

# PERMIT RENEWAL

# Permit Renewal

- Permit expires September 2019
- Application for new permit must be made 6 months in advance
- Renewal applications mailed last week of February
- Fill out and send in with entire Certified Animal Waste Management Plan

## Documents Needed

- Lagoon Design
- Irrigation Design/Site Map
- Field maps
- Emergency Action Plan
- Odor Control Checklist
- Mortality Management Checklist- NEW
- Insect Control Checklist
- Operation and Maintenance Plan
- Waste Utilization plan

# Lagoon Design

Lagoon design- volumes, not blueprint

Operator: [REDACTED] County: LENOIR Date: 03/11/94

Distance to nearest residence (other than owner): 800.0 feet

## STEADY STATE LIVE WEIGHT

0 sows (farrow to finish)	x	1417 lbs.	=	0
0 sows (farrow to feeder)	x	522 lbs.	=	0
0 head (finishing only)	x	135 lbs.	=	0
0 sows (farrow to wean)	x	433 lbs.	=	0
3840 head (wean to feeder)	x	30 lbs.	=	115200

## TOTAL STE

## MINIMUM REQUIRED TREATM

Volume = 115200  
Treatment Volume (C)  
Volume = 115200

## STORAGE VOLUME FOR SLUD

Volume = 0.0

## TOTAL DESIGN VOLUME

Inside top length  
Top of dike at ele  
Freeboard 1.0  
Total design lagoon  
Bottom of lagoon e  
Seasonal high water

Total design volum

SS/END1 SS/END2  
3.0 3.0

## DRAINAGE AREA:

Lagoon (top of dike)  
Length \* Width =  
240.0 130.0 31200.0 square feet

Buildings (ro  
Length \* Wi  
0.0

## TOTA

Design tempor

5A. Volume of waste p

Approximate d

Volume = 11  
Volume = 2

5B. Volume of wash wa

This is the a  
of fresh water  
the lagoon wa

Volume =

Volume =

5C. Volume of rainfal

Use period of

1. Volume of 25 year - 24 hour storm

Volume = 7.2 inches / 12 inches per foot \* DA

Volume = 18720.0 cubic feet

## TOTAL REQUIRED TEMPORARY STORAGE

5A.	28201 cubic feet
5B.	0 cubic feet
5C.	18200 cubic feet
5D.	18720 cubic feet
TOTAL	65121 cubic feet

## SUMMARY

Total required volume	180321 cubic feet
Total design volume avail.	182898 cubic feet
Min. req. treatment volume plus sludge accumulation	115200
At elev. 49.4 feet ; Volume is	116883 cubic feet (end pu
Total design volume less 25yr-24hr storm is	164178 cubic fee
At elev. 51.7 feet ; Volume is	177138 cubic feet (start
Seasonal high water table elevation	46.9 feet

DESIGNED BY: *Randy Murphy* APPROVED BY: *Harold D. Chumwa*

DATE: 3-16-94

DATE: 7-6-94



**N.C. A&T**  
STATE UNIVERSITY

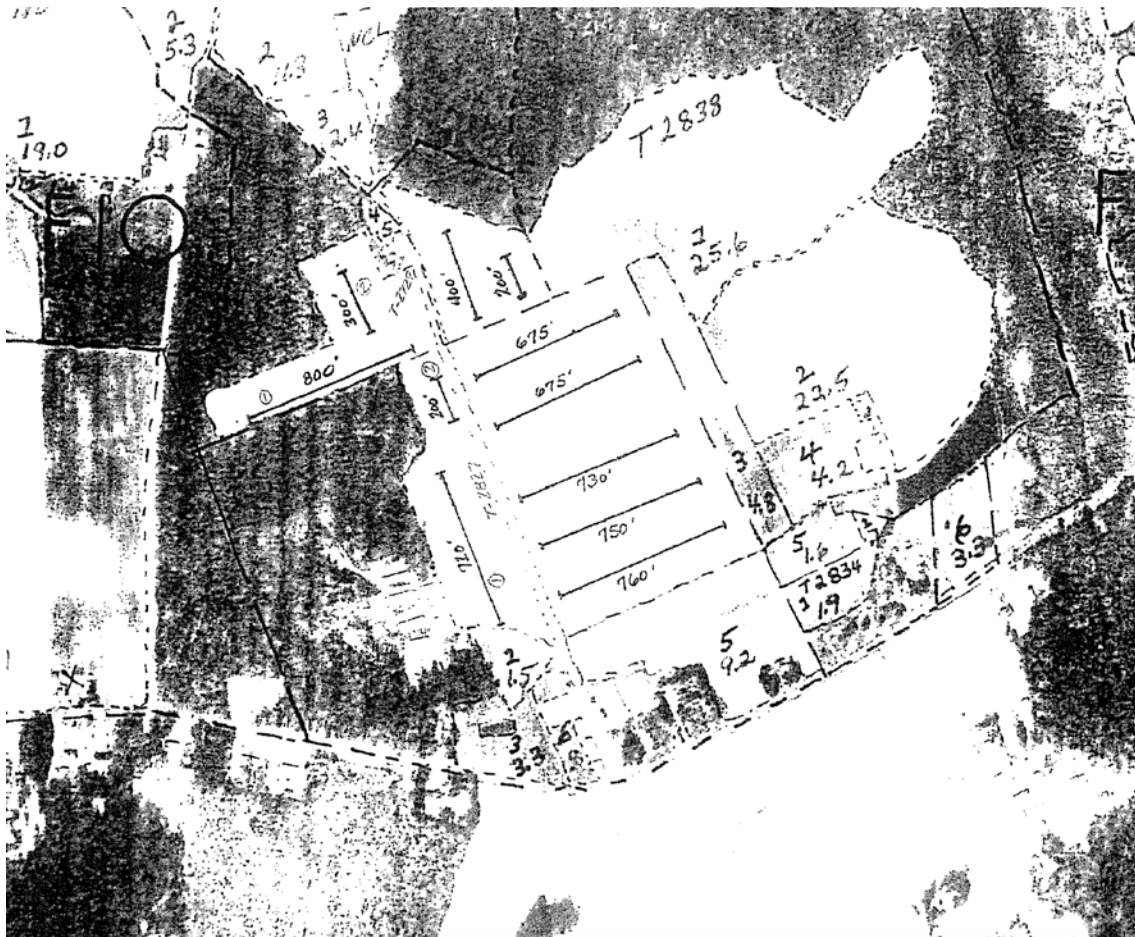
**NC STATE**  
UNIVERSITY

# Lagoon- fill in worksheet

13. Waste Treatment and Storage Lagoons (Verify the following information is accurate and complete. Make all necessary corrections and provide missing data.)

Structure Name	Estimated Date Built	Liner Type (Clay, Synthetic, Unknown)	Capacity (Cubic Feet)	Estimated Surface Area (Square Feet)	Design Freeboard "Redline" (Inches)

# Irrigation design



If design has changed, new design must be sent with all qualifications

- Documented setbacks
- New wetted acreage
- Waste plan certification



# Field Maps- updated



# Emergency Action Plan

## Emergency Action Plan

This plan will be implemented in the event that wastes from your operations are leaking, overflowing, or running off the site. You should NOT wait until wastes reach surface waters or leave your property to consider that you have a problem. You should make every effort to ensure that this does not happen. This plan should be available to all employees at the facility, as accidents, leaks, and breaks can happen at any time.

- 1) Stop the release of wastes. Depending on the situation, this may or may not be possible. Suggested responses to problems are listed below:

a) Lagoon overflow:

- add soil to the berm to increase the elevation of the dam
- pump wastes to fields at an acceptable rate
- stop all additional flow to the lagoon (waterers)
- call a pumping contractor
- make sure no surface water is entering the lagoon

Note: These activities should be started when your lagoon level has exceeded the temporary storage level.

b) Runoff from waste application field:

- immediately stop waste application
- create a temporary diversion or berm to contain the waste on the field
- incorporate waste to reduce further runoff

c) Leaking from the waste distribution system:

- pipes and sprinklers:
  - ① stop recycle (flushing system) pump
  - ② stop irrigation pump
  - ③ close valves to eliminate further discharge
  - ④ separate pipes to create an air gap and stop flow
- flush system, houses, solids separators:
  - ① stop recycle (flushing system) pump
  - ② stop irrigation pump
  - ③ make sure no siphon effect has been created
  - ④ separate pipes to create an air gap and stop flow

d) Leakage from base or sidewall of the lagoon. Often these are seepage as opposed to flowing leaks:

- dig a small well or ditch to catch all seepage, put in a submersible pump, and pump back into the lagoon



# Odor Control Checklist

Swine Farm Waste Management Odor Control Checklist

Source	Cause	BMPs to Minimize Odor	Site Specific Practices
Farmstead	• Swine production	<input type="checkbox"/> Vegetative or wooded buffers <input type="checkbox"/> Recommended best management practices <input type="checkbox"/> Good judgment and common sense	
Animal body surfaces	• Dirty manure-covered animal	<input type="checkbox"/> Dry floors	
Floor surfaces	• W		

Swine Farm Waste Management Odor Control Checklist

Source	Cause	BMPs to Minimize Odor	Site Specific Practices
Pit recharge points	• Agitation of recycled lagoon liquid while pits are filling	<input type="checkbox"/> Extend recharge lines to near bottom of pits with anti-siphon vents	
Manure collection pits	• Ur • Pa • de		
Ventilation exhaust fans	• Vc • Dt		
Indoor surfaces	• Dt		
Flush tanks	• Ag • liq		
Flush alleys	• Ag • co		

Swine Farm Waste Management Odor Control Checklist

Source	Cause	BMPs to Minimize Odor	Site Specific Practices
Settling basin surface	<ul style="list-style-type: none"> <li>• Partial microbial decomposition</li> <li>• Mixing while filling</li> <li>• Agitation when emptying</li> </ul>	<input type="checkbox"/> Extend drainpipe outlets underneath liquid level <input type="checkbox"/> Remove settled solids regularly	
Manure, slurry, or sludge spreader outlets	<ul style="list-style-type: none"> <li>• Agitation when spreading</li> <li>• Volatile gas emissions</li> </ul>	<input type="checkbox"/> Soil injection of slurry/sludges <input type="checkbox"/> Wash residual manure from spreader after use <input type="checkbox"/> Proven biological additives or oxidants	
Uncovered manure, slurry, or sludge on field surfaces	<ul style="list-style-type: none"> <li>• Volatile gas emissions while drying</li> </ul>	<input type="checkbox"/> Soil injection of slurry/sludges <input type="checkbox"/> Soil incorporation within 48 hours <input type="checkbox"/> Spread in thin uniform layers for rapid drying <input type="checkbox"/> Proven biological additives or oxidants	
Dead animals	<ul style="list-style-type: none"> <li>• Carcass decomposition</li> </ul>	<input type="checkbox"/> Proper disposition of carcasses	
Dead animal disposal pits	<ul style="list-style-type: none"> <li>• Carcass decomposition</li> </ul>	<input type="checkbox"/> Complete covering of carcasses in burial pits <input type="checkbox"/> Proper location/construction of disposal pits	
Incinerators	<ul style="list-style-type: none"> <li>• Incomplete combustion</li> </ul>	<input type="checkbox"/> Secondary stack burners	
Standing water around facilities	<ul style="list-style-type: none"> <li>• Improper drainage</li> <li>• Microbial decomposition of organic matter</li> </ul>	<input type="checkbox"/> Grade and landscape such that water drains away from facilities	
Manure tracked onto public roads from farm access	<ul style="list-style-type: none"> <li>• Poorly maintained access roads</li> </ul>	<input type="checkbox"/> Farm access road maintenance	

# Mortality Management Checklist- NEW


Version—November 26, 2018

## Mortality Management Methods

*Indicate which method(s) will be implemented.*

*When selecting multiple methods indicate a primary versus secondary option.  
Methods other than those listed must be approved by the State Veterinarian.*

Primary	Secondary	
<input type="checkbox"/>	<input type="checkbox"/>	<b>Routine Mortality</b> Burial three feet beneath the surface of the ground within 24 hours of knowledge of animal death. The burial must be at least 300 feet from any flowing stream or public body of water (G.S. 106-403). The bottom of the burial pit should be at least one foot above the seasonal high water table. Attach burial location map and plan.
<input type="checkbox"/>	<input type="checkbox"/>	Landfill at municipal solid waste facility permitted by NC DEQ under GS 15A NCAC 13B .0200.
<input type="checkbox"/>	<input type="checkbox"/>	Rendering at a rendering plant licensed under G.S. 106-168.7.
<input type="checkbox"/>	<input type="checkbox"/>	Complete incineration according to 02 NCAC 52C .0102.
<input type="checkbox"/>	<input type="checkbox"/>	A composting system approved and permitted by the NC Department of Agriculture & Consumer Services Veterinary Division (attach copy of permit). If compost is distributed off-farm, additional requirements must be met and a permit is required from NC DEQ.
<input type="checkbox"/>	<input type="checkbox"/>	In the case of dead poultry only, placing in a disposal pit of a size and design approved by the NC Department of Agriculture & Consumer Services (G.S. 106-549.70).
<input type="checkbox"/>	<input type="checkbox"/>	Any method which, in the professional opinion of the State Veterinarian, would make possible the salvage of part of a dead animal's value without endangering human or animal health. (Written approval by the State Veterinarian must be attached).
<input type="checkbox"/>		<b>Mass Mortality Plan</b> Mass mortality plans are required for farms covered by an NPDES permit. These plans are also recommended for all animal operations. This plan outlines farm-specific mortality management methods to be used for mass mortality. The NCDA&CS Veterinary Division supports a variety of emergency mortality disposal options; contact the Division for guidance.  <ul style="list-style-type: none"> <li>A catastrophic mortality disposal plan is part of the facility's CAWMP and is activated when numbers of dead animals exceed normal mortality rates as specified by the State Veterinarian.</li> <li>Burial must be done in accordance with NC General Statutes and NCDA&amp;CS Veterinary Division regulations and guidance.</li> <li>Mass burial sites are subject to additional permit conditions (refer to facility's animal waste management system permit).</li> <li>In the event of imminent threat of a disease emergency, the State Veterinarian may enact additional temporary procedures or measures for disposal according to G.S. 106-399.4.</li> </ul>

Signature of Farm Owner/Manager  
  
Signature of Technical Specialist

Date  
3/1/19  
Date

# Insect Control Checklist

Insect Control Checklist for Animal Operations

Source	Cause	BMPs to Control Insects	Site Specific Practices
<b>Liquid Systems</b>			
Flush Gutters	• Accumulation of solids	<input checked="" type="checkbox"/> Flush system is designed and operated sufficiently to remove accumulated solids from gutters as designed. <input checked="" type="checkbox"/> Remove bridging of accumulated solids at discharge	
Lagoons and Pits	• Crusted Solids	<input checked="" type="checkbox"/> Maintain lagoons, settling basins and pits where pest breeding is apparent to minimize the crusting of solids to a depth of no more than 6 - 8 inches over more than 30% of surface.	
Excessive Vegetative Growth	• Decaying vegetation	<input checked="" type="checkbox"/> Maintain vegetative control along banks of lagoons and other impoundments to prevent accumulation of decaying vegetative matter along water's edge on impoundment's perimeter.	
<b>Dry Systems</b>			
Feeders	• Feed Spillage	<input checked="" type="checkbox"/> Design, operate and maintain feed systems (e.g., bunkers and troughs) to minimize the accumulation of decaying wastage. <input checked="" type="checkbox"/> Clean up spillage on a routine basis (e.g., 7 - 10 day interval during summer; 15-30 day interval during winter).	
Feed Storage	• Accumulations of feed residues	<input type="checkbox"/> Reduce moisture accumulation within and around immediate perimeter of feed storage areas by insuring drainage away from site and/or providing adequate containment (e.g., covered bin for brewer's grain and similar high moisture grain products). <input checked="" type="checkbox"/> Inspect for and remove or break up accumulated solids in filter strips around feed storage as needed.	

# Operation and Maintenance Plan

## OPERATION AND MAINTENANCE PLAN

SHEET 1 OF 2

This lagoon is designed for waste treatment (permanent storage) and 180 days of temporary storage. The time required for the planned fluid level (permanent and temporary storage) to be reached may vary due to site conditions, weather, flushing operations, and the amount of fresh water added to the system.

The designed temporary storage consists of 180 days storage for: (1) waste from animals and (2) excess rainfall after evaporation. Also included is storage for the 25 year - 24 hour storm for the location. The volume of waste generated from a given number of animals will be fairly constant throughout the year and from year to year, but excess rainfall will vary from year to year. The 25 year rainfall will not be a factor to consider in an annual pumping cycle, but this storage volume must always be available.

A maximum elevation is determined in each design to begin pumping and this is usually the outlet invert of pipe(s) from building(s). If the outlet pipe is not installed at the elevation to begin pumping, a permanent marker must be installed at this elevation to indicate when pumping should begin. An elevation must be established to stop pumping to maintain lagoon treatment depth. Pumping can be started or stopped at any time between these two elevations for operating convenience as site conditions permit, such as weather, soils, crop, and equipment in order to apply waste without runoff or leaching.

Land application of waste water is recognized as an acceptable method of disposal. Methods of application include solid set, center pivot, guns, and traveling gun irrigation. Care should be taken when applying waste to prevent damage to crops.

The following items are to be carried out:

1. It is strongly recommended that the treatment lagoon be pre-charged to 1/2 its capacity to prevent excessive odors during start-up. Pre-charging reduces the concentration of the initial waste entering the lagoon thereby reducing odors. Solids should be covered with effluent at all times. When precharging is complete, flush buildings with recycled lagoon liquid. Fresh water should not be used for flushing after initial filling.
2. The attached waste utilization plan shall be followed. This plan recommends sampling and testing of waste (see attachment) before land application.
3. Begin temporary storage pump-out of the lagoon when fluid level reaches the elevation 47.3 as marked by permanent marker. Stop pump-out when the fluid level reached elevation 45.3. This temporary storage, less 25 yr- 24 hr storm, contains 44933 cubic feet or 336096 gallons.

SHEET 2 OF 2

4. The recommended maximum amount to apply per irrigation is one (1) inch and the recommended maximum application rate is 0.3 inch per hour. Refer to the waste utilization plan for further details.
5. Keep vegetation on the embankment and areas adjacent to the lagoon mowed annually. Vegetation should be fertilized as needed to maintain a vigorous stand.
6. Repair any eroded areas or areas damaged by rodents and establish in vegetation.
7. All surface runoff is to be diverted from the lagoon to stable outlets.
8. Keep a minimum of 25 feet of grass vegetated buffer around waste utilization fields adjacent to perennial streams. Waste will not be applied in open ditches. Do not pump within 200 feet of a residence or within 100 feet of a well. Waste shall be applied in a manner not to reach other property and public right-of-ways.
9. The Clean Water Act of 1977 prohibits the discharge of pollutants into waters of the United States. The Department of Environment, Health, and Natural Resources, Division of Environmental Management, has the responsibility for enforcing this law.

# Waste Utilization Plan

Nutrient Management Plan For Animal Waste Utilization  
05-21-2018

This plan has been prepared for:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

This plan has been developed by:

*Eve H. Honeycutt*  
N C Cooperative Extension  
Lenoir County Center  
1791 Hwy 11/55  
Kinston, NC 28504  
252-527-2191

  
Developer Signature

Type of Plan: Nitrogen Only with Manure Only

## Owner/Manager/Producer Agreement

I (we) understand and agree to the specifications and the operation and maintenance procedures established in this nutrient management plan which includes an animal waste utilization plan for the farm named above. I have read and understand the Required Specifications concerning animal waste management that are included with this plan.

\_\_\_\_\_  
Signature (owner)

\_\_\_\_\_  
Date

## Deadline

- 30 days to complete packet
- Mail in with copies of all requested documents
- New COC will be mailed in August\*



## Questions

- Eve\_Honeycutt@ncsu.edu
- Text or call- 252-521-1706
- Join text group- Animal Waste Operators
  - Open text message app
  - To:81010
  - Message: @lenoir
  - send