**BISHCROFT FARM LLC CERTIFICATION REQUEST**

 **REQUIRED DOCUMENTATION**

Bishcroft Farm LLC operates a dairy farm in Tioga County with additional crop ground in Lycoming County. The farm averages 750 milk cows, 100 dry cows, 315 heifers, 420 calves and 1 bull. The operation consists of 1,387.8 acres of cropland, 41.3 acres of pasture and 28.1 acres of farmstead. The farm's primary crop rotation is 4 years of no-till com silage followed by 4 years of no-till mixed-grass*1* alfalfa hay. A rye cover crop is no-tilled after corn silage and harvested for silage in the spring if weather conditions permit. Some fields have been approved to switch to a rotation of 5 years of corn and 3 years of hay. This was done due to a shortage of silage this past year. Fields west of US 15 generally do not receive manure; therefore, they do not generally have a rye cover crop either.

Milk cows are bedded with sand, which is separated out of the manure using a gravity flush system. Manure flushed from the dairy barn gravity flows to a concrete sand separation pad where sand is collected. The liquid manure then flows to an earthen manure pond. The pond is separated into two stages. Stage 1 allows for solids to settle out and stage 2 stores the majority of the liquid manure. Liquid from stage 2 is pumped back to the dairy barn where it is used to flush the barns. Stage 1 and stage 2 are land applied separately from each other and a manure analysis has been performed for each. Both stages are emptied and applied to cropland during the spring, summer and fall. Some dry cows are also housed at the dairy barn. This manure is handled as a solid, collected and reused as bedding at a rented calf barn. Manure from 70 calves housed in hutches is collected and handled in the same manner. Because of this 50 dry cows and 70 additional calves are shown in the Rented Calf Barn manure group in Appendix 3. Manure from the 130 calves at the rented calf barn is handled as a solid and land applied to crop ground every four weeks, year round.

The remaining dry cows, heifers, calves and a bull are housed in two buildings northeast of the dairy facility. The majority of the manure collected from these barns is handled as a liquid; however, a portion is handled as a solid. The liquid manure is stored in a concrete tank which is emptied and land applied in the spring, summer and fall. Solid manure is collected and applied every two to four weeks year round. Solid manure can be temporarily stacked at two locations identified on the operator management map if field conditions do not allow for manure application. Approximately 15 dry cows, 165 heifers and 110 calves have access to two pastures (P1 and P2). A large ACA has formed at a feeding area in P1. A concrete feeding pad, critical area seeding and roofed exercise lot are planned to address this area. Existing cropland has recently been converted to pasture (P2) to aid in reducing the animal numbers on P1 and lessen the impacts of the ACA. Collected manure (both solid and liquid) is applied to com silage in the fall and spring and hay in the summer. Solid manure will be winter applied to hay fields. Liquid manure will not be applied during the winter. Bishcroft Farm LLC has started using a custom manure hauler to apply manure from the stage 2 storage in the fall in spring using a drag hose system.

**CERTIFICATION REQUEST DOCUMENTATION RQUIREMENTS**

1. **Baseline and Threshold (25 Pa Code 96.8)**

Bishcroft Farm LLC meets baseline requirements of 025 PA Code 96.8 by having the following required items:

1. CAFO permit (025 PA 92a.29 and 025 PA 91.36)
2. Nutrient Management Plans for all tracts receiving manure (025 PA 83 Subchapter D)
3. Conservation Plans for all tracts (025 PA 102)

Bishcroft Farm LLC is in full compliance of the requirements of its CAFO permit, Conservation Plans, and Nutrient Management Plan.

Bishcroft Farm LLC meets the threshold needed to generate credits by the requirement states as, “Manure is not mechanically applied within 100 feet of a perennial or intermittent stream with a defined bed or bank, a lake or a pond”. Bishcroft Farm LLC also applies commercial fertilizer at or below agronomic rates contained in the current *Penn State University Agronomy Guide* published by Pennsylvania State University.

**Credit Generation**

Bishcroft Farm LLC is an entirely no-till operation. The only time discing might be done is if the fields are rutted up due to bad weather. In addition to no-till, Bishcroft Farm LLC generates credits by planting cover crops on as many corn silage acres as it can every year. RUSLE2 calculations were run for each field over the entire operation. All credits generated by Bishcroft Farm LLC are generated by going beyond the baseline tillage and/cover cropping requirements to meet the tolerable soil loss rate.

**Credit Calculation Method**

All credits for this certification request will be for Nitrogen (N) credits only. To do this, the current version of the Nonpoint Source Nitrogen Calculation Spreadsheet found on the PA DEP Nutrient Trading Webpage was used. The manure figures used include the manure application rates and manure analysis found in the original certification.

 All cropland associated with this certification lies within Watershed Segment 60. The watershed segment has a Nitrogen delivery ratio of 0.93. The Nitrogen Edge of Stream Ratios for this watershed is 55% for conventional tillage, 31% for conservation tillage, 78% for hay, and 15% for pasture.

Liquid manure is spread by Bishcroft Farm LLC with 2 Houle 6300 Liquid Tank spreaders, a Blazer 6000 liquid manure spreader and a Calumet 3750 liquid manure spreader. Liquid manure is also spread by a custom applicator using a tractor pulled drag hose. The two Houle spreaders hold 6,300 gallons each, the Blazer 6000 holds 6,000 gallons and the Calumet 3750 holds 3,750 gallons. The Houles have been calibrated to apply 6300 gallons per acre, the Blazer 6000 is set up to spread 6,000 gallons per acre, and the Calumet 3750 is set up to spread 5,500 gallons per acre. The custom drag hose is spread at 6,000 gallons per acre. The spreaders were calibrated by spreading a known amount over a known area. The custom applicator provides information to Bishcroft Farm LLC when he applies manure.

1. **Location Maps of the Proposed Prevention Reduction Activity (PRA)**

The following maps have been submitted to show the locations of the proposed PRA for each tract:

1. A map showing the farm boundaries, the field boundaries of tracts that generate credits, adjacent or nearby road names, and any visible receiving streams.
2. A soil map showing the soils in the fields generating credits. A chart with all of the operation’s soil type symbols and their names is also attached with this proposal.
3. A topographic map which shows a tract’s general location, topography, and a latitude and longitude coordinate of the center of the tract’s PRA activities.
4. **Details on the Timing of Credits**

Credits will be verified twice annually. The first time credits will be verified is as soon after April 15th as possible for fields that had a cover crop. To receive credit for having a successful cover crop, there must be a minimum of 50% ground cover by April 15th of that year. The second verification will take place after the spring crops have been planted to verify what type of tillage was used.

1. **Water Quality Uses Under Chapter 93**

|  |  |  |  |
| --- | --- | --- | --- |
| Tract number(s) | Local Watershed Name | Watershed Name | Major Basin |
| 55, 61, 132, 2135, 3165, 3609 & 6690 | Blockhouse Creek  | Pine Creek | Susquehanna River |
| 75, 166, 4884, 4992, 5564. 5565; 6355, 6558, 7134, 7311 & 7316 | Brion Creek | Lycoming Creek | Susquehanna River |
| 60, 4884 & 6355 | Little Elk Run | Lycoming Creek | Susquehanna River |
| 75 | Salt Springs Run | Lycoming Creek | Susquehanna River |
| 3628 | Roaring Branch  | Lycoming Creek | Susquehanna River |
| 5658 | Zimmerman Creek | Pine Creek | Susquehanna River |

All tracts are listed is Chapter 93 as having a designated use of HQ-CWF (High Quality- Cold Water Fishes), except Blockhouse Creek, which is listed as having a designated use of CWF (Cold Water Fisheries).

There are no receiving stream segment listed as having a source of impairment.

1. **Funding Source Information**

Bishcroft Farm LLC has not received any public funding sources to generate these credits. All credits are free and clear financially.

1. **Risk Reduction Plan**

Provisions have been put into place to minimize the operator from not producing the credits through a contract with him, the Lycoming County Conservation District, and the County of Lycoming. The contract states that if the operator is under contract for future credits, he must supply them or provide the money required to pay the Lycoming County Nutrient Trading Program the amount it would cost to buy the amount of credits he did not generate. In most cases, we recommend that our producers sign one year contracts for practices that are not permanent like the CREP BMPs. In addition to this provision, the Lycoming Nutrient Trading Program has a fund set aside equal to 25%-30% of all previously sold credits in case there is a credit generator who defaults on contracted credits by no fault of his own. This fund could also be used to produce contracted credits for a generator instead of having a generator purchase them if he defaults depending on the circumstance of the credit default.

1. **Preservation and Conservation Easement Information**

No farms operated by Bishcroft Farm LLC have a preservation or conservation easement with either the Tioga County or Lycoming County Ag Preservation Program.

1. **Confidential Business Information**

N/A

1. **Submitting Person and PRA Participants**

**Submitter’s Information**

Submitting Agency: Lycoming County Conservation District

Address: 542 County Farm Road, Suite 202

 Montoursville, PA 17754

Contact Name: Rod Morehart, Chesapeake Bay Technician

Contact Phone #: 1(570) 329-1619

**PRA Participants Information**

Operation Information: Bishcroft Farm LLC

Address: 2334 Farm Road

 Roaring Branch, PA 17765

Contact Name: Herman Bishop, Member

Other PRA Participants: Employees of Bishcroft Farm LLC planting, harvesting, applying manure and fertilizer under the guidance of Mr. Bishop.

1. **Professional Qualifications**

Rod Morehart received a B.S.in Wildlife Management from Delaware State University in 2001. He has worked in the conservation field full time since May 2001. He has been nutrient management certified in Maryland, Delaware or Pennsylvania since 2002. He is also a certified conservation planner through the NRCS’s training program. Rod has been involved with the Lycoming County Nutrient Trading Program since its inception. He has written most of the proposals that have been submitted to date. He has completed all of the annual field verification and credit verification submission work since the program started selling credits.

1. **Verification Plan**

Credit verification will start with a cover crop field check in the spring of every year. Successful cover crop fields will have their credits generated and sent in once all of the cover crop credit work is completed for all program participants. Another field verification visit will be made to inspect the tillage used on all fields that can generate tillage related credits after the spring planting has occurred. Those credits will be sent in as a separate verification request after the credit calculation work is completed. This will occur no sooner than June of each Compliance Year.

**Attachments to Supplement the Certification Request Form and**

**The Certified Request Required Documentation Word Document**

1. **Maps Folder (Each folder listed below contains an FSA map, Soil Map, and a Topographic Map)**

Tract 55 Tract 60 Tract 61 Tract 75 Tract 132 Tract 166

Tract 2135 Tract 3165 Tract 3609 Tract 3628 Tract 4884 Tract 4992

Tract 5564 Tract 5564 Tract 5565 Tract 5658 Tract 6355 Tract 6558

Tract 7134 Tract 7311 Tract 7316 Tract 7324

1. **RUSLE2 Folder (Each tract listed has one PDF file for all the fields that generate credits)**

Tract 55 Tract 60 Tract 61 Tract 75 Tract 132 Tract 166

Tract 2135 Tract 3165 Tract 3609 Tract 3628 Tract 4884 Tract 4992

Tract 5564 Tract 5564 Tract 5565 Tract 5658 Tract 6355 Tract 6558

Tract 7134 Tract 7311 Tract 7316 Tract 7324

1. **Spreadsheet Folder (Includes the following spreadsheets)**

Tract 55 F 1 Tract 55 F 2 & 3 Tract 60 F 1 & 2 Tract 60 F 3

Tract 60 F 4 Tract 61 F 2 Tract 61 F 3

Tract 75 F 1 Tract 75 F 2 Tract 75 F 3

Tract 75 F 4 Tract 132 F 2 & 3 Tract 166 F 1

Tract 2135 F 1, 3 5 & 7 Tract 3165 F 1 Tract 3609 F 1-3

Tract 3628 F 2 & 3 Tract 3628 F 4 Tract 3628 F 5

Tract 3628 F 6 Tract 4884 F 3 Tract 4884 F 4 A

Tract 4884 F 4 Tract 4884 F 5 Tract 4884 F 6

Tract 4992 F 1 & 2 Tract 5564 F 1 Tract 5564 F 2

Tract 5658 F 1 Tract 5658 F 2 Tract 6355 F 1, 2 & 7

Tract 6355 F 3 Tract 6355 F 4 Tract 6558 F 1 A

Tract 6558 F 1 B Tract 6690 F 1 & 1 A Tract 6690 F 2

Tract 6690 F 3 Tract 7134 F 1 & 2 Tract 7134 F 3

Tract 7311 F 1 & 2 Tract 7311 F 3 Tract 7311 F 5

Tract 7316 F 3, 11 & 12 Tract 7316 F 9 Tract 7316 F 10 & 13

Tract 7316 F 13 A Tract 7324 F 1-3 Tract 7324 F 8-11

1. **BMP Summary Spreadsheet**
2. **Spreadsheet Summary**
3. **Soil Type List**