

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: 820132 and Certificate of Coverage Number: AWS820132
2. Facility Name: Sam Hope Farms
3. Landowner's name (same as on the Waste Management Plan): Samuel Hope
4. Landowner's mailing address: 350 Malpass Farm Ln  
City/State: Clinton NC Zip: 28328  
Telephone Number (include area code): (910)596-8265 E-mail: \_\_\_\_\_
5. Facility's physical address: 5050 Ezzell Rd  
City: Clinton State: NC Zip: 28328
6. County where facility is located: Sampson
7. Farm Manager's name (If different than the Landowner): \_\_\_\_\_
8. Farm Manager's telephone number (include area code): \_\_\_\_\_
9. Integrator's name (if there is not an integrator write "None"): Murphy-Brown LLC
10. Operator in Charge (OIC) name: Samuel Hope Telephone Number 910-596-8265 OIC # 17844
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 3520  
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 Poult

**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](mailto: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: Samuel J. Hoge Title: Owner  
Signature: Samuel J. Hoge Date: 3-21-14

Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

THE COMPLETED APPLICATION SHOULD BE SENT TO THE FOLLOWING ADDRESS:

**NC DENR-DWR**  
**Animal Feeding Operations Branch**  
**1636 Mail Service Center**  
**Raleigh, North Carolina 27699-1636**

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



# WASTE UTILIZATION PLAN

Coharie Hog Farm

Monday, June 8, 1998

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**Producer :** Sam Hope  
**Farm Name :** Sam Hope Farm  
350 Malpass Farm Lane  
Clinton, NC 28328  
**Telephone # :** (910) 592-5639  
**Type of Operation :** Feeder to Finish Swine  
**Number of Animals :** 3520 hogs design capacity  
**Application Method:** Irrigation

The waste from your animal facility must be land applied at a specified rate to prevent pollution of surface 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 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. Always apply waste based on the needs of the crop to be grown and the nutrient contents of the waste. Do not apply more nitrogen than the crop can utilize. Soil types are important as they have different infiltration rates, leaching potentials, cation exchange capacities, and available water holding capacities. Normally waste shall not be applied to land eroding at greater than 5 tons per acre per year. With special pre-cautions, waste may be applied to land eroding at up to 10 tons per acre per year. 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 DEM regulations. Wind conditions should also be considered to avoid drift and downwind odor problems. 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 to bare ground not more than 30 days prior to planting. Injecting the waste or disking will conserve nutrients and reduce odor problems. This plan is based on waste application through irrigation for this is the manner in which you have chosen to apply your waste. If you choose to inject the waste in the future, you need to revise this plan. Nutrient levels for injecting waste and irrigating waste 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. Attached you will find information on proper sampling techniques, preparation, and transfer of waste samples to the lab for analysis. 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.)

**3520 hogs X 1.9 tons waste/hogs/year = 6688 tons**

AMOUNT OF PLANT AVAILABLE NITROGEN (PAN) PRODUCED PER YEAR

**3520 hogs X 2.3 lbs PAN/hogs/year = 8096 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.

**TABLE 1 : ACRES OWNED BY PRODUCER**

TRACT	FIELD	SOIL TYPE & CLASS- DETERMINING PHASE	CROP CODE	YIELD	LBS AW N/ACRE	COMM N/ACRE	ACRES	LBS AW USED	APPLIC. TIME
8938	14	AUTRYVILLE ALL	BC	4.7	235	0	3.76	883.6	MAR-OCT
8938	~ 14	AUTRYVILLE ALL	SG	1	50	0	3.76	188	SEP-MAY
10913	15	BLANTON 0-5%	BC	3.8	190	0	10.51	1996.9	MAR-OCT
10913	~ 15	BLANTON 0-5%	SG	1	50	0	10.51	525.5	SEP-MAY
5436	2	BLANTON 0-5%	BC	3.8	190	0	6.84	1299.6	MAR-OCT
5436	~ 2	BLANTON 0-5%	SG	1	50	0	6.84	342	SEP-MAY
10913	3	BLANTON 0-5%	BC	3.8	190	0	5.81	1103.9	MAR-OCT
10913	~ 3	BLANTON 0-5%	SG	1	50	0	5.81	290.5	SEP-MAY
10913	4	AUTRYVILLE ALL	BC	4.7	235	0	6.21	1459.35	MAR-OCT
10913	~ 4	AUTRYVILLE ALL	SG	1	50	0	6.21	310.5	SEP-MAY

**TOTALS: 8399.85**

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

\* Indicates a Crop Rotation

NOTE: The applicator is cautioned that P and K may be over applied while meeting the N requirements. Beginning in 1996 the Coastal Zone Management Act will require farmers in some eastern counties of NC to have a nutrient management plan that addresses all nutrients. This plan only addresses Nitrogen.

## TABLE 2 : ACRES WITH AGREEMENT OR LONG TERM LEASE

(Agreement with adjacent landowners must be attached.)

(Required only if operator does not own adequate land. See required specifications 2.)

### There are no Acres Leased

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

\* Indicates a Crop Rotation

\* Acreage figures may exceed total acreage in field 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	LBS N/UNIT
BC	HYBRID BERMUDAGRASS-CONTROLLED GRAZED	TONS	50
SG	SMALL GRAIN OVERSEEDED	AC	50



## TOTALS FROM TABLES 1 AND 2

	ACRES	LBS AW N USED
TABLE 1	33.13	8,400
<b>TOTALS:</b>	<b>33.13</b>	<b>8,400</b>
<b>AMOUNT OF N PRODUCED:</b>		8,096
<b>*** BALANCE</b>		-304

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

Acres show in each of the preceeding 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.

NOTE: The Waste Utilization Plan must contain provisions for periodic land application of sludge at agronomic rates. The sludge will be nurturient rich and will require precautionary measures to prevent over application of nutrients or other elements. Your production facility will produce approximately 1302.4 pounds of plant available nitrogen (PAN) per year in the sludge that will need to be removed on a periodic basis. This figure is PAN when broadcasting the sludge. Please be aware that additional acres of land, as well special equipment, may be needed when you remove this sludge.

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

### 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.

Your facility is designed for 180 days of temporary storage and the temporary storage must be removed on the average of once every 5.92 months. In no instance should the volume of waste being stored in your structure be within 1.6 feet of the top of the dike.

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 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)	APPLICATION AMT (inches)
10913	~15, ~3	BLANTON 0-5%	SG	0.75	*1
10913	15, 3	BLANTON 0-5%	BC	0.75	*1
10913	~4	AUTRYVILLE ALL	SG	0.60	*1
10913	4	AUTRYVILLE ALL	BC	0.60	*1
5436	~2	BLANTON 0-5%	SG	0.75	*1
5436	2	BLANTON 0-5%	BC	0.75	*1
8938	~14	AUTRYVILLE ALL	SG	0.60	*1
8938	14	AUTRYVILLE ALL	BC	0.60	*1

\* 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 the nitrogen limitation. The maximum application amount shown can be applied under optimum soil conditions.

## **NARRATIVE OF OPERATION**

This is the same plan as was developed in 1994, but placed on the current format.  
Based on irrigation design completed on 5-10-2005.



## PLANS & 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. Illegal discharges are subject to assessment of civil penalties of \$10,000 per day by the Division of Water Quality for every day the discharge continues.
2. The Field Office must have documentation in the design folder that the producer either owns or has long term access to adequate land to properly dispose of waste. If the producer does not own adequate land to properly dispose of waste, he shall provide NRCS with a copy of a written agreement with a landowner who is within a reasonable proximity, allowing him/her the use of the land for waste application for the life expectancy of the production facility. 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, climate conditions, and level of management, unless there are regulations that restrict the rate of application for other nutrients.
4. Animal waste may be applied to land that has a Resource Management System (RMS) or an Alternative Conservation System (ACS). If an ACS is used the soil loss shall be no greater than 10 tons per acre per year and appropriate filter strips will be used where runoff leaves the field. These filter strips will be in addition to "Buffers" required by DEM. (See FOTG Standard 393 - Filter Strips and Standard 390 Interim Riparian Forest Buffers).
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" in the NRCS Technical Reference - Environment file 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 conditions conducive to odor or flies and to provide uniformity of application.
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.
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 a crop on bare soil.
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 discharge or by over-spraying. Animal waste may be applied to prior converted croplands provided they have been approved as a land application site by a "technical specialist". Animal waste should not be applied on grassed waterways that discharge directly into water courses, except when applied at agronomic rates and the application 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.). If needed, special vegetation shall be provided for these areas and 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. Lagoon berms and structures should be inspected regularly for evidence of erosion, leakage or discharge.

\*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 as a preemergence with no other 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 (5) 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 Department of Agriculture regulations.

**\* Liquid Systems**



NAME OF FARM: Sam Hope Farm

**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/or storage system or construction of new facilities will require a new utilization plan and a new certification to be submitted to DEM before the new animals are stocked.

I (we) understand that I must own or have access to equipment, primarily irrigation equipment, to land apply the animal waste described in this waste utilization plan. This equipment must be available at the appropriate pumping time such that no discharge occurs from the lagoon in a 25-year 1-day storm event. I also certify that the waste will be applied on the land according to this plan at the appropriate times and at rates that no runoff occurs.

NAME OF FACILITY OWNER: Sam Hope

SIGNATURE: Samuel Hope DATE: 6-8-98

NAME OF MANAGER (if different from owner): \_\_\_\_\_

*please print*

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF TECHNICAL SPECIALIST: Curtis Barwick

AFFILIATION: Coharie Hog Farm

ADDRESS (AGENCY): 300 Westover Rd.

Clinton, NC 28328

(910) 592-1122

SIGNATURE: Curtis Barwick DATE: 6-8-98

updated 7-28-05  
Sam Hope  
C & B Barwick



2  
40.88

T5436  
517  
2  
6.26

2  
9.00  
3  
18.64

T8938  
517  
13  
20.20  
2  
21.10

14  
5.26

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ACEL  
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T5398  
517  
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NON AP  
2  
9.4

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16.65

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3  
12.76

PC