

Nutrient Management Plan For *WOOD ASTH*
08-03-2012

This plan has been prepared for:

Joseph Johnson
Joseph Johnson
PO Box 57

Whitakers, NC 27891
252-985-8976

This plan has been developed by:

Ken Morris
Nash County Soil & Water
1006 Eastern Ave
Rm 107
Nashville, NC 27856
252-459-4116 ext. 3



Developer Signature

Type of Plan: Nutrient Management with *WOOD ASTH*

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)

8-23-12
Date

Signature (manager or producer)

Date

This plan meets the minimum standards and specifications of the U.S. Department of Agriculture - Natural Resources Conservation Service or the standard of practices adopted by the Soil and Water Conservation Commission.

Plan Approved By:


Technical Specialist Signature

8-23-12
Date

Nutrient Management Plan For *WOOD ASH*
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Nutrients applied in accordance with this plan will be supplied from the following source(s):

Commercial Fertilizer is not included in this plan.

U10	ASH STACK waste generated 150.00 tons/year by a 150 animal Broiler House Whole Litter operation. <i>wood ASH from Steers + pallets</i>				
Estimated Pounds of Plant Available Nitrogen Generated per Year					
Broadcast	169				
Incorporated	206				
Injected	N/A				
Irrigated	N/A				
	Max. Avail. PAN (lbs) *	Actual PAN Applied (lbs)	PAN Surplus/Deficit (lbs)	Actual Quantity Applied (Tons)	Surplus/Deficit (Tons)
Year 1	169	7235	-7,066	6,406.95	-6,256.95

This plan includes a User Defined Source to determine the total pounds of PAN in lieu of NRCS Standard values. Refer to North Carolina Cooperative Extension Service publication AG-439-42 entitled "Soil Facts: Use of On-Farm Records for Modifying a Certified Animal Waste Management Plan" for guidance on using on-farm records to develop a User Defined Source.

Note: In source ID, S means standard source, U means user defined source.

* Max. Available PAN is calculated on the basis of the actual application method(s) identified in the plan for this source.

The table shown below provides a summary of the crops or rotations included in this plan for each field. Realistic Yield estimates are also provided for each crop, as well as the crop's P2O5 Removal Rate. The Leaching Index (L.I) and the Phosphorous Loss Assessment Tool (PLAT) Rating are also provided for each field, where available.

If a field's PLAT Rating is High, any planned manure application is limited to the phosphorous removal rate of the harvested plant biomass for the crop rotation or multiple years in the crop sequence. Fields with a Very High PLAT Rating should receive no additional applications of manure. Regardless of the PLAT rating, starter fertilizers may be recommended in accordance with North Carolina State University guidelines or recommendations. The quantity of P2O5 applied to each crop is shown in the following table if the field's PLAT rating is High or Very High.

Planned Crops Summary

Tract	Field	Total Acres	Useable Acres	Plat Rating	LI	Soil Series	Crop Sequence	RYE	P2O5	
									Removal (lbs/acre)	Applied (lbs/acre)
3882	12	5.40	5.40	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	14	1.00	1.00	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	15	0.60	0.60	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	16	3.00	3.00	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	17	1.30	1.30	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	2	16.10	16.10	Low	N/A	Norfolk	Fescue Hay	3.5 Tons	55	N/A
3882	3	2.20	2.20	Low	N/A	Norfolk	Fescue Hay	3.5 Tons	55	N/A
3882	4	0.90	0.90	Low	N/A	Norfolk	Fescue Hay	3.5 Tons	55	N/A
3882	5	3.60	3.60	Low	N/A	Norfolk	Fescue Hay	3.5 Tons	55	N/A
3882	6	0.90	0.90	Low	N/A	Wedowee	Fescue Hay	3.0 Tons	47	N/A
3882	7	8.50	8.50	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	8	19.80	19.80	Low	N/A	Wedowee	Fescue Hay	2.9 Tons	46	N/A
3882	9	10.40	4.00	Low	N/A	Wedowee	Fescue Hay	3.0 Tons	47	N/A

PLAN TOTALS: 73.70 67.30

<i>LI</i>	<i>Potential Leaching</i>	<i>Technical Guidance</i>
< 2	Low potential to contribute to soluble nutrient leaching below the root zone.	None
≥ 2 & ≤ 10	Moderate potential to contribute to soluble nutrient leaching below the root zone.	Nutrient Management (590) should be planned.
> 10	High potential to contribute to soluble nutrient leaching below the root zone.	Nutrient Management (590) should be planned. Other conservation practices that improve the soils available water holding capacity and improve nutrient use efficiency should be considered. Examples are Cover Crops (340) to scavenge nutrients, Sod-Based Rotations (328), Long-Term No-Till (778), and edge-of-field practices such as Filter Strips (393) and Riparian Forest Buffers (391).

<i>PLAT Index</i>	<i>Rating</i>	<i>P Management Recommendation</i>
0 - 25	Low	No adjustment needed; N based application
25 - 50	Medium	No adjustment needed; N based application
51 - 100	High	Application limited to crop P removal
> 100	Very High	Starter P application only

The Waste Utilization table shown below summarizes the waste utilization plan for this operation. This plan provides an estimate of the number of acres of cropland needed to use the nutrients being produced. The plan requires consideration of the realistic yields of the crops to be grown, their nutrient requirements, and proper timing of applications to maximize nutrient uptake.

This table provides an estimate of the amount of nitrogen required by the crop being grown and an estimate of the nitrogen amount being supplied by manure or other by-products, commercial fertilizer and residual from previous crops. An estimate of the quantity of solid and liquid waste that will be applied on each field in order to supply the indicated quantity of nitrogen from each source is also included. A balance of the total manure produced and the total manure applied is included in the table to ensure that the plan adequately provides for the utilization of the manure generated by the operation.

Tract		Field	Source ID	Soil Series	Total Acres	Use, Acres	Crop	Applic. Period	Nitrogen PA Nutrient Req'd (lbs/A)	Comm. Fert. Nutrient Applied (lbs/A)	Res. (lbs/A)	Applic. Method	Manure PA Nutrient Applied (lbs/A)	Liquid Manure Applied (acre)	Solid Manure Applied (acre)	Liquid Manure Applied (Field)	Solid Manure Applied (Field)
									N	N	N		N	1000 gal/A	Tons	1000 gals	tons
3882	12	U10	Wedowee		5.40	5.40	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	616.91
3882	14	U10	Wedowee		1.00	1.00	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	114.24
3882	15	U10	Wedowee		0.60	0.60	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	68.55
3882	16	U10	Wedowee		3.00	3.00	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	342.73
3882	17	U10	Wedowee		1.30	1.30	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	148.51
3882	2	U10	Norfolk		16.10	16.10	Fescue Hay	8/1-7/31	160	0	0	Broad.	25	0.00	22.14	0.00	356.45
3882	3	U10	Norfolk		2.20	2.20	Fescue Hay	8/1-7/31	160	0	0	Broad.	160	0.00	141.70	0.00	311.73
3882	4	U10	Norfolk		0.90	0.90	Fescue Hay	8/1-7/31	160	0	0	Broad.	160	0.00	141.70	0.00	127.53
3882	5	U10	Norfolk		3.60	3.60	Fescue Hay	8/1-7/31	160	0	0	Broad.	160	0.00	141.70	0.00	510
3882	6	U10	Wedowee		0.90	0.90	Fescue Hay	8/1-7/31	133	0	0	Broad.	133	0.00	117.78	0.00	100
3882	7	U10	Wedowee		8.50	8.50	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	971.06
3882	8	U10	Wedowee		19.80	19.80	Fescue Hay	8/1-7/31	129	0	0	Broad.	129	0.00	114.24	0.00	2,261.99
3882	9	U10	Wedowee		10.40	4.00	Fescue Hay	8/1-7/31	133	0	0	Broad.	133	0.00	117.78	0.00	471.14

Waste Utilization Table

Year 1

Tract	Field	Source ID	Soil Series	Total Acres	Use. Acres	Crop	RVE	Applic. Period	Nitrogen PA Nutrient Req'd (lbs/A)	Comm. Fert. Nutrient Applied (lbs/A)	Res. (lbs/A)	Applic. Method	Manure PA Nutrient Applied (lbs/A)	Liquid Manure Applied (acre)	Solid Manure Applied (acre)	Liquid Manure Applied (Field)	Solid Manure Applied (Field)
Total Applied, 1000 gallons																	
Total Produced, 1000 gallons																	
Balance, 1000 gallons																	
Total Applied, tons																	
Total Produced, tons																	
Balance, tons																	
6,406.95																	
150.00																	
-6,256.95																	

Notes: 1. In the tract column, ~ symbol means leased, otherwise, owned. 2. Symbol * means user entered data.

The Nutrient Management Recommendations table shown below provides an annual summary of the nutrient management plan developed for this operation. This table provides a nutrient balance for the listed fields and crops for each year of the plan. Required nutrients are based on the realistic yields of the crops to be grown, their nutrient requirements and soil test results. The quantity of nutrient supplied by each source is also identified.

The total quantity of nitrogen applied to each crop should not exceed the required amount. However, the quantity of other nutrients applied may exceed their required amounts. This most commonly occurs when manure or other byproducts are utilized to meet the nitrogen needs of the crop. Nutrient management plans may require that the application of animal waste be limited so as to prevent over application of phosphorous when excessive levels of this nutrient are detected in a field. In such situations, additional nitrogen applications from nonorganic sources may be required to supply the recommended amounts of nitrogen.

Nutrient Management Recommendations Test

YEAR		1			N (lbs/A)	P2O5 (lbs/A)	K2O (lbs/A)	Mg (lbs/A)	Mn (lbs/A)	Zn (lbs/A)	Cu (lbs/A)	Lime (tons/A)
Tract	Field	3882	12	Req'd Nutrients	129	0	80	0	0	0	0	1
Acres	App. Period	5.40	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	308	254	64	20	6	-1
Tract	Field	3882	14	Req'd Nutrients	129	0	80	0	0	0	0	1
Acres	App. Period	1.00	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	308	254	64	20	6	-1
Tract	Field	3882	15	Req'd Nutrients	129	0	80	0	0	0	0	1
Acres	App. Period	0.60	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	308	254	64	20	6	-1
Tract	Field	3882	16	Req'd Nutrients	129	0	80	0	0	0	0	1
Acres	App. Period	3.00	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	308	254	64	20	6	-1

Nutrient Management Recommendations Test

YEAR		1			N (lbs/A)	P2O5 (lbs/A)	K2O (lbs/A)	Mg (lbs/A)	Mn (lbs/A)	Zn (lbs/A)	Cu (lbs/A)	Lime (tons/A)
Tract	Field	3882	17	Req'd Nutrients	129	0	80	0	0	0	0	1
Acres	App. Period	1.30	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	308	254	64	20	6	-1
Tract	Field	3882	2	Req'd Nutrients	160	0	120	0	0	0	0	0
Acres	App. Period	16.10	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Norfolk		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	3.5 Tons	06-22-12	Manure	25	55	75	49	12	4	1	0
P Removal	Rating	55 lbs/ac.	Low	BALANCE	-135	55	-45	49	12	4	1	0
Tract	Field	3882	3	Req'd Nutrients	160	0	110	0	0	0	0	0
Acres	App. Period	2.20	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Norfolk		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	3.5 Tons	06-14-12	Manure	160	350	481	315	79	24	7	0
P Removal	Rating	55 lbs/ac.	Low	BALANCE	0	350	371	315	79	24	7	0
Tract	Field	3882	4	Req'd Nutrients	160	0	110	0	0	0	0	0
Acres	App. Period	0.90	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Norfolk		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	3.5 Tons	06-22-12	Manure	160	350	481	315	79	24	7	0
P Removal	Rating	55 lbs/ac.	Low	BALANCE	0	350	371	315	79	24	7	0
Tract	Field	3882	5	Req'd Nutrients	160	0	110	0	0	0	0	0
Acres	App. Period	3.60	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Norfolk		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	3.5 Tons	06-22-12	Manure	160	350	481	315	79	24	7	0
P Removal	Rating	55 lbs/ac.	Low	BALANCE	0	350	371	315	79	24	7	0

Nutrient Management Recommendations Test

YEAR		1			N (lbs/A)	P2O5 (lbs/A)	K2O (lbs/A)	Mg (lbs/A)	Mn (lbs/A)	Zn (lbs/A)	Cu (lbs/A)	Lime (tons/A)
Tract	Field	3882	6	Req'd Nutrients	133	0	130	0	0	0	0	0
Acres	App. Period	0.90	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	3.0 Tons	06-22-12	Manure	133	291	400	262	66	20	6	0
P Removal	Rating	47 lbs/ac.	Low	BALANCE	0	291	270	262	66	20	6	0
Tract	Field	3882	7	Req'd Nutrients	129	0	120	0	0	0	0	0
Acres	App. Period	8.50	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	268	254	64	20	6	0
Tract	Field	3882	8	Req'd Nutrients	129	0	120	0	0	0	0	0
Acres	App. Period	19.80	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	2.9 Tons	06-22-12	Manure	129	282	388	254	64	20	6	0
P Removal	Rating	46 lbs/ac.	Low	BALANCE	0	282	268	254	64	20	6	0
Tract	Field	3882	9	Req'd Nutrients	133	0	120	0	0	0	0	0
Acres	App. Period	4.00	8/1-7/31	Supplied By:								
CROP		Fescue Hay		Starter	0	0	0	0	0	0	0	0
				Commercial Fert.	0	0	0	0	0	0	0	0
Soil Series		Wedowee		Residual	0	0	0	0	0	0	0	0
RYE	Sample Date	3.0 Tons	06-22-12	Manure	133	291	400	262	66	20	6	0
P Removal	Rating	47 lbs/ac.	Low	BALANCE	0	291	280	262	66	20	6	0

NOTE: Symbol * means user entered data.

The Required Soil Test Values shown in the following table provide a summary of recommended actions that should be taken if soil tests indicate excessive levels of copper or zinc. Fields that receive manure must have an annual soil analysis for these elements. High levels of zinc and copper can adversely affect plant growth. Alternative crop sites must be used when the concentration of these metals approach excessive levels. Site life can be estimated by dividing the amount of copper and zinc to be applied in lbs/acre by 0.036 and 0.071, respectively and multiplying the result by 0.85. By adding this quantity to the current soil index for copper or zinc, we can predict life of the site for waste disposal.

In addition to copper and zinc indices, this table also provides a summary of lime recommendations for each crop based on the most recent soil sample. Application of lime at recommended rates is necessary to maintain soil pH in the optimum range for crop production.

Required Soil Test Values

Tract	Field	Crop	pH	Lime Recom. (tons/acre)	Cu-I	Copper Recommendation	Zn-I	Zinc Recommendation
3882	12	Fescue Hay	5.5	0.7	146	None	711	None
3882	14	Fescue Hay	5.5	0.7	146	None	711	None
3882	15	Fescue Hay	5.5	0.7	146	None	711	None
3882	16	Fescue Hay	5.5	0.7	146	None	711	None
3882	17	Fescue Hay	5.5	0.7	146	None	711	None
3882	2	Fescue Hay	6.4	0.0	129	None	116	None
3882	3	Fescue Hay	6.0	0.0	80	None	89	None
3882	4	Fescue Hay	5.7	0.3	70	None	75	None
3882	5	Fescue Hay	5.7	0.3	70	None	75	None
3882	6	Fescue Hay	6.2	0.0	95	None	116	None
3882	7	Fescue Hay	6.5	0.0	161	None	193	None
3882	8	Fescue Hay	6.5	0.0	161	None	193	None
3882	9	Fescue Hay	5.6	0.4	101	None	130	None

Required Specifications For Animal Waste Management

- 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 that 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 the waste, he/she shall provide evidence 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 waste production facility to secure an update of the Nutrient Management Plan when there is a change in the operation, increase in the number of animals, method of application, receiving crop type, or available land.**
- 3. Animal waste shall be applied to meet, but not exceed, the nitrogen needs for realistic crop yields based upon soil type, available moisture, historical data, climatic conditions, and level of management, unless there are regulations that restrict the rate of applications 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 eroding at more than 5 tons per acre per year but less than 10 tons per acre per year provided grass filter strips are installed where runoff leaves the field (see USDA, NRCS Field Office Technical Guide Standard 393 - Filter Strips).**
- 5. Odors can be reduced by injecting the waste or by disking after waste application. Waste should not be applied when there is danger of drift from the land application field.**
- 6. When animal waste is to be applied on acres subject to flooding, waste will be soil incorporated on conventionally tilled cropland. When waste is 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 and flies.**

8. **Animal waste shall not be applied to saturated soils, during rainfall events, or when the soil 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.**
10. **Nutrients from waste 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 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.**
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 the fields have been approved as a land application site by a "technical specialist". Animal waste shall not be applied on grassed waterways that discharge 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.
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 pre-plant 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 nutrient, unless other restrictions require waste to be applied based on other nutrients, resulting in a lower application rate than a nitrogen based rate. 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 and maintained for optimum crop production. Soil and waste analysis records shall be kept for a minimum of five years. Poultry dry waste application records shall be maintained for a minimum of three 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.