

**State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources**

Animal Waste Management Systems

Request for Certificate of Coverage

Facility Currently Covered by an Expiring State Non-Discharge General Permit

On September 30, 2014, the North Carolina State Non-Discharge General Permits for Animal Waste Management Systems will expire. As required by these permits, facilities that have been issued Certificates of Coverage to operate under these State Non-Discharge General Permits must apply for renewal at least 180 days prior to their expiration date. Therefore, all applications must be received by the Division of Water Resources by no later than **April 1, 2014**.

Please do not leave any question unanswered. Please verify all information and make any necessary corrections below.

Application must be signed and dated by the Permittee.

1. Facility Number: 090082 and Certificate of Coverage Number: AWS090082
2. Facility Name: Double S Farm
3. Landowner's name (same as on the Waste Management Plan): Murphy Smith
4. Landowner's mailing address: 19829 Hwy 131 S
City/State: Bladenboro NC Zip: 28320
Telephone Number (include area code): (910)648-4826 E-mail: _____
5. Facility's physical address: 18829 Hwy 131
City: ~~Butters~~ Bladenboro State: NC Zip: 28320
6. County where facility is located: Bladen
7. Farm Manager's name (If different than the Landowner): Steven Smith
8. Farm Manager's telephone number (include area code): 910 648 6244
9. Integrator's name (if there is not an integrator write "None"): Murphy-Brown LLC
10. Operator in Charge (OIC) name: Telephone Number 910 648 6244 OIC # 992554 Steven Smith
11. Lessee's name (if there is not a lessee write "None"): None
12. Indicate animal operation type and number:

Swine

Wean to Finish
Wean to Feeder
Farrow to Finish
Feeder to Finish 2448
Farrow to Wean
Farrow to Feeder
Boar/Stud
Gilts
Other

Horses - Horses
Horses - Other

Cattle

Dairy Calf
Dairy Heifer
Milk Cow
Dry Cow
Beef Stocker Calf
Beef Feeder
Beef Brood Cow
Other

Sheep - Sheep
Sheep - Other

Dry Poultry

Non Laying Chickens
Laying Chickens
Turkeys
Other
Pullets
Turkey Poults

Wet Poultry

Non Laying Pullets
Layers

Mail one (1) copy of the most recent Waste Utilization Plan (WUP) along with the field maps for this facility with this completed and signed application as required by NC General Statutes 143-215.10C(d) to the address below. The WUP must be signed by the owner and a certified technical specialist.

As a second option to mailing paper copies of the application package, you can scan and email one signed copy of the application and the WUP to: animalpermits@ncdenr.gov

I attest that this application has been reviewed by me and is accurate and complete to the best of my knowledge. I understand that, if all required parts of this application are not completed and that if all required supporting information and attachments are not included, this application package will be returned to me as incomplete. **Note:** In accordance with NC General Statutes 143-215.6A and 143-215.6B, any person who knowingly makes any false statement, representation, or certification in any application may be subject to civil penalties up to \$25,000 per violation. (18 U.S.C. Section 1001 provides a punishment by a fine of not more than \$10,000 or imprisonment of not more than 5 years, or both for a similar offense.)

Printed Name of Signing Official (Landowner, or if multiple Landowners all landowners should sign. If Landowner is a corporation, signature should be by a principal executive officer of the corporation):

Name: Murphy Smith Title: Landowner

Signature: Murphy Smith Date: 3-28-14

Name: _____ Title: _____

Signature: _____ Date: _____

Name: _____ Title: _____

Signature: _____ Date: _____

THE COMPLETED APPLICATION SHOULD BE SENT TO THE FOLLOWING ADDRESS:

NCDENR-DWR
Animal Feeding Operations Branch
1636 Mail Service Center
Raleigh, North Carolina 27699-1636

Telephone number: (919) 807-6464
E-mail: animalpermits@ncdenr.gov

ANIMAL WASTE UTILIZATION PLAN

Producer: MURPHY SMITH
Location: 19829 NC 131 S.
BLADENBORO NC 28320
Telephone: 910-648-4826
Type Operation: Existing Feeder to Finish Swine
Number of Animals: 2448.00 hogs
(Design Capacity)
STORAGE STRUCTURE: Anaerobic Waste Treatment Lagoon
APPLICATION METHOD: Irrigation

The waste from your animal facility must be land applied at a specified rate to prevent pollution of surface water and/or groundwater. The plant nutrients in the animal waste should be used to reduce the amount of commercial fertilizer required for the crops in the fields where the waste is to be applied.

This waste utilization plan uses nitrogen as the limiting nutrient. Waste should be analyzed before each application cycle. Annual soil tests are strongly encouraged so that all plant nutrients can be balanced for realistic yields of the crop to be grown.

Several factors are important in implementing your waste utilization plan in order to maximize the fertilizer value of the waste and to ensure that it is applied in an environmentally safe manner:

1. Always apply waste based on the needs of the crop to be grown and the nutrient content of the waste. Do not apply more nitrogen than the crop can utilize.
2. Soil types are important as they have different infiltration rates, leaching potentials, cation exchange capacities, and available water holding capacities.
3. Normally waste shall be applied to land eroding at less than 5 tons per acre per year. Waste may be applied to land eroding at 5 or more tons per acre annually, but less than 10 tons per acre per year providing that adequate filter strips are established.
4. Do not apply waste on saturated soils, when it is raining, or when the surface is frozen. Either of these conditions may result in runoff to surface waters which is not allowed under DWQ regulations.

ANIMAL WASTE UTILIZATION PLAN

5. Wind conditions should also be considered to avoid drift and downwind odor problems.
6. To maximize the value of the nutrients for crop production and to reduce the potential for pollution, the waste should be applied to a growing crop or applied not more than 30 days prior to planting a crop or forages breaking dormancy. Injecting the waste or disking will conserve nutrients and reduce odor problems.

This plan is based on the waste application method shown above. If you choose to change methods in the future, you need to revise this plan. Nutrient levels for different application methods are not the same.

The estimated acres needed to apply the animal waste is based on typical nutrient content for this type of facility. Acreage requirements should be based on the waste analysis report from your waste management facility. In some cases you may want to have plant analysis made, which could allow additional waste to be applied. Provisions shall be made for the area receiving waste to be flexible so as to accommodate changing waste analysis content and crop type. Lime must be applied to maintain pH in the optimum range for specific crop production.

This waste utilization plan, if carried out, meets the requirements for compliance with 15A NCAC 2H .0217 adopted by the Environmental Management Commission.

AMOUNT OF WASTE PRODUCED PER YEAR (gallons, ft³, tons, etc.)

2448 hogs x 1.9 tons waste/hogs/year = 4651.2 tons

AMOUNT OF PLANT AVAILABLE NITROGEN (PAN) PRODUCED PER YEAR

2448 hogs x 2.3 lbs PAN/hogs/year = 5630.4 lbs. PAN/year

Applying the above amount of waste is a big job. You should plan time and have appropriate equipment to apply the waste in a timely manner.

The following acreage will be needed for waste application based on the crop to be grown, soil type and surface application.

ANIMAL WASTE UTILIZATION PLAN

TABLE 1: ACRES OWNED BY PRODUCER

TRACT	FIELD	SOIL TYPE & CLASS- DETERMINING PHASE	CROP CODE ----- APPLY METH	YIELD	LBS AW N PER AC	COMM N PER AC or RESID. N	** ACRES	* LBS AW N USED ----- APPLIC TIME
2589	1	EXA	C I	125.0	141.25	15	10	1412.5 MAR-JUN
2589	2	NA	C I	120	135	15	12	1620 MAR-JUN
2589	3	NA	C I	120	135	15	20	2700 MAR-JUN
2589	~1	EXA	W I	60	144	0	10	1440 OCT-MAR
2589	~1	EXA	SB I	30	120	0	10	1200 APR-JUN Jun-Sept.
2589	~2	NA	W I	60	144	0	12	1728 OCT-MAR
2589	~2	NA	SB I	30	120	0	12	1440 APR-JUN Jun-Sept.
2589	~3	NA	W I	60	144	0	20	2880 OCT-MAR
2589	~3	NA	SB I	25	100	0	20	2000 APR-JUN Jun-Sept.
		END	I					ADO

TOTAL | 16420.5

~ - Indicates that this field is being overseeded (i.e. interplanted) or winter annuals follow summer annuals.

NOTE: The applicator is cautioned that P and K may be over applied while meeting the N requirements. In the future, regulations may

ANIMAL WASTE UTILIZATION PLAN

require farmers in some parts of North Carolina to have a nutrient management plan that addresses all nutrients. This plan only addresses nitrogen.

ANIMAL WASTE UTILIZATION PLAN

TABLE 2: ACRES WITH NOTARIZED AGREEMENT OR LONG TERM LEASE

(Agreement with adjacent landowners must be attached.)
 (Required only if operator does not own adequate land.
 See required specification 2.)

TRACT	FIELD	SOIL TYPE & CLASS- DETERMINING PHASE	CROP CODE	YIELD	LBS AW N PER AC	COMM N PER AC or RESID. N	** ACRES	* LBS AW N USED
			----- APPLY METH					----- APPLIC TIME
		END						
							TOTAL	0

~ Indicates that this field is being overseeded (i.e. interplanted) or winter annuals follow summer annuals.

** Acreage figures may exceed total acreage in fields due to overseeding.

* lbs AW N (animal waste nitrogen) equals total required nitrogen less any commercial nitrogen (COMM N) supplied.

The following legend explains the crop codes used in tables 1 and 2 above:

CROP CODE	CROP	UNITS	PER UNIT
C	CORN	BUSHEL	1.25
SB	SOYBEANS	BUSHEL	4
W	WHEAT	BUSHEL	2.4

TOTALS FROM TABLES 1 AND 2

ACRES	LBS AW N USED
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ANIMAL WASTE UTILIZATION PLAN

		Corn Rotation crop	wheat/soybean
TABLE 1	42	8330	10688
TABLE 2	0	0	
TOTAL	42		
*** BALANCE		-2700	-5058

*** This number must be less than or equal to 0 in order to fully utilize the animal waste N produced.

ANIMAL WASTE UTILIZATION PLAN

*** This number must be less than or equal to 0 in order to fully utilize the animal waste N produced.

Acres shown in each of the preceding tables are considered to be the usable acres excluding required buffers, filter strips along ditches, odd areas unable to be irrigated, and perimeter areas not receiving full application rates due to equipment limitations. Actual total acres in the fields listed may, and most likely will be, more than the acres shown in the tables.

See attached map showing the fields to be used for the utilization of animal waste.

SLUDGE APPLICATION:

The waste utilization plan must contain provisions for periodic land application of sludge at agronomic rates. The sludge will be nutrient rich and will require precautionary measures to prevent over application of nutrients or other elements. Your production facility will produce approximately 905.76 pounds of plant available nitrogen per year in the sludge.

If you remove the sludge every 5 years, you will have approximately 4528.8 pounds of PAN to utilize. Assuming you apply this PAN to hybrid bermudagrass hayland at the rate of 300 pounds of nitrogen per acre, you will need 15.096 acres of land. If you apply the sludge to corn at the rate of 125 pounds of nitrogen per acre, you will need 36.2304 acres of land. Please be aware that these are only estimates of the PAN and land needed. Actual requirements could vary by 25% depending on your sludge waste analysis, soil types, realistic yields, and application methods.

APPLICATION OF WASTE BY IRRIGATION

The irrigation application rate should not exceed the intake rate of the soil at the time of irrigation such that runoff or ponding occurs. This rate is limited by initial soil moisture content, soil structure, soil texture, water droplet size, and organic solids. The application amount should not exceed the available water holding capacity of the soil at the time of irrigation nor should the plant available nitrogen applied exceed the nitrogen needs of the crop.

If surface irrigation is the method of land application for this plan, it is the responsibility of the producer and irrigation designer to ensure that an irrigation system is installed to properly irrigate the acres shown in Tables 1 and 2. Failure to apply the recommended rates and

ANIMAL WASTE UTILIZATION PLAN

amounts of nitrogen shown in the tables may make this plan invalid.

The following table is provided as a guide for establishing application rates and amounts.

Tract	Field	Soil Type	Crop	Application Rate (in/hr)	Applic. Amount (inches)
2589	1	EXA	C	0.35	*0.75
2589	2	NA	C	0.4	*0.75
2589	3	NA	C	0.4	*0.75
2589	~1	EXA	SB	0.35	*0.75
2589	~1	EXA	W	0.5	*0.75
2589	~2	NA	SB	0.35	*0.75
2589	~2	NA	W	0.5	*0.75
2589	~3	NA	SB	0.4	*0.75
2589	~3	NA	W	0.5	*0.75

ANIMAL WASTE UTILIZATION PLAN

- * This is the maximum application amount allowed for the soil assuming the amount of nitrogen allowed for the crop is not over applied. In many situations, the application amount shown cannot be applied because of the nitrogen limitation. The maximum application amount shown can be applied under optimum soil conditions.

Your facility is designed for 180.00 days of temporary storage and the temporary storage must be removed on the average of once every 6.00 months. In no instance should the volume of the waste be stored in your structure be within the 25 year 24 hour storm storage or one foot of freeboard except in the event of the 25 year 24 hour storm.

It is the responsibility of the producer and waste applicator to ensure that the spreader equipment is operated properly to apply the correct rates to the acres shown in Tables 1 and 2. Failure to apply the recommended rates and amounts of nitrogen shown in the tables may make this plan invalid.

Call your technical specialist after you receive the waste analysis report for assistance in determining the amount of waste per acre and the proper application rate prior to applying the waste.

NARRATIVE OF OPERATION

Landowner will rotate Corn with Wheat/Soybeans. Values given in table, page 6 Net "N" value assume all fields planted to same crop. I recommend that fields be rotated so that any given year portion of acreage planted in corn, part in wheat/soybeans to better balance nutrients. Some commercial fertilization will still be necessary to meet nutrient requirements of some crops.

WASTE UTILIZATION PLAN

REQUIRED SPECIFICATIONS

1. Animal waste shall not reach surface waters of the state by runoff, drift, manmade conveyances, direct application, or direct discharge during operation or land application. Any discharge of waste which reaches surface water is prohibited.
2. There must be documentation in the design folder that the producer either owns or has an agreement for use of adequate land on which to properly apply the waste. If the producer does not own adequate land to properly dispose of waste, he/she shall provide a copy of an agreement with a landowner who is within a reasonable proximity, allowing him/her the use of the land for waste application. It is the responsibility of the owner of the facility to secure an update of the Waste Utilization Plan when there is a change in the operation, increase in the number of animals, method of utilization, or available land.
3. Animal waste shall be applied to meet, but not exceed, the nitrogen needs for realistic crop yields based on soil type, available moisture, historical data, climatic conditions, and level of management, unless there are regulations that restrict the rate of application for other nutrients.
4. Animal waste shall be applied to land eroding less than 5 tons per acre per year. Waste may be applied to land that is eroding at 5 or more tons, but less than 10 tons per acre per year providing grass filter strips are installed where runoff leaves the field. (See FOTG Standard 393 -Filter Strip)
5. Odors can be reduced by injecting the waste or disking after waste application. Waste should not be applied when there is danger of drift from the irrigation field.
6. When animal waste is to be applied on acres subject to flooding, it will be soil incorporated on conventionally tilled cropland. When applied to conservation tilled crops or grassland, the waste may be broadcast provided the application does not occur during a season prone to flooding. (See "Weather and Climate in North Carolina" for guidance.)
7. Liquid waste shall be applied at rates not to exceed the soil infiltration rate such that runoff does not occur offsite or to surface waters and in a method which does not cause drift from the site during application. No ponding should occur in order to control odor or flies.
8. Animal waste shall not be applied to saturated soils, during rainfall events, or when the surface is frozen.
9. Animal waste shall be applied on actively growing crops in such a manner that the crop is not covered with waste to a depth that would inhibit growth. The potential for salt damage from animal waste should also be considered.

WASTE UTILIZATION PLAN

REQUIRED SPECIFICATIONS

10. Waste nutrients shall not be applied in fall or winter for spring planted crops on soils with a high potential for leaching. Waste nutrient loading rates on these soils should be held to a minimum and a suitable winter cover crop planted to take up released nutrients. Waste shall not be applied more than 30 days prior to planting of the crop or forages breaking dormancy.
11. Any new swine facility sited on or after October 1, 1995 shall comply with the following: The outer perimeter of the land area onto which waste is applied from a lagoon that is a component of a swine farm shall be at least 50 feet from any residential property boundary and from any perennial stream or river (other than an irrigation ditch or canal. Animal waste other than swine waste from facilities sited on or after October 1, 1995), shall not be applied closer than 25 feet to perennial waters. (See Standard 393 - Filter Strips).
12. Animal waste shall not be applied closer than 100 feet to wells.
13. Animal waste shall not be applied closer than 200 feet of dwellings other than those owned by the landowner.
14. Waste shall be applied in a manner not to reach other property and public right-of-ways.
15. Animal waste shall not be discharged into surface waters, drainageways, or wetlands by a discharge or by over-spraying. Animal waste may be applied to prior converted cropland provided they have been approved as a land application site by a "technical specialist". Animal waste shall not be applied on grassed waterways that discharges directly into water courses, and on other grassed waterways, waste shall be applied at agronomic rates in a manner that causes no runoff or drift from the site.
16. Domestic and industrial waste from washdown facilities, showers, toilets, sinks, etc., shall not be discharged into the animal waste management system.
17. A protective cover of appropriate vegetation will be established on all disturbed areas (lagoon embankments, berms, pipe runs, etc.). Areas shall be fenced, as necessary, to protect the vegetation. Vegetation such as trees, shrubs, and other woody species, etc., are limited to areas where considered appropriate. Lagoon areas should be kept mowed and accessible. Berms and structures should be inspected regularly for evidence of erosion, leakage or discharge.

WASTE UTILIZATION PLAN

REQUIRED SPECIFICATIONS

18. If animal production at the facility is to be suspended or terminated, the owner is responsible for obtaining and implementing a "closure plan" which will eliminate the possibility of an illegal discharge, pollution and erosion.
19. Waste handling structures, piping, pumps, reels, etc., should be inspected on a regular basis to prevent breakdowns, leaks, and spills. A regular maintenance checklist should be kept on site.
20. Animal waste can be used in a rotation that includes vegetables and other crops for direct human consumption. However, if animal waste is used on crops for direct human consumption it should only be applied preplant with no further applications of animal waste during the crop season.
21. Highly visible markers shall be installed to mark the top and bottom elevations of the temporary storage (pumping volume) of all waste treatment lagoons. Pumping shall be managed to maintain the liquid level between the markers. A marker will be required to mark the maximum storage volume for waste storage ponds.
22. Waste shall be tested within 60 days of utilization and soil shall be tested at least annually at crop sites where waste products are applied. Nitrogen shall be the rate - determining element. Zinc and copper levels in the soils shall be monitored and alternative crop sites shall be used when these metals approach excessive levels. pH shall be adjusted for optimum crop production and maintained. Soil and waste analysis records shall be kept for five years. Poultry dry waste application records shall be maintained for three (3) years. Waste application records for all other waste shall be maintained for five (5) years.
23. Dead animals will be disposed of in a manner that meets North Carolina regulations.

ANIMAL WASTE UTILIZATION PLAN

WASTE UTILIZATION PLAN AGREEMENT

Name of Farm: S & S FARMS

Owner/Manager Agreement

I (we) understand and will follow and implement the specifications and the operation and maintenance procedures established in the approved animal waste utilization plan for the farm named above. I (we) know that any expansion to the existing design capacity of the waste treatment and storage system or construction of new facilities will require a new certification to be submitted to the North Carolina Division of Water Quality (NCDWQ) before the new animals are stocked. I (we) also understand that there must be no discharge of animal waste from this system to surface waters of the state from a storm event less severe than the 25-year, 24-hour storm. The approved plan will be filed on-site at the farm office and at the office of the local Soil and Water Conservation District and will be available for review by NCDWQ upon request.

Name of Facility Owner: MURPHY SMITH

(Please print)

Signature: Murphy Smith Date: 10-7-97

Name of Manager (If different from owner): _____

Signature: _____ Date: _____

Name of Person Preparing Plan: (Please print) Samuel G. Warren

Affiliation: USDA- NRCS Phone No. 910-862-6936

Address (Agency): 122 Ag. Service Ctr.

Elizabethtown NC 28337

Signature: Samuel G. Warren, DC Date: 10/7/97

CONSERVATION PLAN MAP

Owner Murphy Smith Operator _____ Date 4-22-91
 County BLADEN State NC
 Approximate acres 59 Approximate scale 1" = 660'
 Cooperating with BLADEN Conservation District _____
 Plan identification BB135 Photo number _____
 Assisted by WARREN USDA Soil Conservation Service

1999

