**SHERMAN BEEF CATTLE CERTIFICATION REQUEST REQUIRED DOCUMENTATION**

Sherman Beef Cattle has a beef operation located in Clinton Twp., Lycoming County. The operation is pasture based. The cattle are pastured 100% of the time for about 175 days a year. During the growing season, the cattle are moved either daily or every other day throughout paddocks that are within the main pastures. In the winter months, the animals are confined 100% of the time on a concrete barnyard.

Currently, there are 26 cows, 26 calves, 3 heifers, and 2 bulls on the operation. For the purposes of this proposal, we are assuming 10 beef cows, 10 calves, 3 heifers, and 2 bulls. This is the number of animals that generate the highest number of nitrogen credits.

**CERTIFICATION REQUEST DOCUMENTATION REQUIREMENTS**

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

Sherman Beef Cattle meets baseline requirements of 025 PA Code 96.8 by having the following required items:

1. A Manure Management Plan covering all of the tracts receiving manure (025 PA 83 Subchapter D)
2. Conservation Plans for all tracts (025 PA 102)

Sherman Beef Cattle meets the threshold needed to generate credits by the requirement stated 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”. Sherman Beef Cattle 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**

Sherman Beef Cattle’s operation generates credits based on practice that have been implemented into the grazing operation. These include Precision Grazing, Off-Stream Watering with and without Stream Fencing, and having a Riparian Forested Buffer. The credits are generated based on the difference between how the operation was run before the best management practices (BMPs) were implemented and how it is run now that the BMPs have been implemented. They also generate credits for going above baseline for tillage and for planting cove crops.

**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.

The Planned manure figures are based on what was happing before the BMP implementation and the Current manure figures are based on what is happening now, with the assumption that the operation has the maximum number of animals that it can and still not be an Act 38 regulated operation and still be below the nitrogen application rates needed for the grassed hay based on current ***Penn State University Agronomy Guide*** figures.

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 topographic map which shows both tracts’ general location, topography, and a latitude and longitude coordinate of the center of the tracts’ PRA activities.

Note: The Aerial Maps and the Soil Maps in the original proposal are still current and are not included.

1. **Details on the Timing of Credits**

Credits will be verified annually. If cover crops are planted, they will be inspected as close to April 15th as possible to ensure that they have achieved 50% ground cover. Another visit will be done to check tillage practices, to make sure that all credit generating BMPs are being maintained and to obtain animal numbers and animal movement information. This visit will take place after the spring plantings have been completed.

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

|  |  |  |  |
| --- | --- | --- | --- |
| Tract numbers | Local Watershed Name | Watershed Name | Major Basin |
| 3511 and 3512 | UNT to W. Branch Susquehanna River | West Branch Susquehanna River | Susquehanna River |

UNTs are listed in Chapter 93 as having a designated use of WWF (Warm Water Fishes).

The receiving stream segments for Tracts 3511 and 3512 are not impaired.

1. **Funding Source Information**

Sherman Beef Cattle has received public funding sources to generate these credits. The funding was through the USDA’s CREP Program. Sherman Beef Cattle’s CREP contract expires in 2021 and Mr. Sherman plans on re-enrolling his land into the program again. 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**

Tracts 3511 and 3512 are both enrolled in the Clinton Township Ag Security Area. Tract 3512 is also enrolled in the Lycoming County Ag Preservation Program.

**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: Sherman Beef Farm

Address: 575 Brouse Road

 Montgomery, PA 17752

Contact Name: Michael Sherman

Other PRA Participants: N/A

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**

Two certification visits will take place annually. The first visit will occur close to April 15 to ensure that the cover crops have achieved 50% ground cover. The second on-farm inspection will occur after the spring crops have been planted. During this visit the tillage method to complete an inspection of credit generating BMPs and to get animal numbers and animal movement information will occur during this visit.

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

**Certification Request Required Documentation**

1. **Map Folder**

**This folder contains the following maps:**

Sherman T 3511 map Sherman T 3511 soil map

Sherman T 3512 map Sherman T 3512 soil map

Sherman T 3511 & 3512 topographic map

1. **RUSLE2 Folder**

**This folder contains the following RUSLE2 PDFs:**

Sherman T 3511 F 1 Sherman T 3512 F 2

Sherman T 3512 P 1 & 4 Sherman T 3512 P 3 A & 3 B

1. **Spreadsheet Folder**

**This folder contains the following spreadsheets:**

 Sherman T 3511 F 1 Sherman T 3512 F 2 Sherman T 3512 P 1

 Sherman T 3512 P 3 A Sherman 3512 P 3 B Sherman T 3512 P 4

1. **Sherman beef manure figures maximum numbers**
2. **Sherman BMP Summary**
3. **Sherman Spreadsheet Summary**