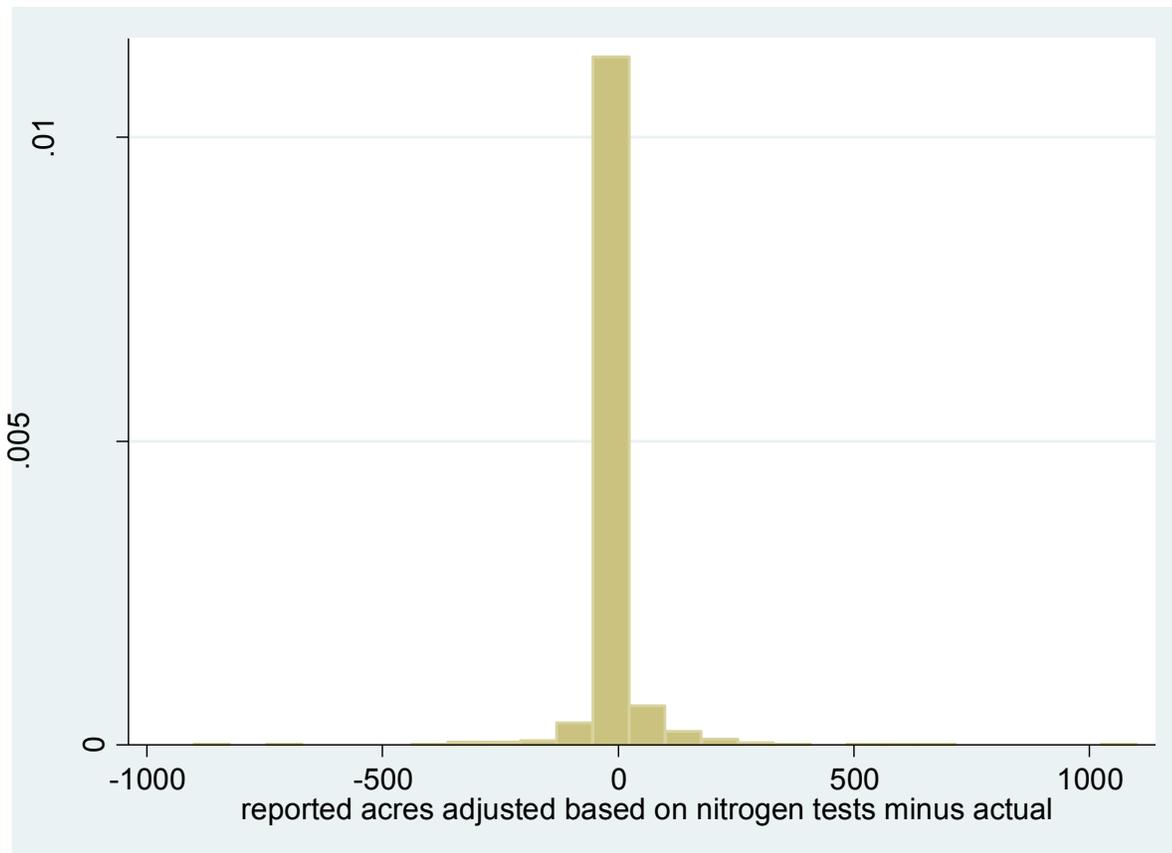
Category 1	56	76.96	11.59	
Category 2	51	-56.51	8.92	
Category 3	75	2.26	4.10	(-5.91, 10.42)
Total	711	2.25	1.54	(-0.78, 5.27)



Advanced Nutr Mgmt

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
adjDIF	15.61	13.75	(-11.38, 42.60)
<b>Drop +9500</b>			
adjDIF	2.25	3.26	(-4.314, 8.65)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>564</b>	<b>79</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>63</b>	<b>9</b>	<b>117.58</b>	<b>21.68</b>	
w/ +9500	64	9	264.18	148.15	
<b>Category 2</b>	<b>54</b>	<b>8</b>	<b>-104.82</b>	<b>19.11</b>	
<b>Category 3</b>	<b>29</b>	<b>4</b>	<b>-5.06</b>	<b>35.06</b>	<b>(-76.88, 66.76)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>2.25</b>	<b>3.26</b>	<b>(-4.14, 8.65)</b>
w/ +9500	711	100	15.61	13.75	(-11.38, 42.60)



(graph excludes the +9500 observation)

Manure Transport (no statistical analysis)

Manure Storage

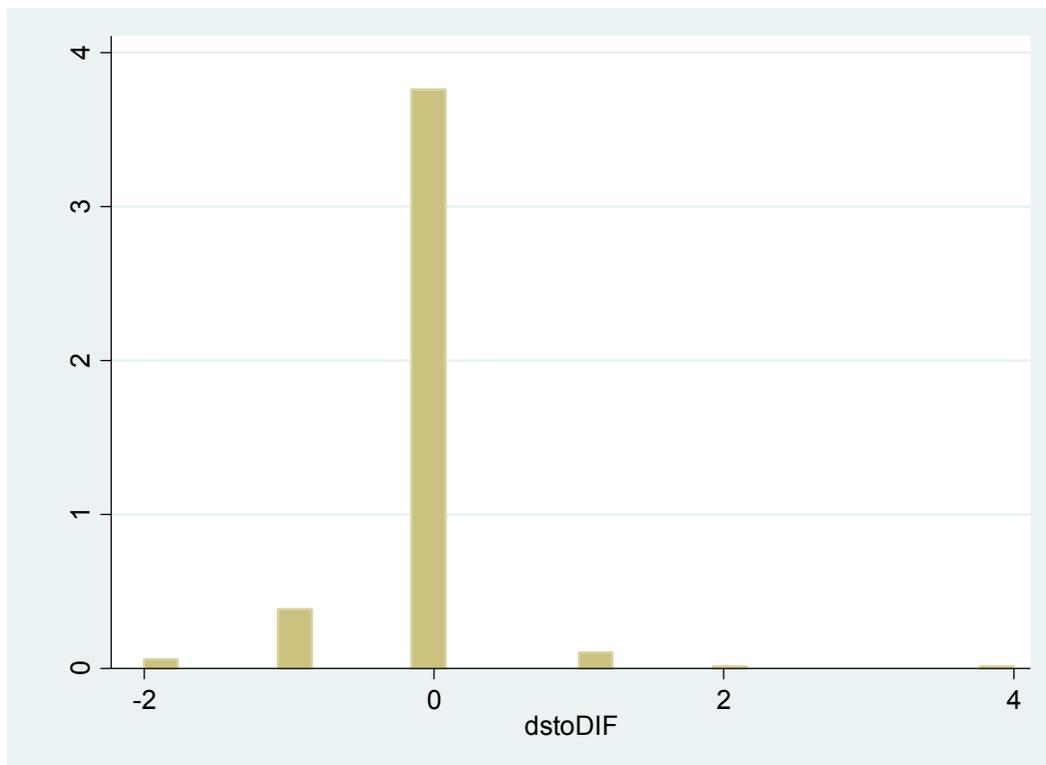
Difference between number of storage units reported in the mail/web survey and number of units reported in the farm visits

**DAIRY** (-54)

N = 711

Mean	Std. Err.	95% Conf. Interval
-.0759	.0176	(-.1105, -.0414)

*It might help to think of the mean here as a proportion, so (on average) about 1 in 12 of the farms (8 percent) in the original survey that did not report a dairy manure storage unit actually had one.*



**Value      Freq.      Percent**

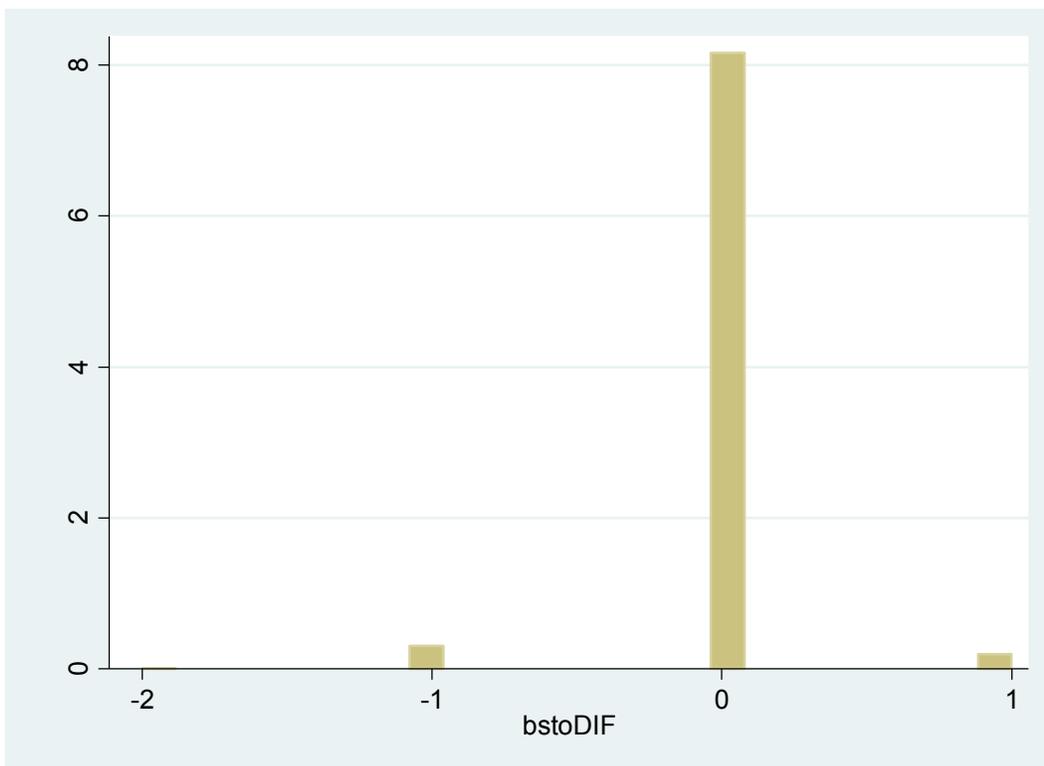
	-2	10	1.41
	-1	63	8.86
	0	617	86.78
	1	17	2.39
	2	2	0.28
	4	2	0.28
Total	-54	711	100.00

**BEEF** (-11)

N = 711

Mean	Std. Err.	95% Conf. Interval
-.0155	.0094	(-.0340, .0030)

*On average about 1 in 60 farms that reported no beef manure storage units actually had one.*



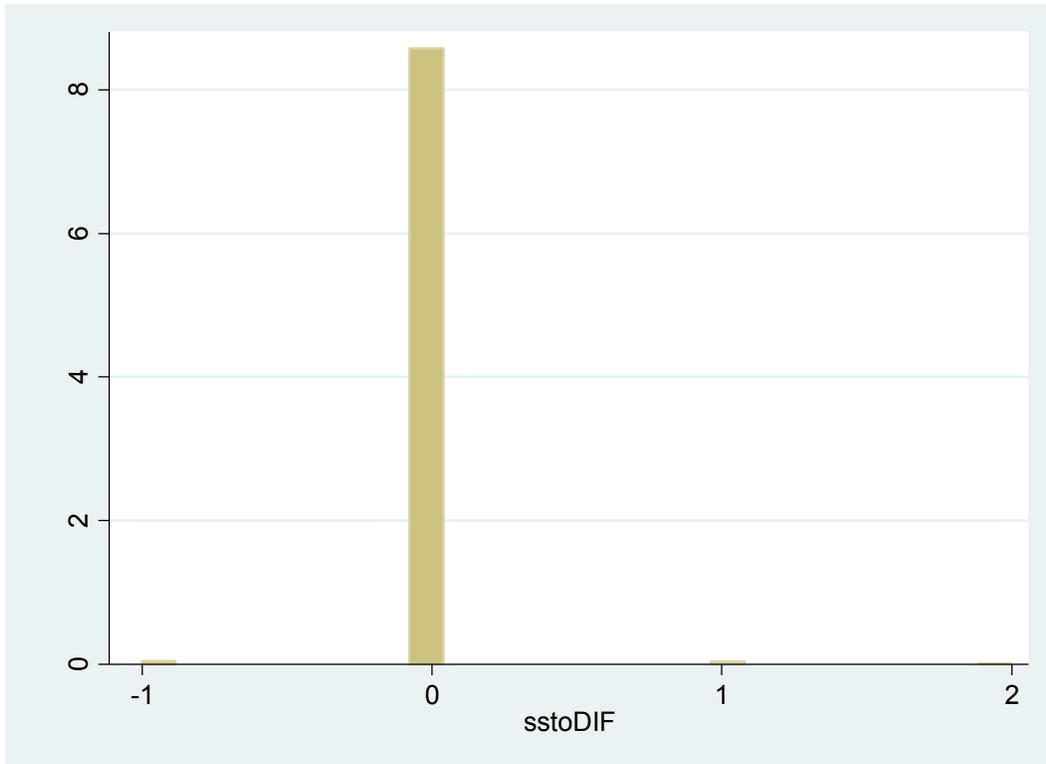
Value	Freq.	Percent
-2	1	0.14

	-1	25	3.52
	0	669	94.09
	1	16	2.25
Total	-11	711	100.00

**SWINE (+1)**

N = 711

Mean	Std. Err.	95% Conf. Interval
.0014	.0047	(-.0078, .0106)

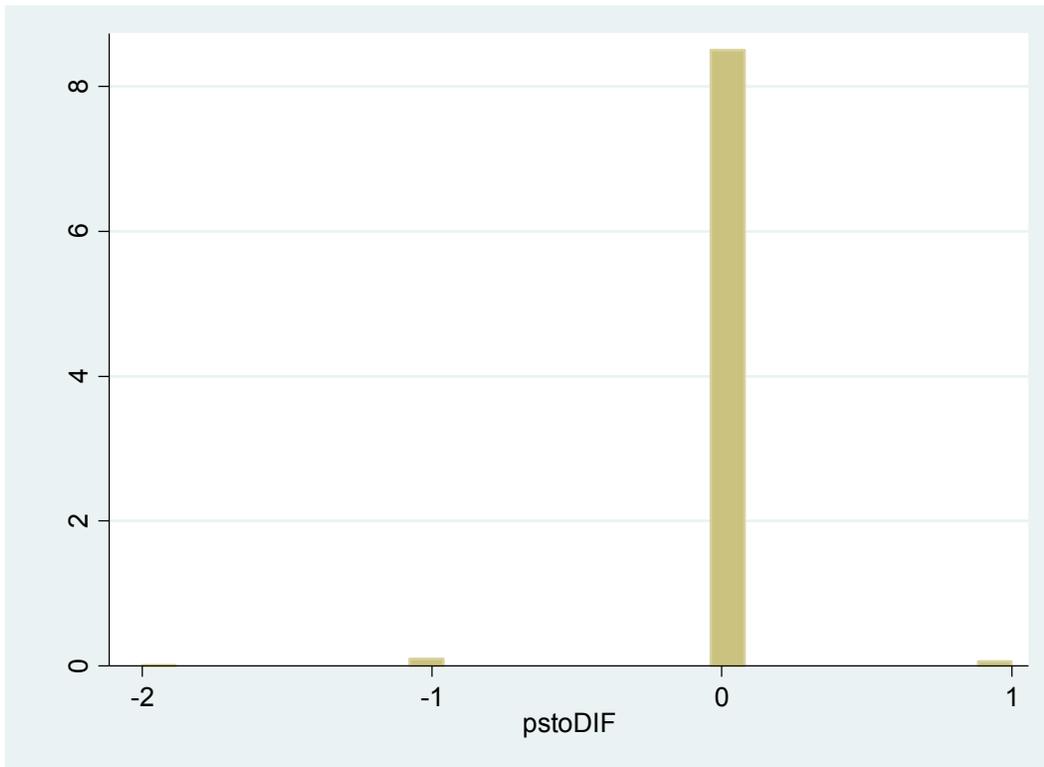


	<b>Value</b>	<b>Freq.</b>	<b>Percent</b>
	-1	4	0.56
	0	703	98.87
	1	3	0.42
	2	1	0.14
Total	+1	711	100.00

**POULTRY** (-5)

N = 711

Mean	Std. Err.	95% Conf. Interval
-.0070	.0058	(-.0184, .0043)



	<b>Value</b>	<b>Freq.</b>	<b>Percent</b>
	-2	1	0.14
	-1	8	1.13
	0	697	98.03
	1	5	0.70
Total	-5	711	100.00

Barnyard Runoff Control

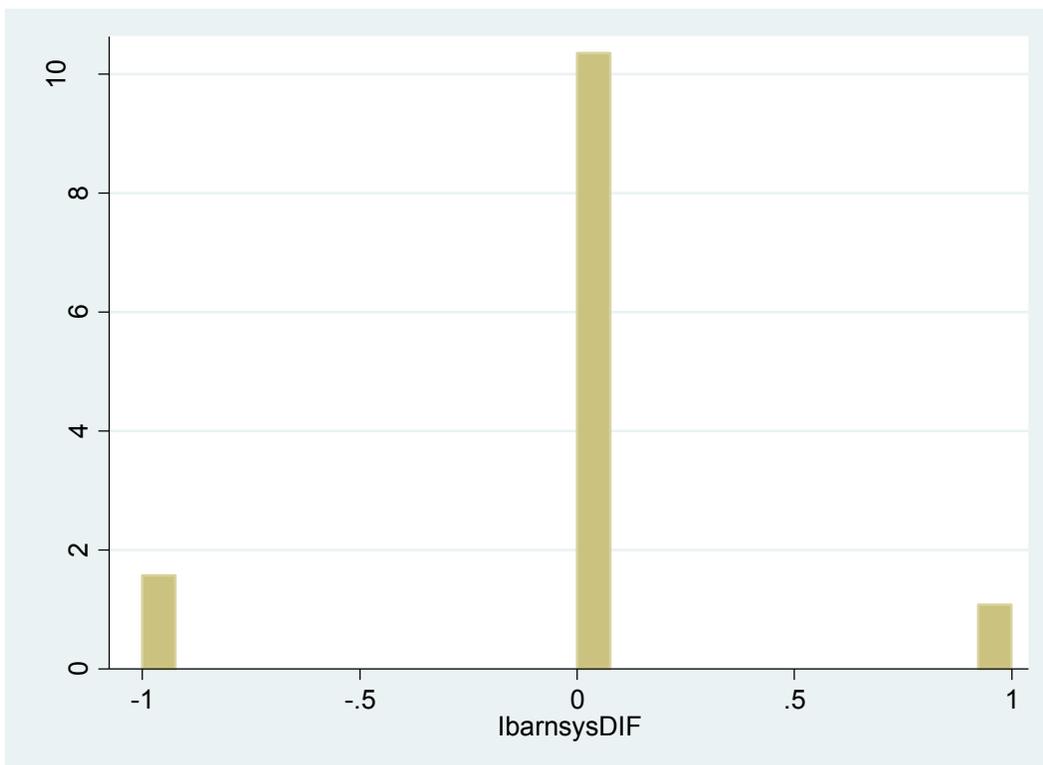
Difference between practices reported in mail/web survey and those reported from the farm visits

**Farms having a privately funded barnyard runoff system overall:**

N = 711

Mean	Std. Err.	95% Conf. Interval
-0.0380	0.0169	(-0.0711, -.0048)

*On average about 4 percent of farms that did not report themselves having a system actually did have one as reported by the farm visits*



Value	Freq.	Percent
-1	86	12.10
0	61	8.58
1	10	1.41

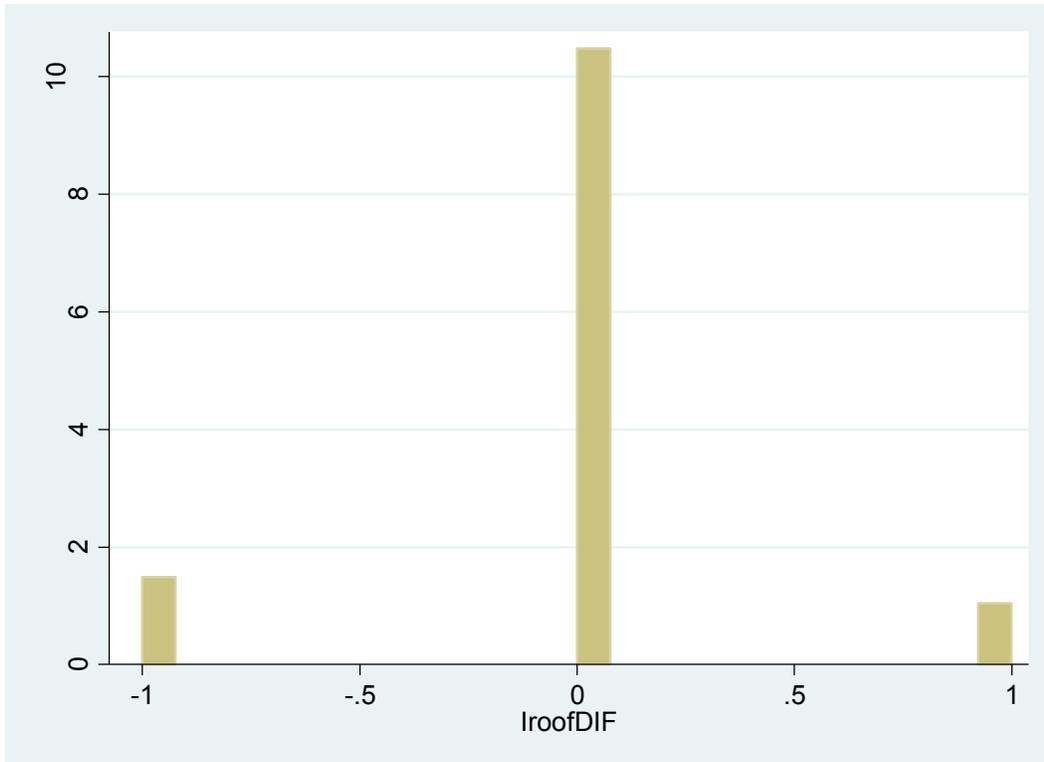
	0	566	79.61
	1	59	8.30
Total	-27	711	100.00

Reporting each practice within "Barnyard Runoff Control Structures" separately

**ROOF RUNOFF STRUCTURES (-24)**

N = 711

Mean	Std. Err.	95% Conf. Interval
-0.0328	0.0165	(-0.0661, -0.0014)

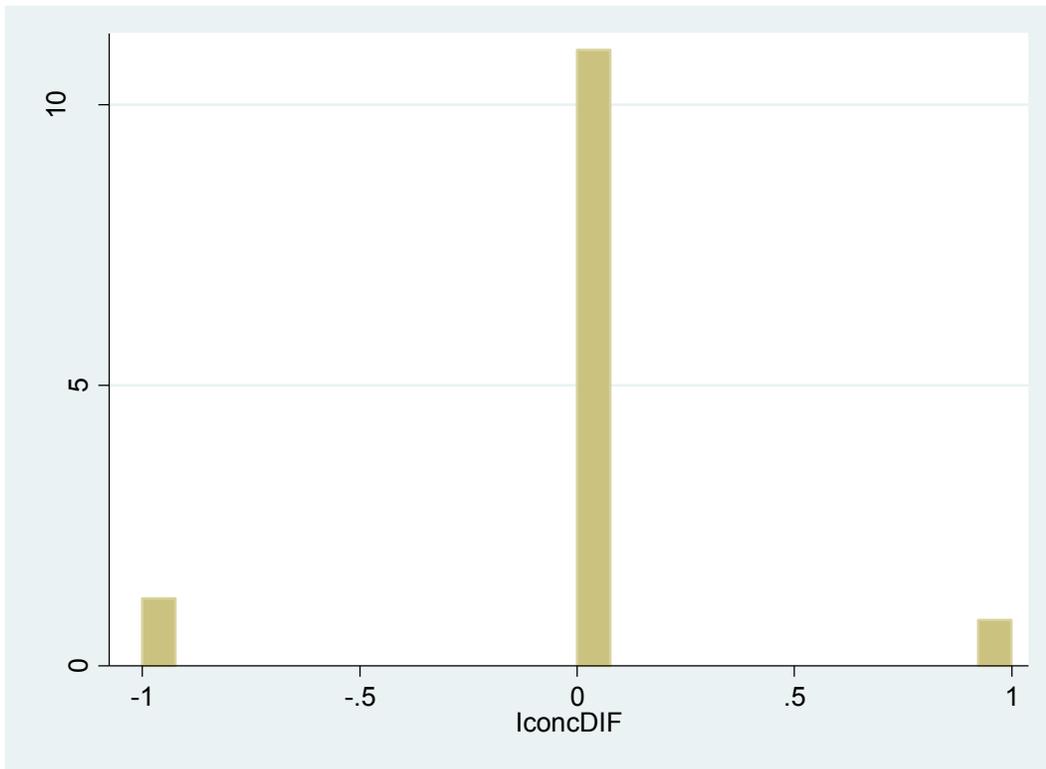


	<b>Value</b>	<b>Freq.</b>	<b>Percent</b>
	-1	81	11.39
	0	573	80.59
	1	57	8.02
Total	-24	711	100.00

**CONCRETE BARNYARDS (-21)**

N = 711

Mean	Std. Err.	95% Conf. Interval
-0.0295	0.0148	(-0.0586, -0.0005)

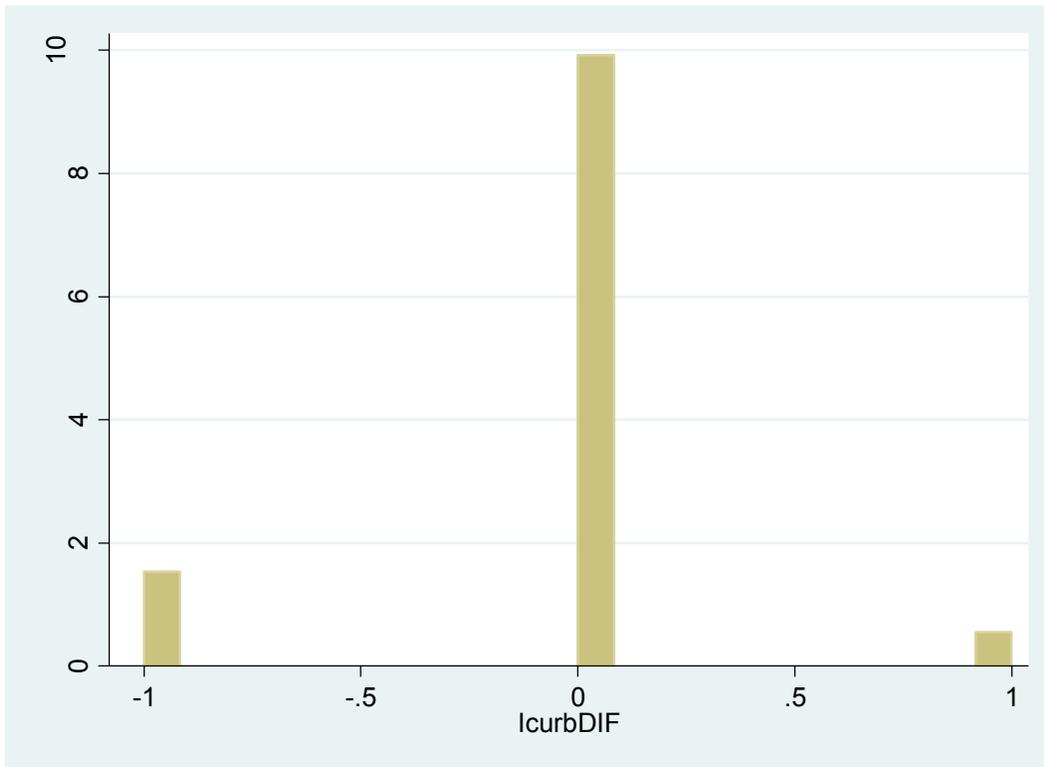


	<b>Value</b>	<b>Freq.</b>	<b>Percent</b>
	-1	66	9.28
	0	600	84.39
	1	45	6.33
Total	-21	711	100.00

**CURBS (-57)**

N = 711

Mean	Std. Err.	95% Conf. Interval
-0.0802	0.0151	(-0.1097, -0.0506)

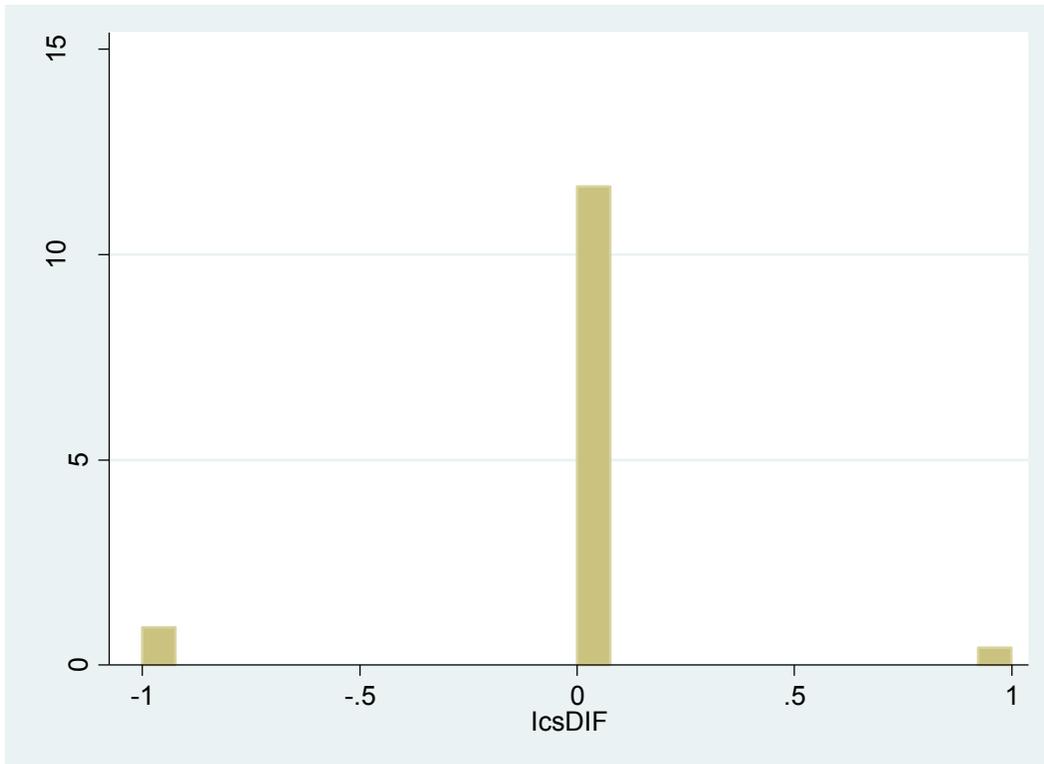


	<b>Value</b>	<b>Freq.</b>	<b>Percent</b>
	-1	88	12.38
	0	592	83.26
	1	31	4.36
Total	-57	711	100.00

**COLLECTION SYSTEMS (-27)**

N = 711

Mean	Std. Err.	95% Conf. Interval
-0.0380	0.0119	(-0.0614, -0.0145)

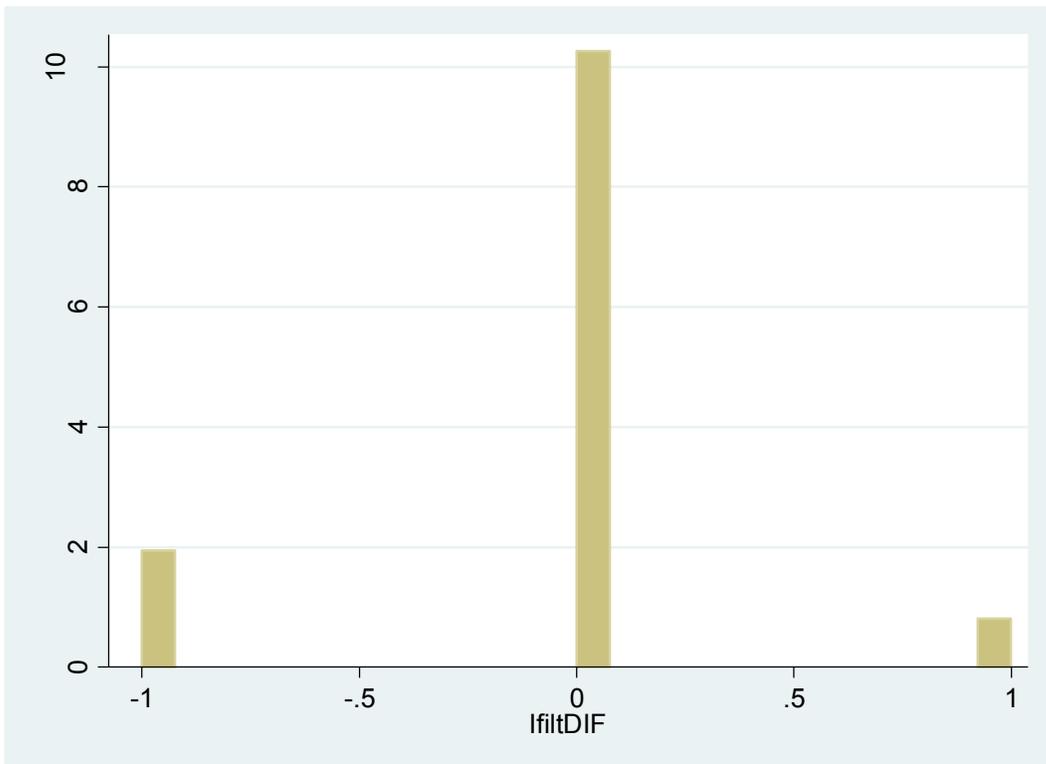


	<b>Value</b>	<b>Freq.</b>	<b>Percent</b>
	-1	50	7.03
	0	638	89.73
	1	23	3.23
Total	-27	711	100.00

**BARNYARD RUNOFF FILTER STRIPS (-62)**

N = 711

Mean	Std. Err.	95% Conf. Interval
-0.0872	0.0169	(-0.1204, -0.0540)



Value	Freq.	Percent
-------	-------	---------

	-1	106	14.91
	0	561	78.90
	1	44	6.19
Total	-62	711	100.00

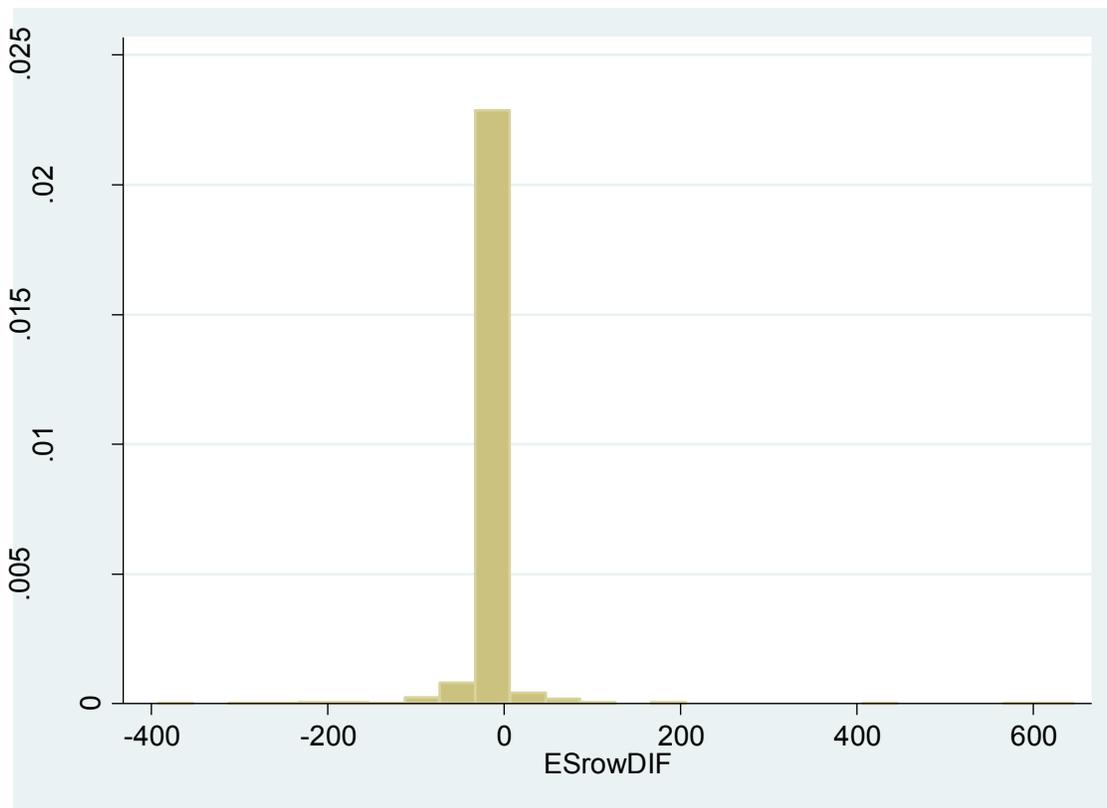
E&S Plans

*ROW CROP ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
ESrowDIF	-2.98	2.40	(-7.69, 1.73)

<b>Drop -1100</b>	Mean	Std. Err.	95% Conf. Int.
ESrowDIF	-1.43	1.84	(-5.04, 2.18)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>622</b>	<b>87</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>18</b>	<b>3</b>	<b>130.64</b>	<b>47.61</b>	
<b>Category 2</b>	<b>49</b>	<b>7</b>	<b>-79.70</b>	<b>11.17</b>	
w/ -1100	50	7	-100.11	23.16	
<b>Category 3</b>	<b>21</b>	<b>3</b>	<b>25.64</b>	<b>13.99</b>	<b>(-3.53, 54.82)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>-1.43</b>	<b>1.84</b>	<b>(-5.04, 2.18)</b>
w/ -1100	711	100	-2.98	2.40	(-7.69, 1.73)



(graph excludes the -1100 observation)

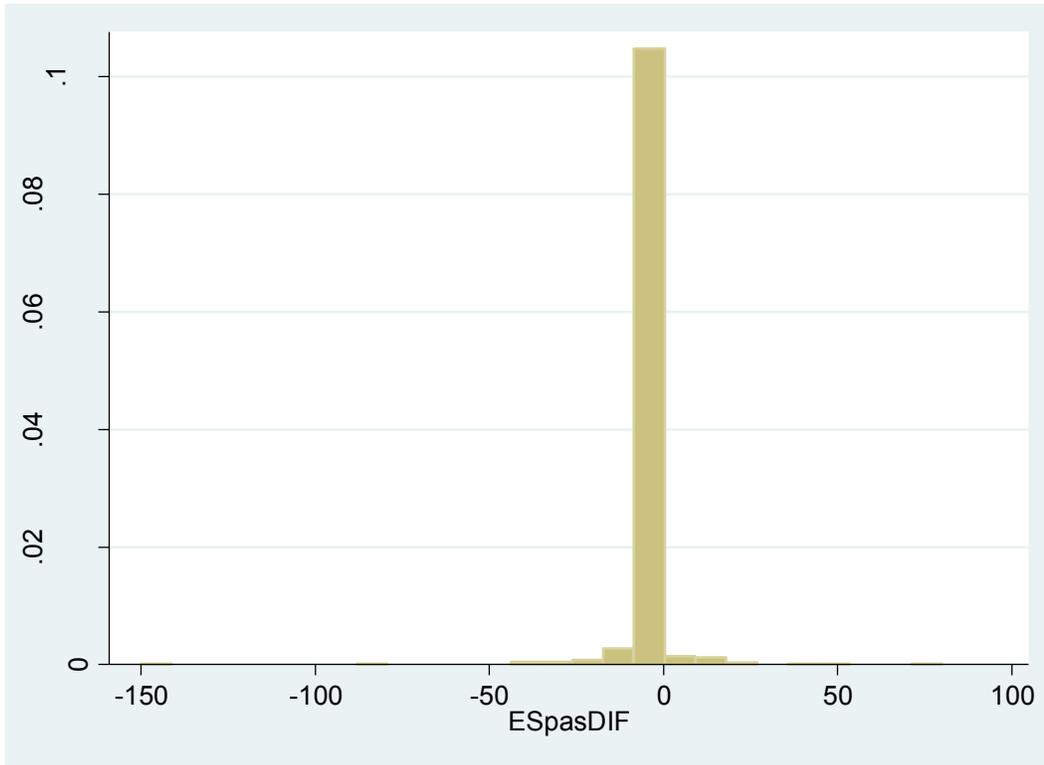
*PASTURE ACRES*

Raw variable	Mean	Std. Err.	95% Conf. Int.
ESpasDIF	-1.20	0.65	(-2.48, 0.07)

Drop -400	Mean	Std. Err.	95% Conf. Int.
ESpasDIF	-0.64	0.33	(-1.28, -0.00)

	<u>Freq.</u>	<u>Percent</u>	<u>Mean</u>	<u>Std. Err.</u>	<u>95% Conf. Int.</u>
<b>Category 0</b>	<b>638</b>	<b>90</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>16</b>	<b>2</b>	<b>17.5</b>	<b>4.99</b>	
<b>Category 2</b>	<b>39</b>	<b>6</b>	<b>-19.75</b>	<b>4.19</b>	
w/ -400	40	6	-29.25	10.35	

<b>Category 3</b>	<b>17</b>	<b>2</b>	<b>2.02</b>	<b>2.55</b>	<b>(-3.41, 7.44)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>-0.64</b>	<b>0.33</b>	<b>(-1.28, -0.00)</b>
w/ -400	711	100	-1.20	0.65	(-2.48, 0.07)

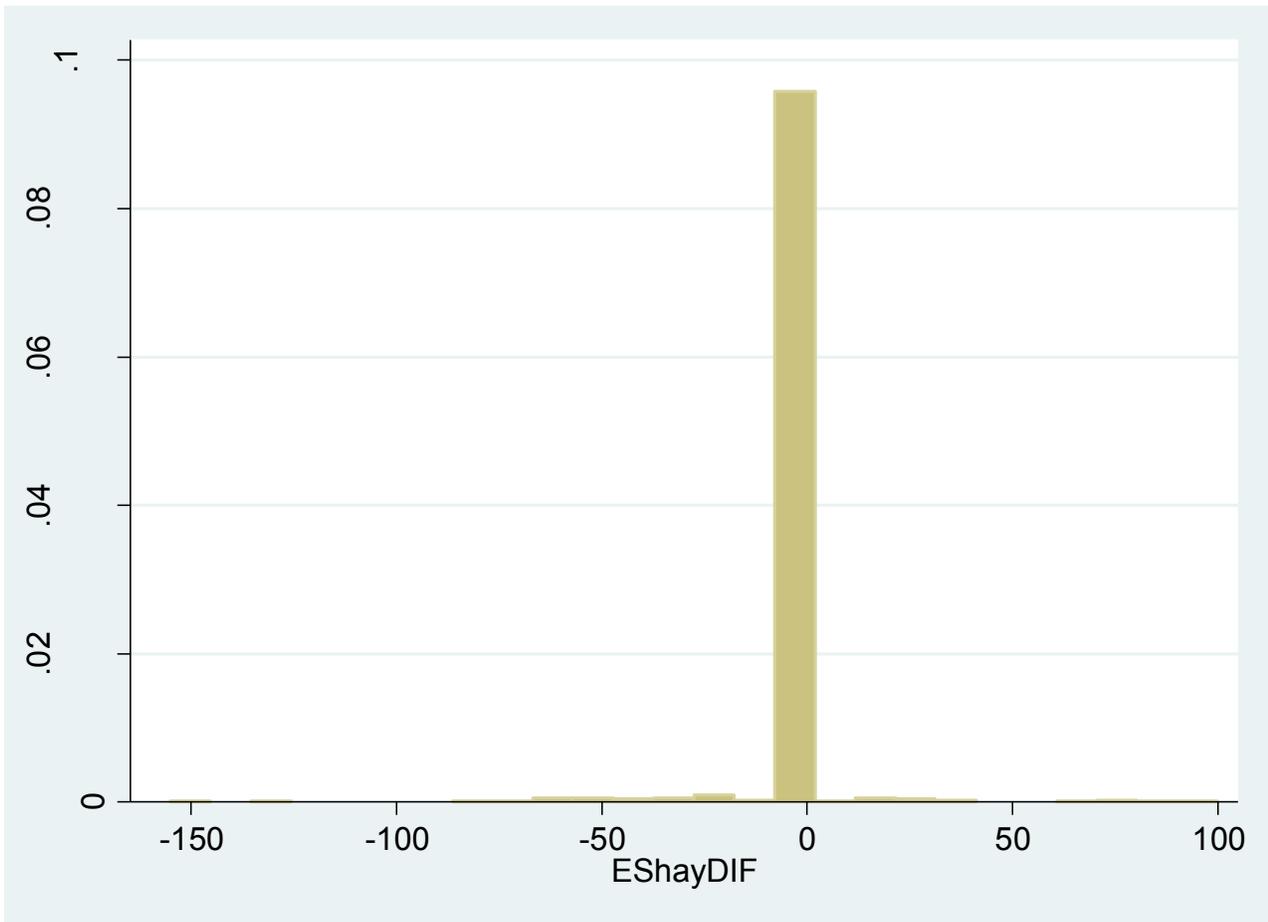


(graph excludes observation at -400)

*HAY ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
EShayDIF	-2.44	0.95	(-4.30, -0.58)
<b>Drop -400,-300,-278</b>	Mean	Std. Err.	95% Conf. Int.
EShayDIF	-1.07	0.51	(-2.07, -0.07)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>644</b>	<b>91</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>12</b>	<b>2</b>	<b>44</b>	<b>8.17</b>	
<b>Category 2</b>	<b>37</b>	<b>6</b>	<b>-31.50</b>	<b>5.58</b>	
w/ outliers	40	6	-53.59	13.65	
<b>Category 3</b>	<b>15</b>	<b>2</b>	<b>-8</b>	<b>9.49</b>	<b>(-28.35, 12.35)</b>
<b>Total</b>	<b>708</b>	<b>100</b>	<b>-1.07</b>	<b>0.51</b>	<b>(-2.07, -0.07)</b>
w/ outliers	711	100	-2.44	0.95	(-4.30, -0.58)

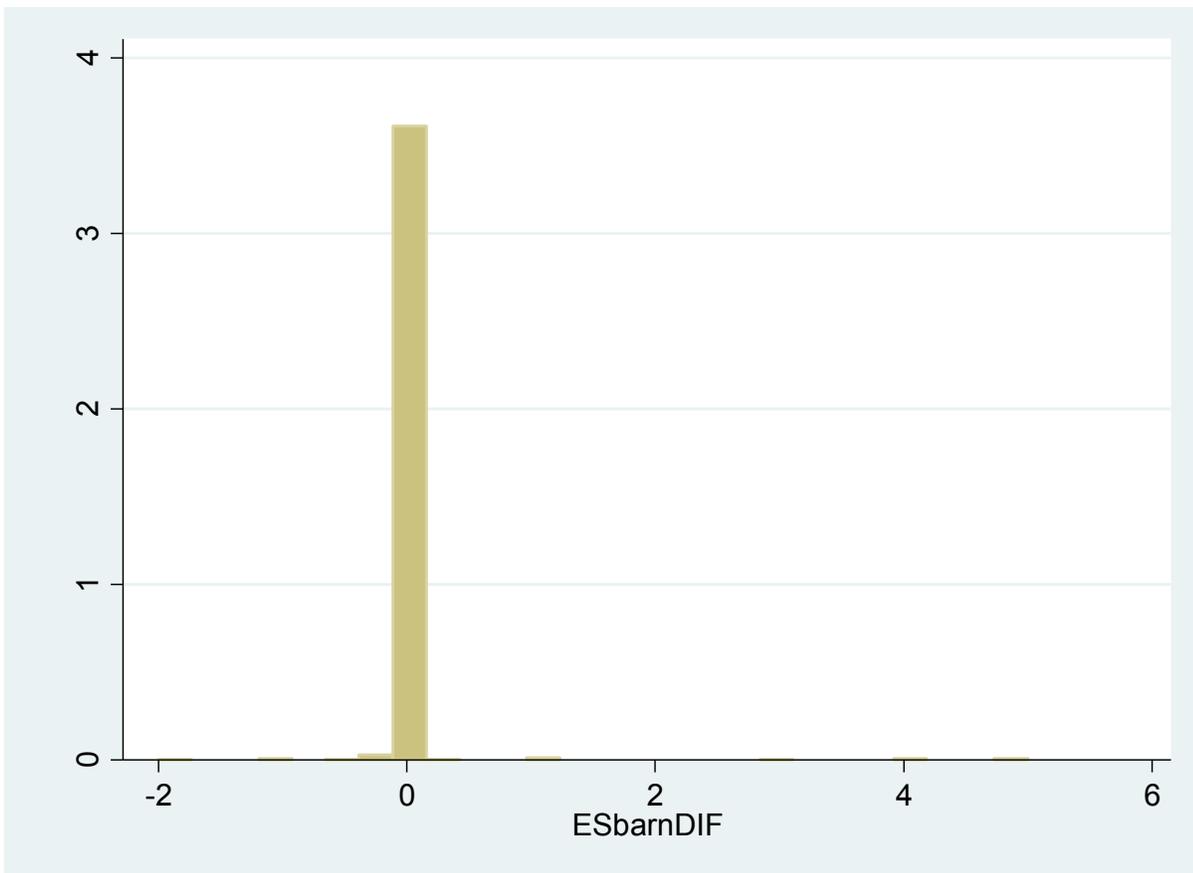


(graph excludes -400, -300, and -278)

*BARNYARD ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
ESbarnDIF	0.025	0.014	(-0.002, 0.053)

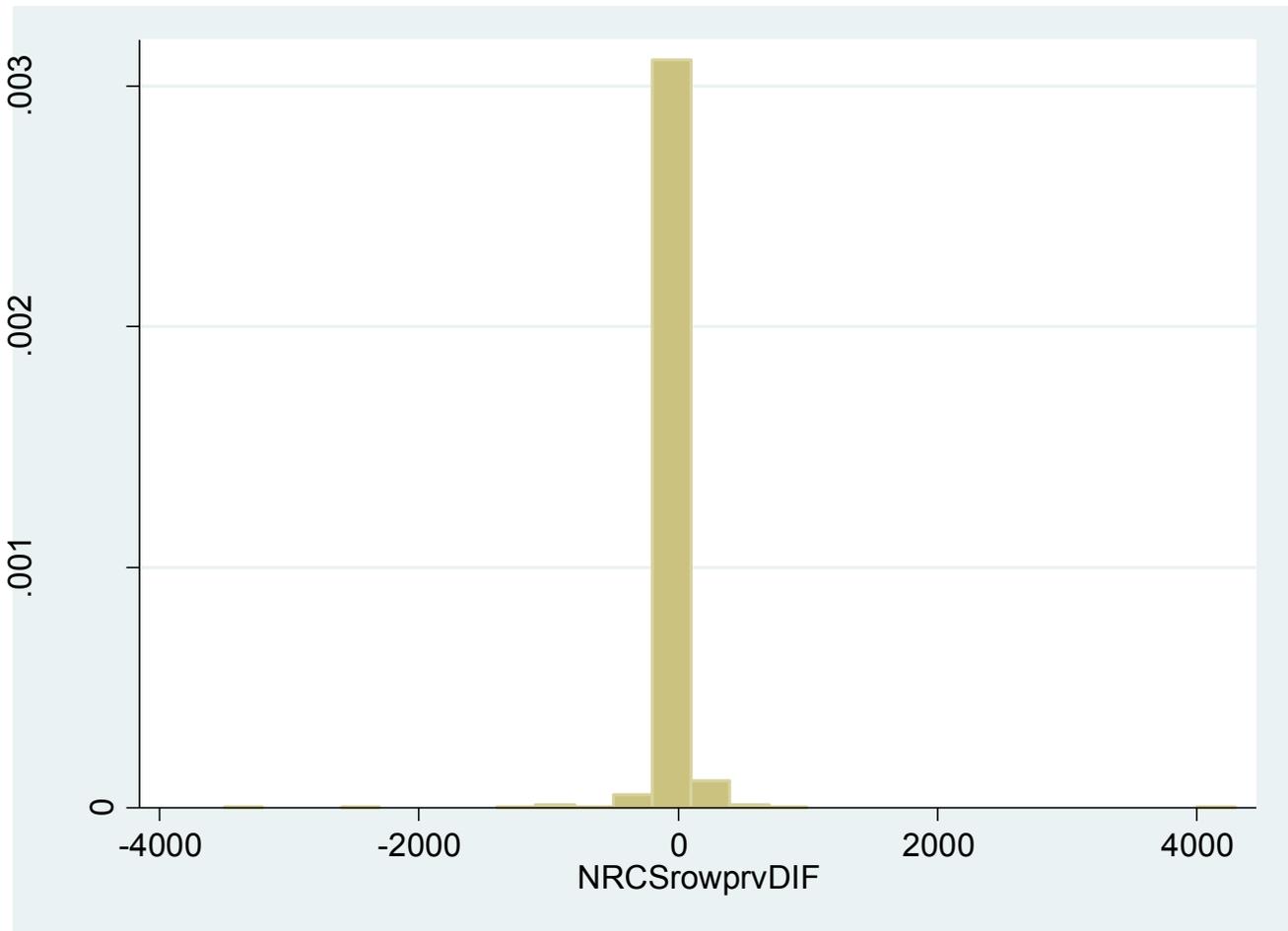
	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>676</b>	<b>95</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>11</b>	<b>2</b>	<b>2.21</b>	<b>0.60</b>	
<b>Category 2</b>	<b>20</b>	<b>3</b>	<b>-0.31</b>	<b>0.11</b>	
<b>Category 3</b>	<b>4</b>	<b>1</b>	<b>0.01</b>	<b>0.16</b>	<b>(-0.51, 0.53)</b>
<b>Total</b>	<b>711</b>	<b>100</b>	<b>0.03</b>	<b>0.02</b>	<b>(-0.00, 0.05)</b>



NRCS Plans (privately funded)

ROW CROP ACRES

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.		
NRCSrowprvDIF	-8.28	9.40	(-26.74, 10.19)		
	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>538</b>	<b>76</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>55</b>	<b>8</b>	<b>128.48</b>	<b>18.84</b>	
<b>Category 2</b>	<b>77</b>	<b>11</b>	<b>-216.62</b>	<b>57.67</b>	
<b>Category 3</b>	<b>41</b>	<b>6</b>	<b>90.96</b>	<b>108.52</b>	<b>(-128.37,</b>
					<b>310.28)</b>
<b>Total</b>	<b>711</b>	<b>100</b>	<b>-8.28</b>	<b>9.40</b>	<b>(-26.74, 10.19)</b>

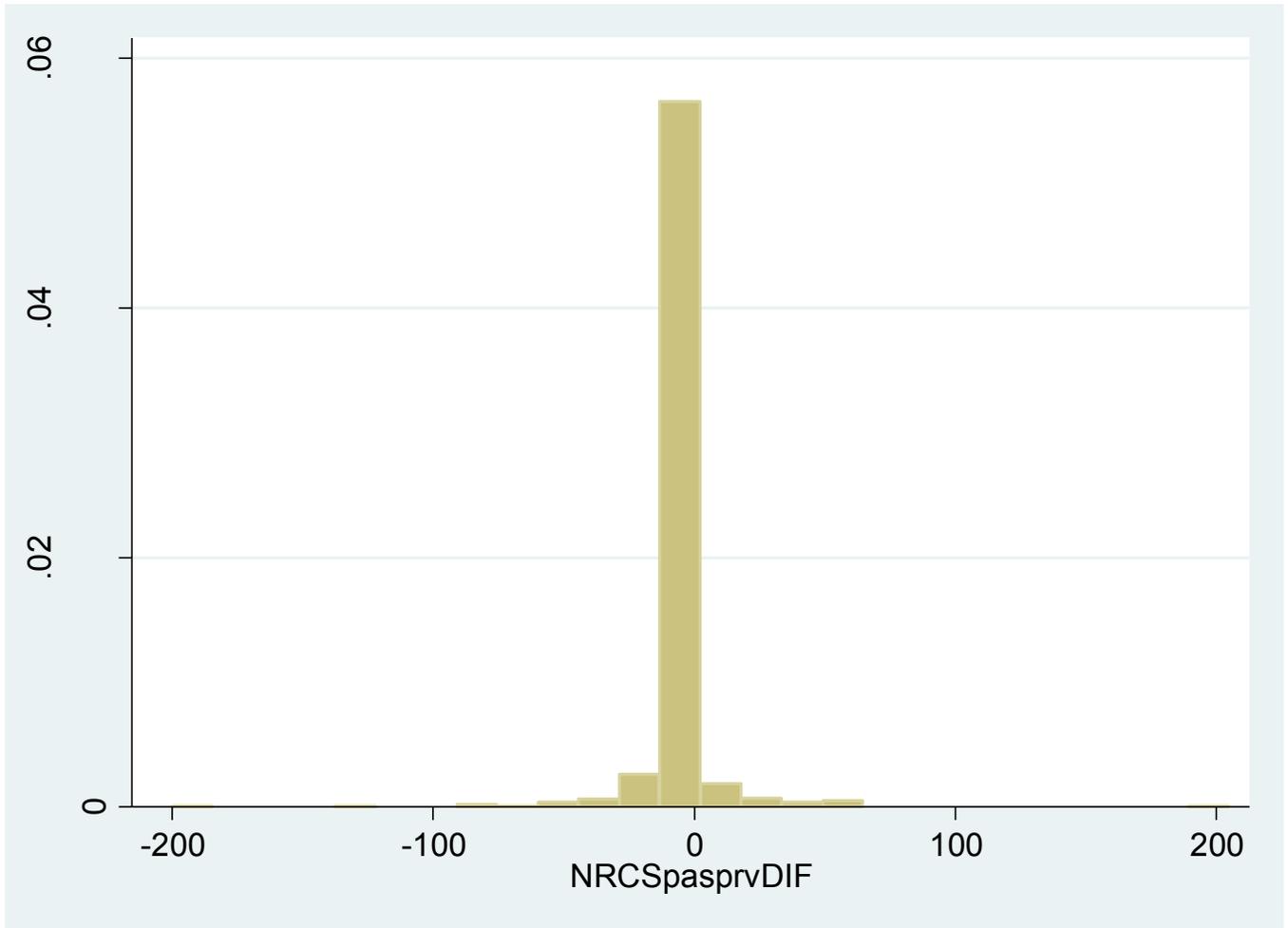


*PASTURE ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
NRCSpasprvDIF	-0.97	0.59	(-2.13, 0.20)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>587</b>	<b>82.56</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>35</b>	<b>4.92</b>	<b>22.89</b>	<b>3.22</b>	
<b>Category 2</b>	<b>64</b>	<b>9.00</b>	<b>-24.08</b>	<b>3.71</b>	
<b>Category 3</b>	<b>25</b>	<b>3.52</b>	<b>2.12</b>	<b>9.63</b>	<b>(-17.75, 21.99)</b>

**Total**                    **711**                    **100.00**                    **-0.97**                    **0.59**                    **(-2.13, 0.20)**



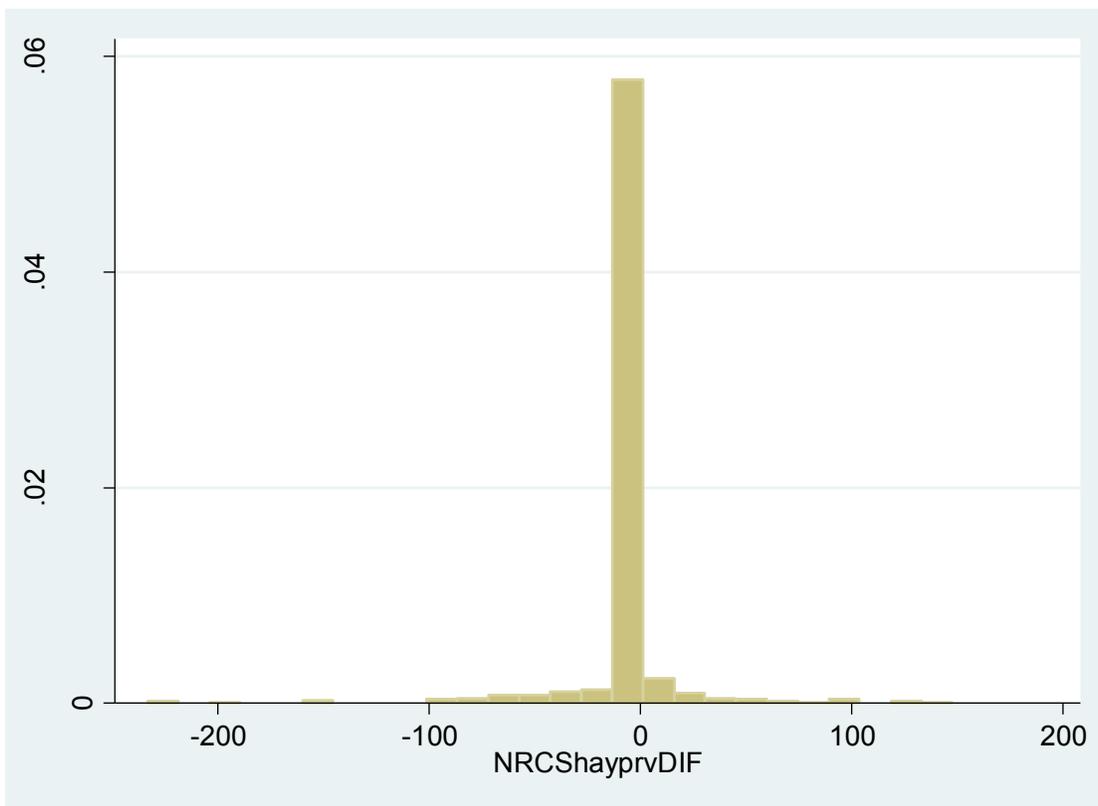
*HAY ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
NRCSHayprvDIF	-3.23	1.29	(-5.76, -0.69)

<b>Drop -600</b>	Mean	Std. Err.	95% Conf. Int.
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NRCShayprvDIF            -2.39            0.98            (-4.31, -0.46)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>577</b>	<b>81</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>40</b>	<b>6</b>	<b>39.26</b>	<b>6.36</b>	
<b>Category 2</b>	<b>64</b>	<b>9</b>	<b>-46.72</b>	<b>5.56</b>	
w/ -600	65	9	-55.23	10.12	
<b>Category 3</b>	<b>29</b>	<b>4</b>	<b>2.12</b>	<b>9.63</b>	<b>(-17.75, 21.99)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>-2.39</b>	<b>0.98</b>	<b>(-4.31, -0.46)</b>
w/ -600	711	100	-3.23	1.29	(-5.76, -0.69)

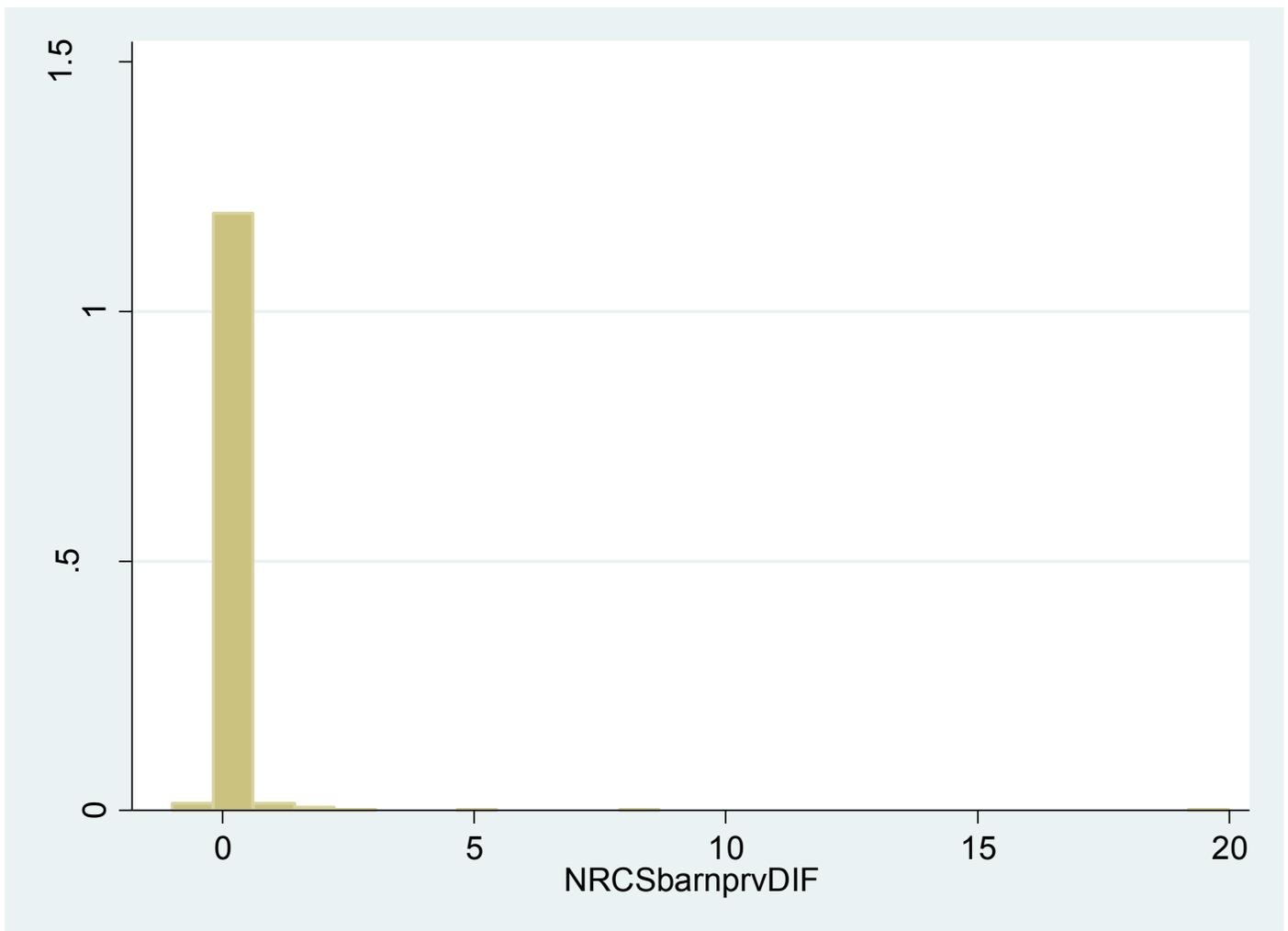


(graph excludes -600)

*BARNYARD ACRES*

Raw variable	Mean	Std. Err.	95% Conf. Int.
NRCSbarnprvDIF	0.067	0.032	(0.004, 0.130)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>661</b>	<b>93</b>	<b>0</b>	<b>---</b>	
<b>Category 1</b>	<b>18</b>	<b>3</b>	<b>2.54</b>	<b>1.11</b>	
<b>Category 2</b>	<b>27</b>	<b>4</b>	<b>-0.19</b>	<b>0.04</b>	
<b>Category 3</b>	<b>5</b>	<b>1</b>	<b>1.39</b>	<b>0.93</b>	<b>(-1.21, 3.99)</b>
<b>Total</b>	<b>711</b>	<b>100</b>	<b>0.07</b>	<b>0.03</b>	<b>(0.00, 0.13)</b>



(graph excludes -600)

Stream Bank Fencing

*FENCING LENGTH (FT.)*

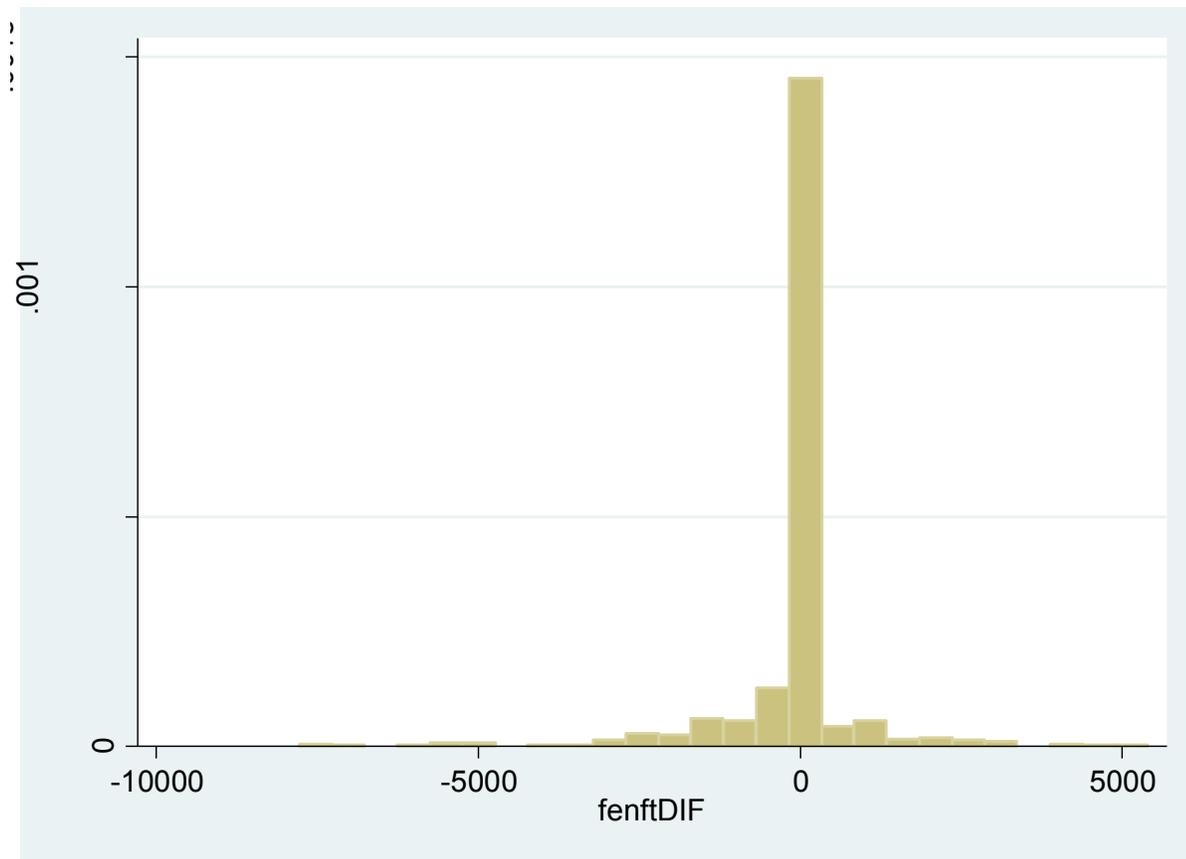
N = 711

Mean	Std. Err.	95% Conf. Interval
-204.376	60.428	(-323.015, -85.736)

Exclude 3 observations -25000, -17160, -11000

N = 708

Mean	Std. Err.	95% Conf. Interval
-130.157	40.489	(-209.650, -50.664)



(graph excludes -25000, -17160, and -11000)

		Freq.	Percent	
reported	0	verified 0	478	67.23
reported	> 0	verified 0	26	3.66
reported	0	verified > 0	61	8.58
reported	> 0	verified > 0	146	20.53
Total		711	100.00	

*DISTANCE FROM STREAM TO FENCE (FT.)*

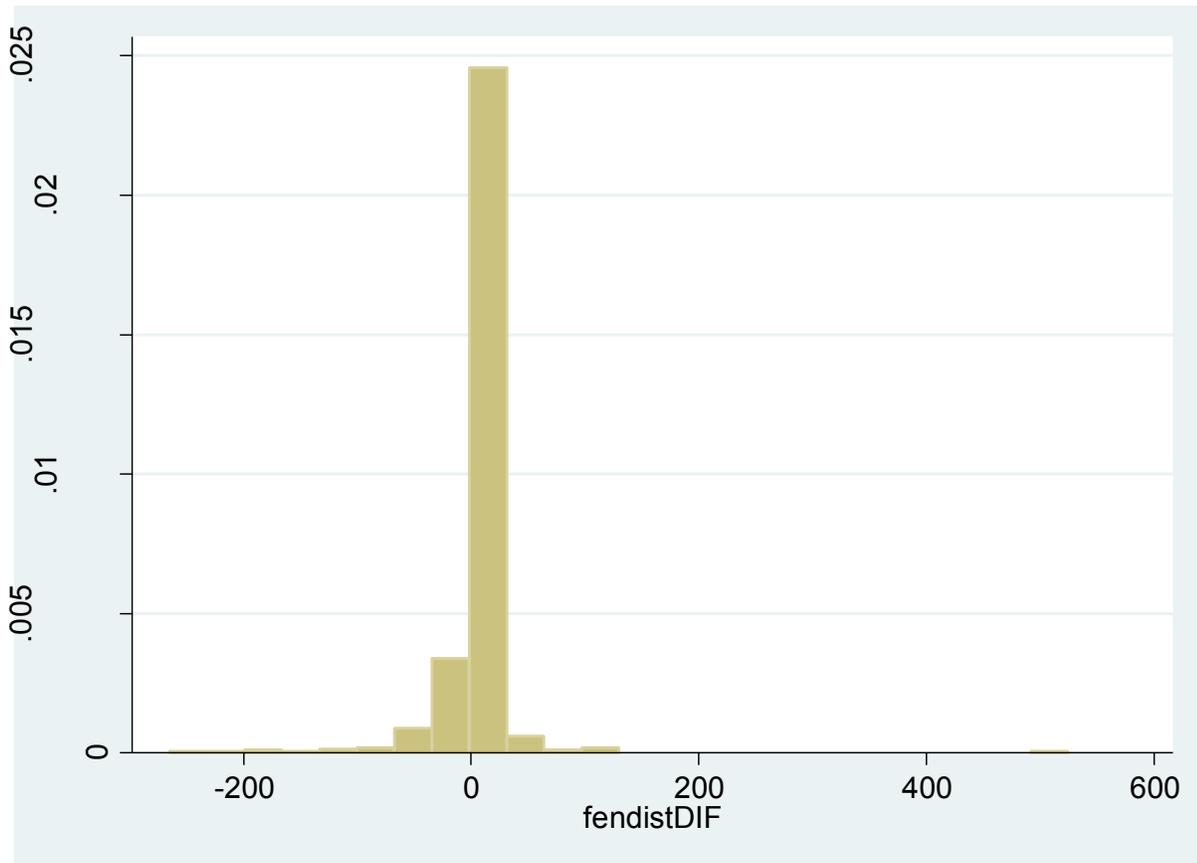
N = 711

Mean	Std. Err.	95% Conf. Interval
0.018	1.842	(-3.599, 3.635)

Exclude 1 obs +1000

N = 710

Mean	Std. Err.	95% Conf. Interval
-1.390	1.189	(-3.724, 0.945)



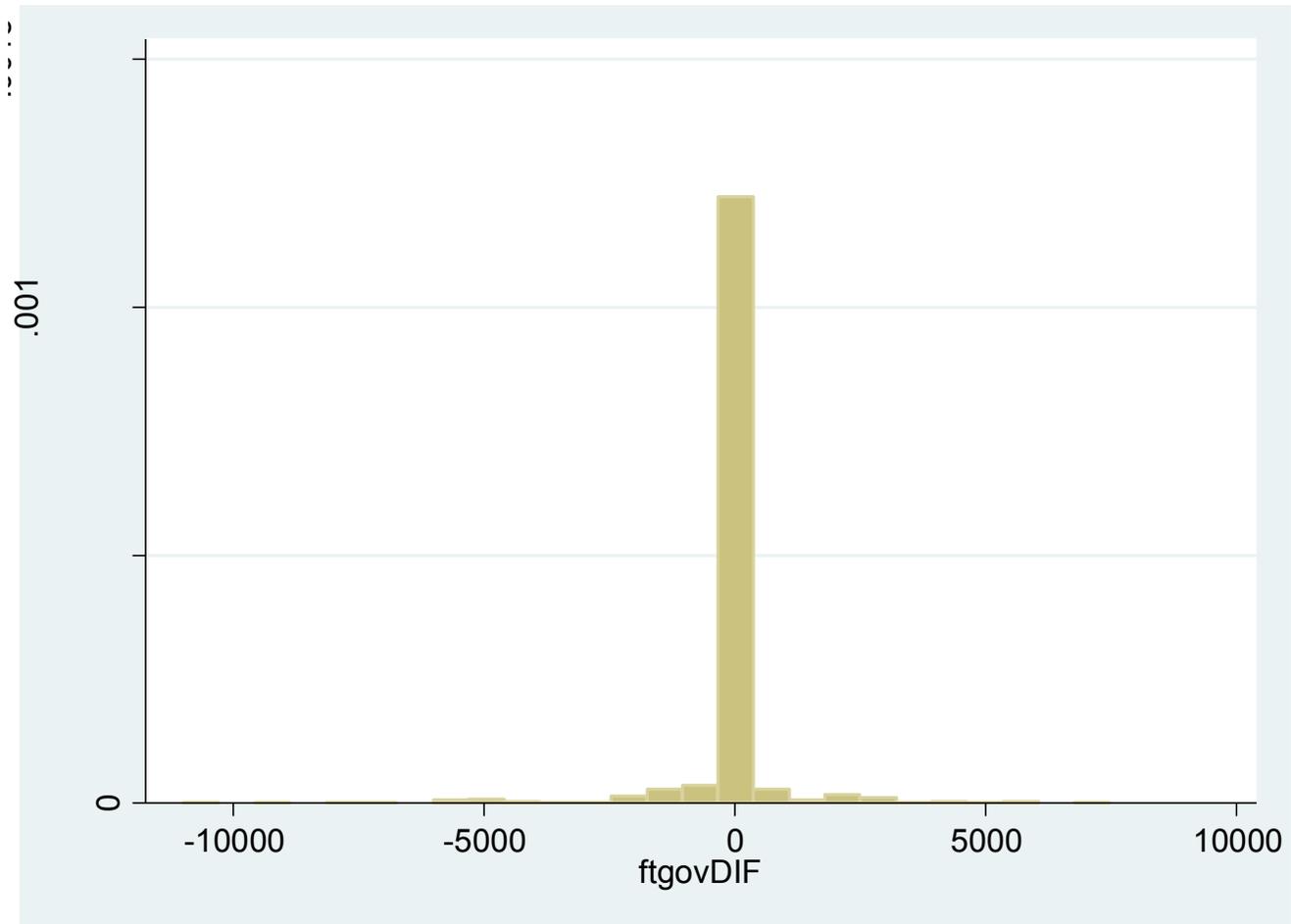
(graph excludes +1000)

		Freq.		Percent	
reported	0	verified	0	471	66.24
reported	> 0	verified	0	35	4.92
reported	0	verified	> 0	54	7.59
reported	> 0	verified	> 0	151	21.24
		Total		711	100.00

*PUBLIC FUNDED FENCING (FT.)*

N = 711

Mean	Std. Err.	95% Conf. Interval
-64.471	43.189	(-149.265, 20.323)



			Freq.	Percent
reported	0	verified 0	599	84.25
reported	> 0	verified 0	21	2.95
reported	0	verified > 0	28	3.94
reported	> 0	verified > 0	63	8.86
		Total	711	100.00

*PRIVATELY FUNDED FENCING (FT.)*

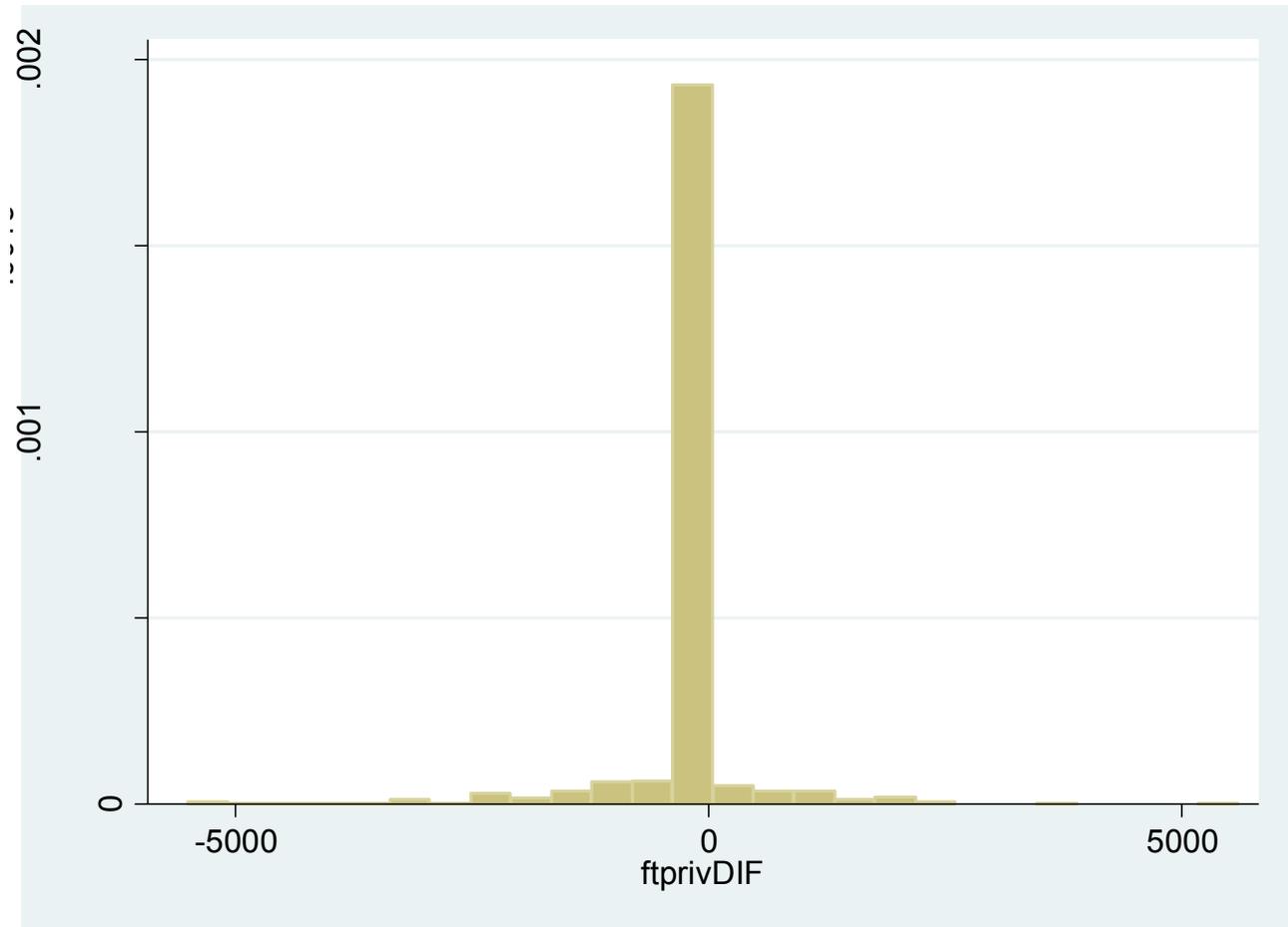
N = 711

Mean	Std. Err.	95% Conf. Interval
-141.190	52.784	(-244.822, -37.558)

Exclude 3 obs -25000, -17160, +10000

N = 709

Mean	Std. Err.	95% Conf. Interval
-96.364	28.078	(-151.491, -41.237)



(graph excludes -25000, -17160, +10000)

			Freq.	Percent
reported	0	verified 0	553	77.78
reported > 0		verified 0	29	4.08
reported	0	verified > 0	60	8.44
reported > 0		verified > 0	69	9.70
Total			711	100.00

*ACRES OF BUFFER (calculated with fence length x distance from stream)*

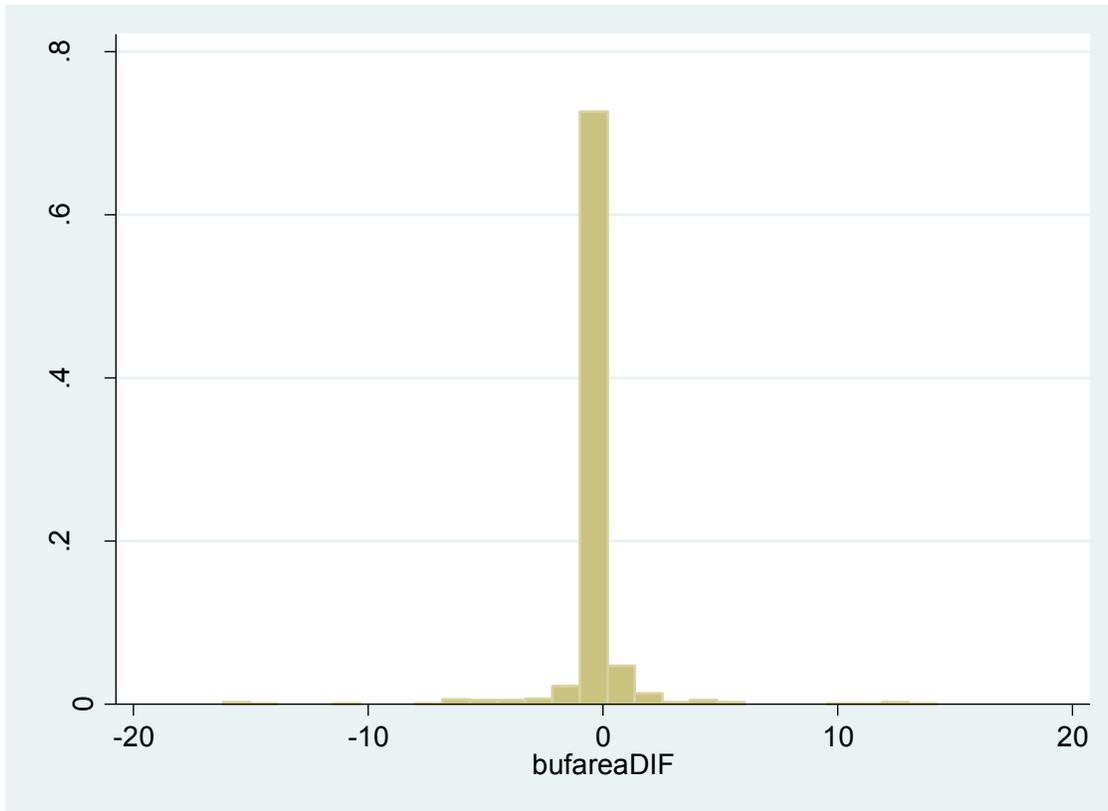
N = 711

Mean	Std. Err.	95% Conf. Interval
-0.215	0.099	(-0.409, -0.021)

Exclude 3 obs -39.39394, -27.77778, -19.66942

N = 708

Mean	Std. Err.	95% Conf. Interval
-0.093	0.067	(-0.225, 0.039)



(graph excludes -39.39, -27.78, -19.67)

			Freq.	Percent
reported 0	verified 0		478	67.23
reported > 0	verified 0		32	4.50
reported 0	verified > 0		61	8.58
reported > 0	verified > 0		140	19.69
	Total		711	100.00

ACRES OF PRIVATELY FUNDED BUFFER

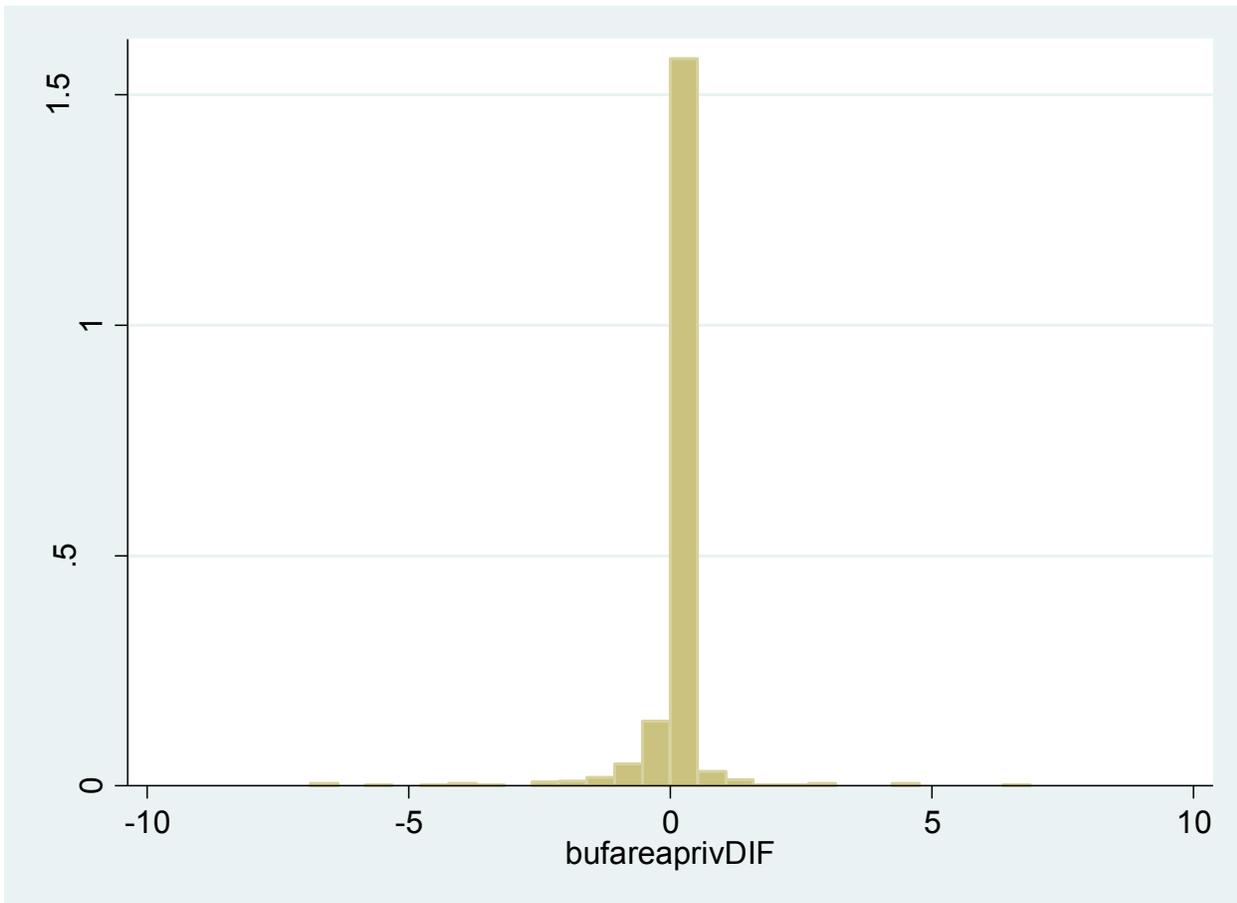
N = 711

Mean	Std. Err.	95% Conf. Interval
-0.142	0.067	(-0.273, -0.011)

Exclude 3 obs -39.39394, -14.63499, -10.56015

N = 708

Mean	Std. Err.	95% Conf. Interval
-0.051	0.027	(-0.105, 0.002)



(graph excludes -39.39, -14.63, -10.56)

			Freq.	Percent
reported	0	verified 0	555	78.06
reported	> 0	verified 0	33	4.64

reported	0	verified > 0	58	8.16
reported > 0		verified > 0	65	9.14
		Total	711	100.00

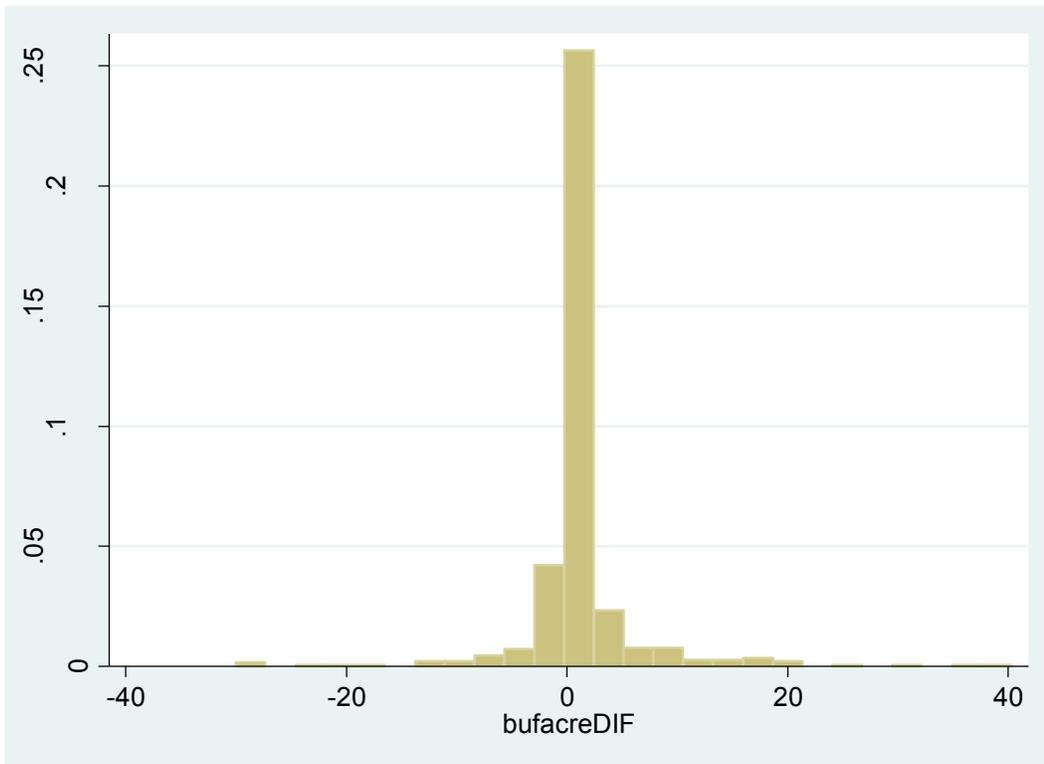
Riparian Buffers

\*\*\*This seems to be the only BMP that is systematically over-reported\*\*\*

*BUFFER ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
bufacreDIF	0.514	0.262	(0.001, 1.028)
<b>Drop -128.5583</b>	Mean	Std. Err.	95% Conf. Int.
bufacreDIF	0.696	0.188	(0.326, 1.066)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	<b>407</b>	<b>57</b>	<b>0</b>		
<b>Category 1</b>	<b>95</b>	<b>13</b>	<b>5.57</b>	<b>0.61</b>	
<b>Category 2</b>	<b>113</b>	<b>16</b>	<b>-2.84</b>	<b>0.45</b>	
w/-128.5583	114	16	-3.95	1.19	
<b>Category 3</b>	<b>95</b>	<b>13</b>	<b>3.01</b>	<b>0.92</b>	<b>(1.19, 4.83)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>0.70</b>	<b>0.19</b>	<b>(0.33, 1.07)</b>
w/-128.5583	711	100	0.51	0.26	(0.00, 1.03)

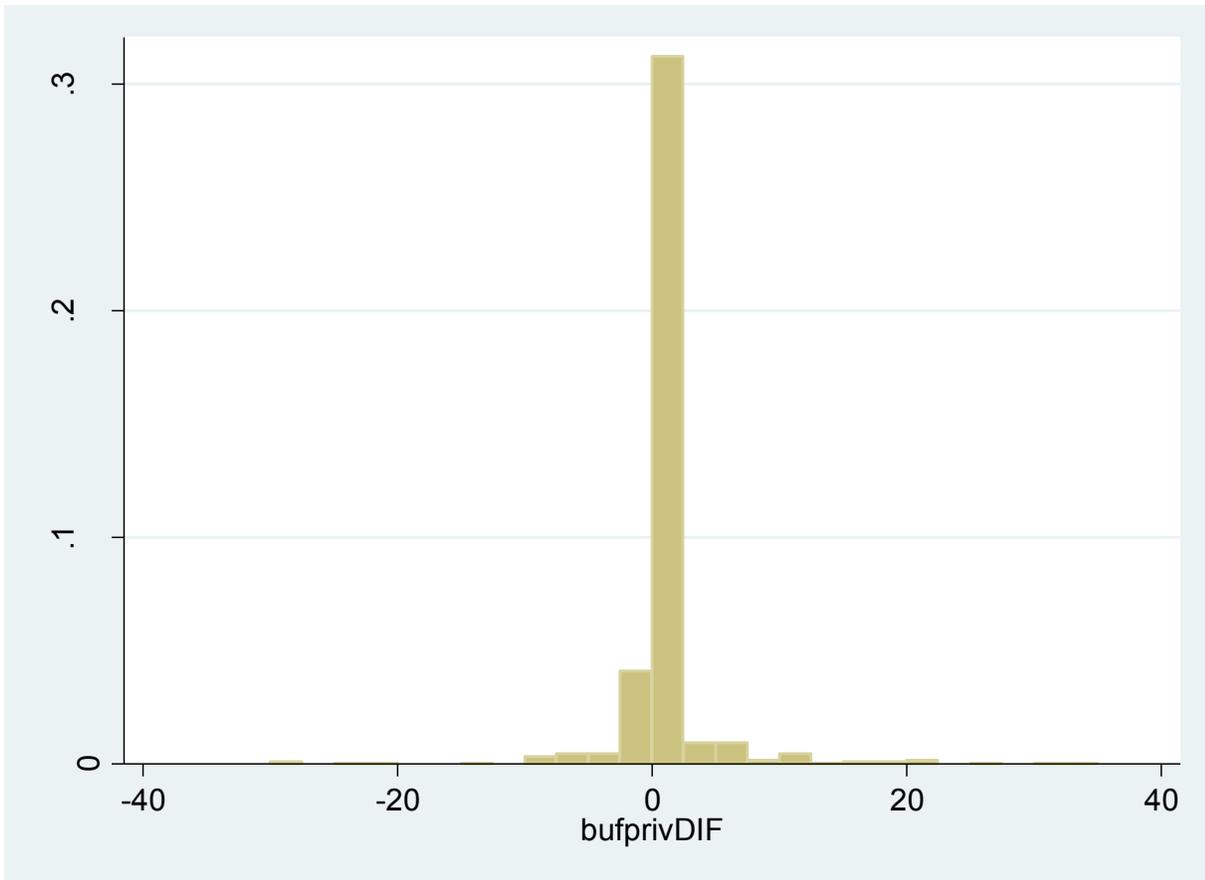


(graph excludes -128.5583)

*PRIVATELY FUNDED BUFFER ACRES*

<b>Raw variable</b>	Mean	Std. Err.	95% Conf. Int.
bufprivDIF	0.3308	0.1462	(0.0438, 0.6179)

	Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
<b>Category 0</b>	509	72	0		
<b>Category 1</b>	80	11	5.54	0.71	
<b>Category 2</b>	87	12	-2.47	0.44	
<b>Category 3</b>	35	5	0.39	1.67	(-3.00, 3.79)
<b>Total</b>	711	100	0.33	0.15	(0.04, 0.62)

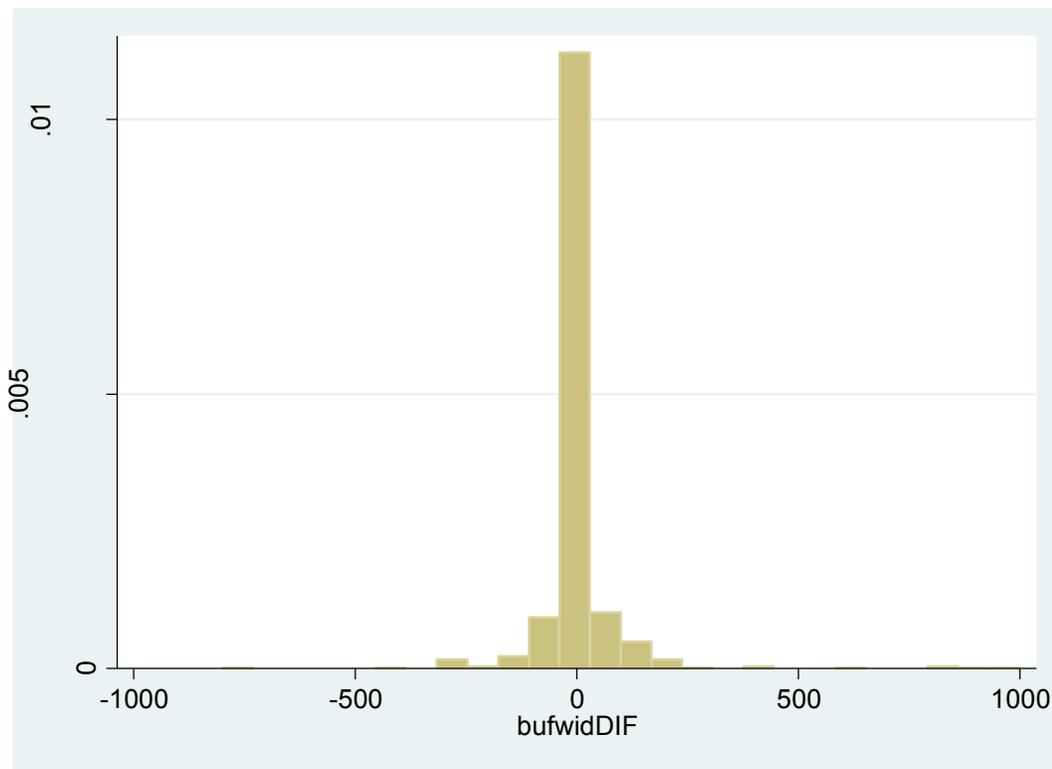


BUFFER WIDTH

Raw variable	Mean	Std. Err.	95% Conf. Int.
bufprivDIF	2.0499	4.6355	(-7.0510, 11.1509)
<b>Drop -2000</b>			
bufprivDIF	4.8697	3.6844	(-2.3640, 12.1034)

Freq.	Percent	Mean	Std. Err.	95% Conf. Int.
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<b>Category 0</b>	<b>398</b>	<b>56</b>	<b>0</b>		
<b>Category 1</b>	<b>98</b>	<b>14</b>	<b>89.89</b>	<b>14.69</b>	
<b>Category 2</b>	<b>110</b>	<b>16</b>	<b>-77.2</b>	<b>10.30</b>	
w/-2000	111	16	-94.52	20.11	
<b>Category 3</b>	<b>104</b>	<b>15</b>	<b>30.20</b>	<b>13.61</b>	<b>(3.21, 57.18)</b>
<b>Total</b>	<b>710</b>	<b>100</b>	<b>4.87</b>	<b>3.68</b>	<b>(-2.36, 12.1)</b>
w/-2000	711	100	2.05	4.64	(-7.05, 11.15)



(graph excludes -2000)

## Appendix D: Summary Data on Manure Transport between Counties

Manure Transport Summary Results

County	Manure Exported (Tons)	Manure Imported (Tons)	Net Change in Manure (Tons)
Adams		100	100
Bedford	200	1230	1030
Berkeley, WV		1300	1300
Berks	5259	16,320	11061
Blair	1230	600	-630
Bradford		400	400
Cambria	2624		-2624
Cecil, MD		10,163	10163
Centre	62		-62
Chester	14,095	5290	-8805
Clinton		12	12
Columbia	10	450	440
Cumberland	1950	250	-1700
Dauphin	300	2008	1708
Franklin	2964	1025	-1939
Fulton	200	50	-150
Huntingdon	600	550	-50
Indiana		2624	2624
Jefferson, NY		2000	2000
Lancaster	35,643	5220	-30423
Lebanon	3461	4538	1077
Lehigh		200	200
Lycoming		3566	3566
Mifflin		72	72
Montour	3950		-3950
Northampton		350	350
Northumberland		2387	2387
Schuylkill	652	570	-82
Snyder	647		-647
Somerset		200	200
Susquehanna	400		-400
Tioga	2,804	2300	-504
Union	339	575	236
York	350	10,876	10,526

## Appendix E: Sample Calculation to Determine Expected (Adjusted) Acres and Upper and Lower 95% Confidence Limits for Aggregate Data

The per farm mean difference between reported and verified units and 95% confidence intervals established for each practice set forth in detail in Appendix C can be applied to the aggregate data to establish total “expected” results. This is done by applying the following calculation: reported value – mean deviation per farm\*n, where n = total number of farms with survey returns (6,782). This same formula can be applied to calculate lower and upper 95% confidence bounds on this number by substituting the two ends of the 95% confidence intervals per farm for the mean deviation per farm developed for each practice.

These calculations allow “expected” results to be reported as adjusted results to account for systematic over or under reporting by respondents.

For example, the total aggregate riparian buffer acres reported from all survey returns (n=6,782) was 9,013 acres.

**Reported Acres:** 9,013 (for n 6,782) (p. 9, Table 1)

The verification data allows us to calculate per farm mean differences and upper and lower 95% confidence limits around this mean difference:

**Verification Data:** (for n=711) (p. 87, Appendix C, “Privately Funded Buffer Acres”)

Mean Difference Per Farm (reported-verified): 0.3308

Std. Err. of Difference: 0.1462

Critical t-value: 1.96331

Lower 95% Confidence Limit of Difference: 0.0438 (calculated as follows:  $0.3308 - 1.96331 * 0.1462 = 0.0438$ )

Upper 95% Confidence Limit of Difference: 0.6179 (calculated as follows:  $0.3308 + 1.96331 * 0.1462 = 0.6179$ )

Applying these per farm calculations to the entire data set (n=6,782), we can developed “expected” aggregate riparian buffer acres and upper and lower 95% confidence intervals for the aggregate data as follows:

**Expected (Adjusted) Acres:** 6,770 (for n=6,782) (calculated as follows: reported value – mean deviation per farm\*n, or  $9,013 - 0.3308 * 6,782 = 6,770$ )

**Upper 95% Confidence Limit:** 8,716 (for n=6,782) (calculated as follows: reported value – upper 95% confidence limit per farm\*n, or  $9,013 - 0.0438 * 6,782 = 8,716$ )

**Lower 95% Confidence Limit:** 4,823 (for n=6,782) (calculated as follows: reported value – upper 95% confidence limit per farm\*n, or  $9,013 - 0.6179 * 6,782 = 4,823$ )

This allows us to report 6,770 acres of riparian buffers as adjusted results to account for systematic over reporting of the practice.



**COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION**

DATE: January 9, 2017

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 November / December 2016.

For the months of November and December 2016, staff and delegated conservation districts have:

1. Odor Management Plans:
  - a. 8 OMPs in the review process
  - b. 16 OMPs approved
  - c. 1 OMP approval rescinded
2. Reviewed and approved 149 Nutrient Management (NM) Plans in the 3<sup>rd</sup> quarter of 2016.
  - a. Those approved NM plans covered 42,345 acres
  - b. Those approved NM plans included 105,116 Animal Equivalent Units (AEUs), generating 1,409,549 tons of manure.
3. Conducted four (4) county conservation district program evaluations.
4. Managing fifteen (15) enforcement or compliance actions, currently in various stages of the compliance process.
5. Worked with legal counsel on three (3) separate Environmental Hearing Board cases.
6. Received, reviewed, and working on public comments that were received on the on a new 5-year delegation agreement for FY17-22.
7. Received, reviewed, and working on public comments that were received on draft technical guidance on how to handle food processing residuals in Act 38 and manure management in general.
8. Received, reviewed, and working on public comments for the next edition of the Nutrient Management Technical Manual.

9. Received, reviewed, and working on public comments for the next edition of the Nutrient Management and Manure Management Administrative Manual.
10. Received, reviewed, and working on public comment for the draft revised standard animal weights and animal groupings that are used for Act 38.



**COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION**

DATE: January 9, 2017

TO: State Conservation Commission Members

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

THROUGH: Karl G. Brown  
Executive Secretary

RE: Act-38 Nutrient and Manure Management Program Evaluations

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

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

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

Between July 1, 2016 and December 31, 2016, a total of five (5) conservation districts were evaluated. Each district evaluated was meeting program requirements and had an overall ranking of "good".

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

1. Although the CD does spontaneously discuss Act 38 and Chapter 91 Program participants needs throughout the year with their cooperating agencies at district

- events (fields days, BOD meetings) the SCC does encourage the CD to actually meet at least once annually, formally or informally, for the purpose of discussing educational and outreach efforts to these operators. (2 of 5)
2. Currently technical review comments are shared with NM planners within the body of emails. Although this can be appropriate for specific comments, the SCC strongly encourages the CD to provide planners with a hard copy of well written out comments on district letterhead. These formal letters may be sent as an attachment to an email, but typically need to be stand-alone documents. (1 of 5)
  3. Regarding follow-up procedures to performing NM Status Reviews, the SCC reminds the CD that they need to be sending the operator both a copy of the completed form, and a follow-up letter. (1 of 5)
  4. The old Act 6 and/or Act 38 NMP that are no longer valid should be purged from the CD files. The CD should work with Tom Juengst at DEP to update the current plan count. (2 of 5)
  5. The CD needs to access the need to implement an imported/exported manure tracking system. (2 of 5)
  6. The CD needs to be aware of waiver requirements on project sites with NM plans. (1 of 5)
  7. The NMS should work on gaining technical/field experience and obtain a NRCS job approval rating. (3 of 5)
  8. The CD needs to have better written documentation/communication with landowners of timelines to reach compliance. (1 of 5)
  9. The SCC acknowledges the CD's frustration with farmers not understanding the "why" behind the Act 38 program, its record keeping requirements, or its complexity, as the Act 38 Program is a very complex program. However, the SCC also encourages the CD to use their annual NM Status Reviews for not just checking regulatory compliance, but also for educational opportunities. The plan holder's NMP Approval Letter, and the program's record keeping packet (found in Chapter 6 of the NM Administrative Manual) are suggested for helping producers know and understand their Act 38 obligations. (1 of 5)
  10. The CD is reminded that for Nutrient Balance Sheets (NBSs) submitted as part of an NMP, they are to review those NBSs, as well as perform a site visit to the NBS farm if staff is not familiar with the farm. (1 of 5)
  11. To help staff better understand its Delegation Agreement, the administrative side of the Act 38 Program, and how to become more confident in answering producers' questions, the SCC encourages the CD to become more familiar with the Nutrient Management Administrative Manual, particularly chapters 3, 4, and 6. (1 of 5)
  12. The SCC appreciates the CD letting planners know when reviews will be delayed, and why. (1 of 5)
  13. The SCC appreciates the CD maintaining multiple staff proficient in the Act 38 and Chapter 91 Program. (1 of 5)
  14. The SCC commends the CD for their creativity in putting together their Am I in Compliance packets, and distributing them to their local townships as an educational outreach opportunity. (1 of 5)
  15. The SCC greatly appreciates, and thanks the CD, for following up to complaints with formal letters being sent to the operator, even when there was no observed violation. (1 of 5)

16. The CD should consider a more focused outreach to potential equine CAOs and plain sect community. (1 of 5)

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

1. Regarding support from state staff in dealing with reviewing NMPs and NBSs, The CD offers that they have always received the needed assistance. (1 of 5)
2. The CD offers that regarding support from state staff when dealing with compliance and / or enforcement issues, DEP support could be improved by providing prompt and consistent action on water quality pollution events that the District has investigated and reported to them. (2 of 5)
3. The CD offers that the NM program budgeting restriction can be challenging when you have staff turn-over and need to reallocate money. (1 of 5)
4. The CD offered that the NM Spreadsheet has become too cumbersome for the farmer and the length of the review to long for larger plans. (1 of 5)
5. The CD offered that there is not enough plan life for NM plans. (3yrs hardly lets you get into a routine) (1 of 5)
6. The CD offered that there is a lack of commercially certified NM plan writers is in Western PA. (1 of 5)
7. The CD offered that there seems to be a disconnection between regulations to real world application. (1 of 5)
8. The CD offered that they would like to see the plan review process for final certification be more educational with SCC review staff. (1 of 5)
9. The CD offered that they see a need for more manure hauler/broker education. (1 of 5)
10. The CD offered that the NMP should list start of plan writing date, too many plans use book values and don't set farmers off on the right foot for manure sampling procedures (1 of 5)
11. The CD offered that we need to review P-index for grazing systems. Consider 10% or less change is soil /manure test for grass based operations to renew NM plan. (1 of 5)
12. The CD offered that we should look at 8 AEU limit for NM planning level – most horse owners have 1-2 horses and bare lot of less than 1 acre. (1 of 5)
13. The CD offered that the Manure Management manual definition of manure should include feed waste (1 of 5)
14. The CD offered that the MMP should provide year round management for round bale feeders and ACA's. (1 of 5)
15. The CD offered that manure spreader calibration should be required for MMP. (1 of 5)
16. The CD offered that PDIP was a good program to promote VAO participation. (1 of 5)
17. The CD offered that Ag/NM techs should not be allowed to take Boot camp I and II in the same year. (1 of 5)
18. The CD offered that we should offer regional NM commercial plan writer certification courses. (1 of 5)
19. The CD offered that additional training needed in: recordkeeping, Using the NM plan Stamps, when a new signature page should be used, plan updates & complaint follow up. Should have regional Annual trainings. (2 of 5)

20. The CD offers the following regarding improving training, or what training they recommend being offered:
- a. Training on how to deal with plans that are continuously subpar from the same plan writers;
  - b. Training for plan writers to better explain plans to farmers;
  - c. Training on how the Act 49 program works and how it relates to Act 38. This training would be ideal after all of the Act 38 training is completed;
  - d. Training to go over the Administrative Manual for Act 38;
  - e. Training on what SCC wants reviewers to report about plan writers that are not reviewing the completed plans with farmers or falsifying information;
  - f. Training on what steps need to be followed when an update is submitted to a CD. All of the trainings deal with NMP amendments and there is no discussion on how to handle updates.
  - g. For new employees that are going through Act 38 training, would like to have the Introduction to Livestock Operations Training before the Act 38 training to become more aware of how livestock operations operate;
  - h. There could also be a short intro in the Act 38 training when Appendix 3 is discussed and explain common livestock operations.
  - i. The Act 38 certification trainings are a good overview, but working with or having the ability to talk to an experienced NMS reviewer as questions arise is super helpful.
  - j. Training should be offered on how to complete their quarterly reports. (2 of 5)
21. The CD offered they would appreciate if DEP would communicate with them regarding how situations were resolved that the CD referred to DEP. (1 of 5)



**COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION**

**DATE:** January 6, 2017

**TO:** Members  
State Conservation Commission

**FROM:** Karl J. Dymond  
State Conservation Commission *KJ Dymond*

**SUBJECT:** January 2017 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 November 2016 Commission meeting.

**Program Statistics**

Below are the overall program statistics relating to the Commission's Odor Management Program, representing the activities of the program from its inception in March of 2009, to December 31, 2016.

The table below summarizes approved plans grouped by the Nutrient Management Program Coordinator Areas and by calendar year.

	<i>W</i>	<i>Central</i>	<i>NE</i>	<i>SE</i>	<i>Annual Totals</i>
**2009	4	3	6	27	40
**2010	2	4	8	25	39
**2011	6	6	11	17	40
**2012	10	2	16	17	45
**2013	5	6	13	40	64
**2014	7	8	17	44	76
**2015	2	15	15	61	93
2016	4	19	16	59	98
<i>Totals</i>	40	63	102	290	<i>Grand Total: 495</i>

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

As of December 31, 2016, five hundred sixty OMPs have been **submitted**, four hundred ninety five have been **approved**, eight plans have been **denied**, sixteen plans have been **withdrawn** without action taken, thirty two plans were **rescinded** and nine plans are going through the **plan review process**. Note: of the 560 total plans, 103 of those plans are amendments of previously approved plans.

# OMP Status Report

Action	OMP Name	County	Municipality	Species	AEUs	OSI Score	Status	Action By	Amend
10/24/2016	Joe Jurgielewicz & Son, LTD. - Hegins Farm	Schuylkill	Hegins Twp	Duck	0	51.8	Approved	Exec. Sec.	
10/24/2016	Landis, James	Lancaster	Little Britain Twp	Broilers	164.22	43.7	Approved	Exec. Sec.	A
10/28/2016	Wagner, Joseph	Snyder	Spring Twp	Broilers	226.65	21.1	Approved	Exec. Sec.	
11/9/2016	Nolt, Matt	Lebanon	Millcreek Twp	Broilers	260.1	35.6	Approved	Exec. Sec.	
11/9/2016	Stoltzfus, John B, Jr	Lancaster	E Hempfield Twp	Cattle	4.58	77.4	Approved	Exec. Sec.	
11/15/2016	Renniger, Joshua	Snyder	W Beaver Twp	Turkey	176.6	26.0	Approved	Exec. Sec.	
11/15/2016	Rohrer Farms, Inc - Organic Farm	Lancaster	Penn Twp	Layers	289.08	27.4	Approved	Exec. Sec.	A
11/17/2016	Herbruck Poultry Ranch, Inc	Franklin	Montgomery Twp	Layers	7560.0	11.7	Approved	Exec. Sec.	
11/17/2016	Clark Crest Farm, Inc.	Lancaster	E Drumore Twp	Swine	63.7	30.6	Approved	Exec. Sec.	
11/28/2016	Brubaker Run Farms, LLC	Lancaster	Rapho Twp	Duck	131.2	67.6	Approved	Exec. Sec.	A
11/28/2016	Kreider, Noah W & Sons, LLP - Donegal F	Lancaster	E Donegal Twp	Layers	4725.0	33.0	Approved	Exec. Sec.	A
12/5/2016	Keister Family Farms, LLC	Snyder	Franklin Twp	Turkey	450.91	36.9	Approved	Exec. Sec.	A
12/6/2016	Martin, Clair	Berks	Richmond Twp	Broilers	150.2	34.5	Approved	Exec. Sec.	A
12/14/2016	Remley, Drew - Nursery Farm	Tioga	Liberty Twp	Swine	251.7	50.4	Approved	Exec. Sec.	
12/14/2016	Nolt, Galen - Westview Farm	Lancaster	Fulton Twp	Cattle	371.0	37.1	Approved	Exec. Sec.	A
12/14/2016	Windy Ridge Breeder Farm, LLC (prev Jeff	Clinton	Pine Creek Twp	Layers	308.84	25.3	Approved	Exec. Sec.	A
12/14/2016	We-Kings Farm, LLC	Franklin	Antrim Twp	Turkey	381.6	13.8	Approved	Exec. Sec.	
12/14/2016	Wagner, Scott	Lancaster	Little Britain Twp	Turkey	350.01	32.3	Approved	Exec. Sec.	
<i>VAO</i>									
10/28/2016	Skull Hill Dairy	Berks	Centre Twp	Layers	146.2	-11.2	Rescinded PJ	Exec. Sec.	



COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION

**DATE:** January 6, 2017  
**TO:** State Conservation Commission  
**FROM:** Johan E. Berger  
Financial, Certification and Conservation District Programs  
**SUBJ:** 2016 Program Accomplishments: Nutrient and Odor Management Specialist;  
Commercial Manure Hauler & Broker Certification programs

**Certification Program Summary**

State Conservation Commission staff facilitate training and certification programs for persons interested in ‘commercial’ or ‘public’ certification in order to develop or review odor management or nutrient management plans under the Act 38 *Facility Odor Management or Nutrient Management* programs. Training is also facilitated for commercial manure haulers and brokers seeking certification under the Act 49 *Commercial Manure Hauler and Broker Certification* program.

**Program Accomplishments (January 1, 2016 to December 31, 2016)**

1. Program staff facilitated two certification cycles of course work for the Nutrient Management Specialist certification program in 2016. Thirty-six (36) individuals completed the necessary certification coursework to achieve provisional certification.
2. Two certification cycles of coursework for the Commercial Manure Hauler and Broker certification program was offered in March and September 2016. Twenty-three (23) commercial manure haulers or brokers completed their required coursework and certification requirements.
3. Program staff performed twenty-one (21) reviews of nutrient management plan reviews for certification requirements. *Note: This is an internal review conducted on NMPs under review by public review specialists seeking final certification.*
4. Program staff issued the following licenses to individuals who successfully completed certification requirements and/or continuing education requirements for license renewals:
  - a. Nutrient Management and Odor Management Specialists: .....73
  - b. Nutrient Management Specialist (Provisional License) .....44
  - c. Commercial Manure Haulers and Brokers: ..... 260

Total licenses monitored and maintained by Commission staff on behalf of PDA:

  - a. *Nutrient Management Specialists*.....325
  - b. *Commercial Manure Haulers and Brokers* .....635
  - c. *Odor Management Specialists* ..... 27

5. Approved credits for eligible continuing education programs scheduled up to December 31, 2016:
  - a. Nutrient Management Specialist certification: ..... 43 events
  - b. Commercial Manure Hauler and Broker certification: ..... 15 events
6. Program staff performed fifteen (15) site inspections regarding record keeping requirements under the Commercial Manure Hauler and Broker Certification Program.
7. Four (4) compliance investigations under the Commercial Manure Hauler and Broker Certification program were performed. A 'notice of violation' and associated penalties were assessed and imposed for three licensees. Corrective actions were completed by the licensees. These cases are closed. One compliance action remains open pending corrective actions by the licensee.
8. One compliance investigation under the Nutrient Management Specialist and Odor Management Specialist certification program remains open pending completion of corrective actions by the specialist.



COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION

**DATE:** January 11, 2017  
**TO:** State Conservation Commission  
**FROM:** Johan E. Berger  
 Financial, Certification and Conservation District Programs  
**SUBJ:** 2016 Program Accomplishments  
 Resource Protection and Enhancement Program (REAP)

**REAP Program Summary**

The Resource Enhancement and Protection (REAP) Program allows farmers, businesses, and landowners to earn state tax credits in exchange for the implementation of conservation Best Management Practices (BMPs) on Pennsylvania farms. REAP is a “first-come, first-served” program – no rankings. The program is administered by the State Conservation Commission and the tax credits are awarded by the Pennsylvania Department of Revenue. Eligible applicants receive between 50% and 75% of project costs in the form of State tax credits for up to \$150,000 per agricultural operation.

**Program Accomplishments**

January 1, 2016 to December 31, 2016

The FY2016 REAP application period opened August 2016 with an annual tax credit allocation of \$10 million. Below is a summary of the FY2015 and FY2016 rounds of REAP applications (1), and a summary of REAP activities from January 1, 2016 to December 31, 2016 (2).

**(1) FY 2015**

<b>Applications</b>	<b>Total Cost</b>	<b>Other Public Funds</b>	<b>REAP Requests</b>	<b>Credits Granted</b>
FY2015 344	\$25.6 million	\$4.0 million	\$10.5 million	\$6.93 million
FY2016 127	\$13.44 million	\$3.22 million	\$5.34 million	\$1.8 million

<b>a) REAP Request – project types</b>	<b><u>FY2015</u></b>	<b><u>FY2016</u></b>
1) Proposed.....	\$3.02 million	\$2.3 million
2) Completed Projects .....	\$7.63 million	\$3.34 million
b) No-Till Equipment.....	\$5.1 million	\$2.68 million
c) Structural BMPs .....	\$4.3 million	\$2.5 million
d) Plans (Ag E&S, Conservation, Manure Management, Nutr. Mgmt.) .....	\$162,500	\$56,713
e) Low Disturbance Residue Management Equipment .....	\$660,000	\$100,000
f) Precision Ag Equipment .....	\$206,000	\$8,000

**(2.) January 01, 2016 - December 31, 2016**

1. Tax Credits issued to applicants for completed, eligible projects ..... *\$12.35 million*
2. Number of BMPs completed associated with issued tax credits..... *1361 projects*
3. Number of tax credit 'sales' completed..... *223 sale transactions*
4. Total tax credits processed through 'sales' .....*\$4.15 million*
5. Number of site inspections conducted on completed projects ..... *102*
6. Educational and promotional activities included five (5) farmer meetings various visits to conservation districts and NRCS offices across Pennsylvania.



COMMONWEALTH OF PENNSYLVANIA  
STATE CONSERVATION COMMISSION

**Date:** January 3, 2017

**To:** State Conservation Commission

**From:** Roy Richardson, Dirt and Gravel Roads Program Coordinator

**Through:** Karl G. Brown, Executive Secretary

**RE:** Dirt, Gravel, and Low Volume Roads Program (DGLVRP) Update

**Quality Assurance/Quality Control (QAQC)** - Since the November meeting, 3 QAQCs have been conducted. To date, 51 have been completed with 4 currently scheduled for 2017. Staff is on track to meet the goal of completing this round of QAQC visits in 2017.

**Education and outreach** –Commission and Center staff have conducted the following trainings:

**Environmentally Sensitive Maintenance Training (ESM)** – 11 ESM trainings were held in 2016

County	Date(s)	Location	Total Registered	Total Certified
Fayette	March 15 <sup>th</sup> & 16 <sup>th</sup>	Park Inn by Radisson, Uniontown, PA	69	65
Columbia/Montour	March 29 <sup>th</sup> & 30 <sup>th</sup>	Pine Barn Inn, Danville, PA	82	77
Adams/Franklin	April 13 <sup>th</sup> & 14 <sup>th</sup>	Gettysburg Hotel, Gettysburg, PA	76	76
Blair	April 26 <sup>th</sup> & 27 <sup>th</sup>	Altoona Grand Hotel, Altoona, PA	74	75
Susquehanna/Wayne	May 11 <sup>th</sup> & 12 <sup>th</sup>	Montrose Bible Conference, Montrose, PA	83	76
McKean	May 24 <sup>th</sup> & 25 <sup>th</sup>	VFW, Port Allegheny, PA	45	40

Erie	June 1 <sup>st</sup> & 2 <sup>nd</sup>	Erie County Conservation District, Erie, PA	35	29
Monroe	June 21 <sup>st</sup> & 22 <sup>nd</sup>	Kalahari Resort, Pocono Manor, PA	50	42
Chester	July 12 <sup>th</sup> & 13 <sup>th</sup>	Hilton Garden Inn, Exton, PA	37	32
Sullivan	October 19 <sup>th</sup> & 20 <sup>th</sup>	St. Francis Assisi Hall, Mildred, PA	44	39
Centre	November 15 <sup>th</sup> & 16 <sup>th</sup>	Ramada, State College, PA	58	59
<b>TOTALS</b>			653	610

**Tech assists** - The Center has developed a new online “Technical Assistance Tracker” that will allow for better scheduling, summary, and reporting of technical assistance visits with Conservation Districts. The tracker, which went online in June, is also accessible by SCC staff. The tracker has logged 204 completed technical assists.

**Annual Summary Reports** – Conservation districts are in the process of completing their annual summary reports. The deadline for reporting is January 15, 2017. These 65 reports will be compiled into one comprehensive annual summary report. This report will be presented to the House and Senate transportation committees.



## BUILDING BRIDGES

Farmers\* Municipalities\* Citizens  
Conservation Districts\* Agribusiness

To: Members  
State Conservation Commission

From: Beth Futrick  
Agriculture/Public Liaison

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

Re: Ombudsman Program Update – Southern Alleghenies Region

January 3, 2017

### Activities: October 21, 2016 – December 30, 2016

- Administer Blair County's NACD-Urban Ag Grant.
  - Meetings with various partners to coordinate urban ag outreach efforts
  - Develop a Blair County Urban Ag network
  - Hold workshops to connect technical support partners with potential clients
    - Urban Ag/GI bus tour with municipalities
  - Organizing a demonstration for the Farm Show University at the Ag 101 Stage on January 7 at 12-  
Noon.
    - We will show ways to grow food in confined spaces. The event is called "Cooking the Food We Grow"
    - This event is to highlight the NACD grants awarded to Conservation Districts across the county in 2016. The goal of the grants is for Districts to develop an Urban Ag Program in their Counties.
- Collaborating with the Center for Dairy Excellence (CDE) and Center for Beef Excellence (CBE) to do farmer workshops for manure management and ag e/s plan development. The intent is to train producers on PA One Stop and assist with developing their Ag E/S plan.
  - Coordinated with PSU's PA One Stop staff and five conservation districts (Cambria, Huntingdon, Clinton, Washington, and Luzerne) to set dates, venues, and promotional activities for the workshops.
- Planning two Fly Camp events. The goal is to train partnering agency staff to provide technical support and assist with fly complaints.
  - Organizing the Lycoming County event for March 22, 2017
  - Coordinating with Penn State Extension, Blair County to host a teleconference session on March 23, 2017
- Administering Blair County's NFWF Grant
  - Coordinating with two engineering firms and two municipalities to complete design work for the two green infrastructure practices that will be installed this spring.
- Working with a local graphic designer to develop interpretive signage to be installed at each green infrastructure (GI) site in Blair County. These signs serve as stormwater education.

**Meetings/Trainings/Events**

- Blair Co Urban Ag / GI bus tour. For municipal and other organizations to learn about community garden and other green space for soil, nutrient, and stormwater control and benefits (Oct 18)
- Halloween Harvest-fest. For Blair community members to learn about urban ag practices/management (Oct 30)
- Planning meeting with CDE/CBE – prep for upcoming manure management and ag E/S farmer workshops (Nov 11)
- Urban Ag Network meeting – discovering partnerships, grants, and land issues (Nov 16)
- Planning meeting with CDE/CBE – prep for upcoming manure management and ag E/S farmer workshops (Nov 18)
- Healthy Blair County Coalition meeting (Nov 21)
- Fly Camp planning meeting (Nov 22)
- Ag E/S workshop planning with PA One Stop staff (Dec 9)
- Fly Camp planning meeting (Dec 14)
- Urban Ag planning event (Dec 21)

**Conflict Issues/Municipal Assistance –**

- Lycoming County- fly complaint – continuing to follow up with Dr Martin and farmers
- Clinton-Odor complaint – turn over to DEP
- Fulton County – CAFO and Act 38 issue

**Reports & Grant Applications**

--Prepared and submitted payment request to NFWF

--For CDE/CBE and Penn State PAOneStop, created a working document for the Ag E/S workshop development to track dates, venues, and other details for the upcoming workshops.



## BUILDING BRIDGES

Farmers \* Municipalities \* Citizens  
Conservation Districts \* Agribusiness

To: Members  
State Conservation Commission

From: Shelly Dehoff  
Agriculture/Public Liaison

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

Re: Agricultural Ombudsman Program Update

January 24, 2017

**Activities:** Since mid-November 2016, I have taken part or assisted in a number of events, including the following:

- Working with Mushroom Farmers of PA and American Mushroom Institute to create public brochure about mushroom phorid flies
- Pursuing creation of a manure recordkeeping app for mobile devices
- Planned for and moderated a session on emergency preparedness at local fairs, for the South Central Task Force Ag Subcommittee presentation at PA Assoc'n of County Fairs convention
- Creating a new statewide publication regarding ag compliance action efforts
- Working with Centers for Dairy and Beef Excellence to offer 4 farmer workshops to obtain baseline Ag E&S plans in eastern PA
- Organizing and planning "Fly Camp 2017" in later March with 4 different entities
- completed multiple site verification visits for Lancaster Ag Preserve Program
- Beginning to plan Ag Week 2017 for Lancaster County
- Serve as Secretary for Coalition for Smart Growth Board and Exec Comm
- Serve as Chair of the South Central Task Force Agriculture Subcommittee
- Attended and assisted at Lancaster Co. Agriculture Council meetings

**Local Government Interaction:** I have been asked to provide educational input regarding agriculture:

**Chester Co**— request for input about ordinance wording for minimum acreage for horse ownership; may attend meeting in near future

**York Co**—provided input to municipality about contents of zoning ordinance

**Moderation or Liaison Activities:** I have been asked to provide moderation or liaison assistance with a particular situation:

**Chester Co**—on-going issue regarding phorid flies in Chester Co.

**Research and Education Activities:**

**Perry Co**—provided educational input to consultant about wording in ordinance

**Fayette Co**—request for information from HOA president about dredging a lake and spreading soil on local farm fields

**Fly Complaint Response Coordination:** I have taken complaints or am coordinating fly-related issues in:

**Lancaster Co**— received new complaint

**Franklin Co**—new complaint

