**CHARLES BOSCH FARM CERTIFICATION REQUEST**

**REQUIRED DOCUMENTATION**

The Bosch farm is a dairy operation located in Lycoming County. The dairy operation itself and all of its associated crop land is located in Clinton Township. Currently, there are 88 milk cows, 12 dry cows, 22 calves, and 40 young heifers. All cows and calves are confined 100% of the time. The basic crop rotation for this farm is three years of corn silage or corn grain and 4 years of spring planed alfalfa/grass mixed hay. All corn ground receives liquid manure in either the spring or the fall. Bed back manure is spread on the hay ground.

**CERTIFICATION REQUEST DOCUMENTATION RQUIREMENTS**

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

The Bosch farm meets baseline requirements of 025 PA Code 96.8 by having the following required items:

1. Manure Management Plan for all tracts receiving manure (025 PA 83 Subchapter D)
2. Erosion and Sedimentation Plans/Conservation Plans for all tracts (025 PA 102)

The Bosch farm is in full compliance of the requirements of its Ag E & S Plans/Conservation Plans and Manure Management Plan.

The Bosch farm 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”. The Bosch farm 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**

The Bosch farm is primarily a no-till operation. In addition to no-till, The Bosch farm generates credits by planting cover crops on all corn silage acres and as many corn grain acres as it can every year. RUSLE2 calculations were run for each field over the entire operation. All credits generated by The Bosch farm 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 70. The watershed segment has a Nitrogen delivery ratio of 0.941. The Nitrogen Edge of Stream Ratios for this watershed is 45% for conventional tillage, 45% for conservation tillage, 86% for hay, and 13% for pasture.

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 new tract:

1. An FSA 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.
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.

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

|  |  |  |  |
| --- | --- | --- | --- |
| Tract numbers | Local Watershed Name | Watershed Name | Major Basin |
| 574, 2727, 3675 & 3676 | UNT to W. Branch Susquehanna River | West Branch Susquehanna River | Susquehanna River |
| 574, 2727, 3675 & 3676 | West Branch Susquehanna River | West Branch Susquehanna River | Susquehanna River |

The receiving stream segments for both tracts are listed in Chapter 93 as having a designated use of WWF- Warm Water Fishes.

|  |  |  |  |
| --- | --- | --- | --- |
| **Receiving Stream** | **Reach Code** | **Tract Number(s)** | **Source and Cause of Impairment** |
| W. Branch Susquehanna River | 11460 | 2727, 3675 & 3676 | Source Unknown- PCB |

1. **Funding Source Information**

The Bosch farm’ 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**

All of Mr. Bosch’s tracts are enrolled in the Clinton Township Ag Security Area. Tract 574 has a conservation easement through the Lycoming County Agricultural 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: The Bosch Farm

Address: 7908 Armstrong Road

 Muncy, PA 17756

Contact Name: Charles Bosch

Other PRA Participants: Bosch family members

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**

**Certification Request Required Documentation**

1. **Map Folder**

**Each folder listed below contains an FSA map, Soil Map, and a Topographic Map**

Tract 574 Tract 2727 Tract 2729 Tract 3675 Tract 3676

1. **RUSLE2 Folder**

**This folder contains the following RULSE2 PDFs:**

Bosch T 574 F 1 & 2, T 2727 F 1 & 2, & T 2729 F 2 Bosch T 2727 F 2 & 6

Bosch Tract 3675 F 1 & 2 RUSLE2 Bosch Tract 3676 F 1 RUSLE2

1. **Spreadsheet Folder**

**This folder contains the following spreadsheets:**

 Bosch T 574 F 1 & 2 Bosch T 2727 F 1-6 Bosch T 2729 F 2

 Bosch T 3675 F 1 & 2 Bosch T 3676 F 1

1. **Bosch BMP Summary Spreadsheet**
2. **Bosch Spreadsheet Summary**