



## Producer Activity Document (Version 1, 5/1/2007 Format)

This document is only part of the complete nutrient management plan and contains producer-oriented planned management activities and recordkeeping forms. Refer to the plan document for more detail, guidance, and reference information. Both this document and the plan document shall remain in the possession of the producer/landowner.

**Farm contact information:** Sample Dairy Farm  
c/o  
123 Cow Drive  
Holstein, TN 30000  
555-555-5555

**Latitude/Longitude:**

**Plan Period:** Sep 2007 - Aug 2010

**Type and Size of the AFO:** 175 Cow Dairy

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## Section 1. Background and Site Information

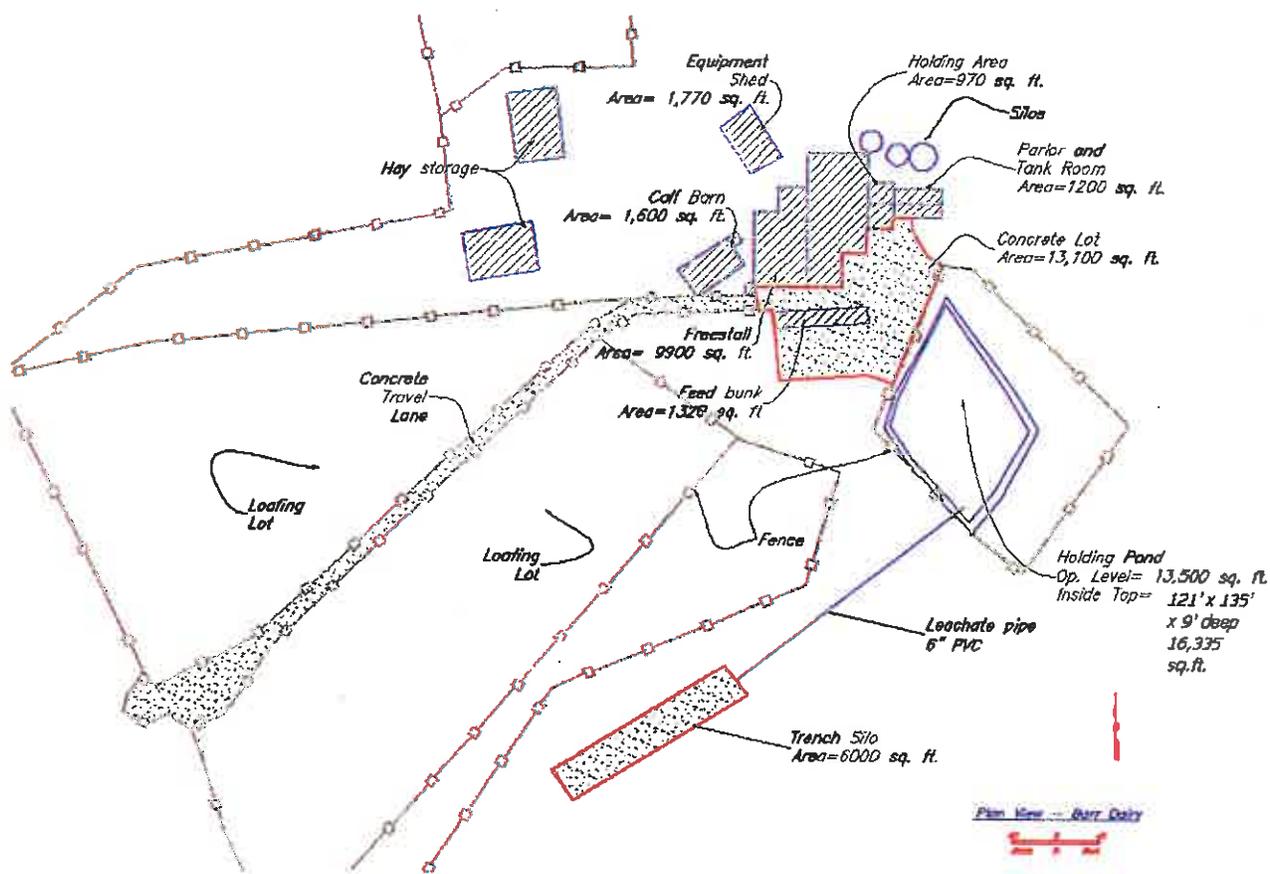
### 1.1. General Description of Operation

The dairy has been in operation since 1972 at its current location. The current waste management system was designed by NRCS in 1991. The dairy herd consists of 175 lactating animals and 14 dry cows. Average lactating cow weight is 1300 lbs. There are 272 acres of land available for crop production on the farm, but with setbacks for manure application only 254 acres are utilized for row and forage crops. The current earthen storage is 135 ft. x 121 ft. x 9 ft deep. Assuming 74,800 gallons permanent storage (non- available space in the bottom of the structure), and 121, 420 gallons of freeboard and 25yr – 24 hr storm rainfall and runoff, this storage has 502,020 gallons of available storage.

*For more details see the CNMP*

## Section 2. Manure and Wastewater Handling and Storage

### 2.1. Map(s) of Production Area



## 2.2. Operation and Maintenance Plan

### **Operation and Maintenance Checklist**

The following is a list of Operation and Maintenance activities associated with the conservation practices to be implemented with this CNMP. The facility operator and other employees should become familiar with the activities detailed below.

#### **Earthen Holding Ponds & Lagoons**

1. Earthen slopes shall be checked for rills and gullies. Seeding shall be as necessary to maintain a grass cover. Weeds shall be controlled. The top of dam and outside slopes shall be mowed annually to discourage weed growth and allow closer examination of the earth embankment. Quickly remove woody vegetation that begins to grow on the embankment to prevent root establishment.
2. Earthen slopes shall be checked for soft or damp/wet areas that may be a sign of potential leakage. Burrowing animals in the slopes shall be controlled. Animals shall be immediately removed and the burrow holes filled.
3. Fencing/gates shall be maintained around the structure to exclude animals and humans at all times.
4. Safety equipment (life buoys, ropes) and warning signs shall be maintained and checked periodically for wear.
5. High traffic areas, such as pump access areas, should be lined with aggregate or concrete if vegetative cover cannot be maintained.
6. Where dedicated agitation areas are established, inspect the bottom for scour holes. Where holes develop, fill with compacted clay, and line the surface with concrete to prevent further scouring. If this does occur, please contact the local NRCS/SWCD office for assistance.
7. The maximum operating level in the facility is 2 feet below the low point in the existing embankment that contains the manure and runoff. When this elevation is reached, pump-out should commence as long as soil conditions exist that will allow for infiltration of the manure liquids. Pump-out is not to occur in December, January, or February. Pump-out should not be scheduled if severe or wet weather is a threat. The elevation at which pump-out is to occur shall be marked with a post or other suitable device. Removing the storage volume (1,178,000 gallons per year) is estimated to take 40 hours of pumping per year with a 500 gallon per minute irrigation gun. If hauling with a 1500 - gallon spreader, then it will take 392 hours per year to empty the waste storage facility based on a 1/2-hour round trip.
8. Thoroughly agitate the storage facility one hour before pump-out and during pump-out to ensure uniform distribution of nutrients in manure.
9. Domestic and industrial waste from toilets shall not be discharged into the storage facility(s).
10. In the event of closure or shutdown where there is no longer need to manage manure and runoff from this operation, the closure plan will be followed

#### **Gutters & Downspouts:**

1. Blockages/debris – Material shall be removed.
2. Loose/unconnected hangers – Shall be made secure.
3. Leakage – Patching or replacement made.
4. Downspouts shall be shielded from livestock access. Downspouts shall be periodically checked for:
  - a. Damage – Crushed sections shall be removed and replaced. Guards/shields shall be maintained.
  - b. Outlets – Water from gutters and downspouts shall be directed away from feedlots and animal holding areas.
  - c. Outlets shall be maintained to prevent pooling of water or the occurrence of excessive erosion.

#### **Manure Sump Management and Operation**

Gases produced in manure pits and sumps can reach lethal concentrations. It is therefore essential to take all reasonable precautions to avoid contact with these gases.

1. A lid or cover over the sump access opening should be in place at all times to prevent accidental entry.
2. At least two persons shall be present when work involving the sump is to be done. One person shall act as observer and remain outside the sump at all times.
3. Do not enter manure sump without wearing an approved correctly fitted, self-contained breathing apparatus. In addition, a safety harness and lifeline should be used.

#### **Manure Transfer Systems:**

To prevent plugging in pipe transfer systems:

1. Dry, dense "clumps" of manure/ bedding or frozen manure shall not be placed in reception pit/pipe. Frozen manure shall be allowed to thaw before placing in the transfer pipe. Water shall be added to dry material.
2. Care shall be given to avoid foreign objects such as wood, concrete or metal entering the system.

3. Changes made in the type of bedding materials originally proposed for the system may result in plugging or blockage of the transfer system. A change to sand bedding will almost certainly cause a sand buildup at the outlet and plug the transfer pipe. Please contact the NRCS/SWCD office for planning assistance if you are considering a switch to sand bedding in a system not initially designed for sand.

Each time the system is emptied, the following shall be checked:

4. Condition of the reception box. Look for deterioration of the box material. Examine the connection area of the box and transfer pipe. If an additional pipe enters the box (milkhouse line),, check for any blockages.
5. Condition of the transfer pipe. Look for low areas or blowholes over the pipe for signs of pipe joint problems.

**Pushoff Ramps:**

For pushoff ramps/piers, all traffic barriers/guards shall be maintained in good condition. Safety barriers/guards/grates shall be maintained around reception/pumping boxes. Components showing wear shall be immediately replaced.

**Mortality Management Facility:**

1. Keep composter fenced
2. When placing fresh carcass on compost, cover with a minimum of 1 foot of sawdust.
3. Prevent area run-off water from entering the compost facility.

**Manure and Wastewater Application:**

1. Nutrients should not be applied in December, January, or February unless following the University of Tennessee recommendations.
2. If the crop, method of application, feed ration or consistency of manure changes, it will be necessary to re-calculate an appropriate application amount.
3. Nutrients from any source shall not be applied on saturated, frozen and/or snow-covered soil.
4. Nutrients will not be spread in an established waterway or any defined drainage way that carries concentrated flow. Manure may be applied to newly constructed grass waterways if incorporated immediately.
5. Manure cannot be applied on land that is subject to frequent flooding unless the manure is incorporated immediately.
6. Nutrients cannot be applied when imminent rain is expected.
7. Injecting or incorporating manure into the soil versus surface application will reduce odors.
8. Soil profile sampling for nitrogen when corn is knee high. Follow Pre-Sidedress Nitrogen Test (PSNT) (UT SP427 for com).
9. Application rates must not exceed soil infiltration rates (i.e., it may take 2 applications to achieve 1-inch rate).
10. Equipment shall be calibrated to ensure uniform distribution of manure at recommended rates.
11. Non-application buffer widths will be maintained around fields receiving manure. See guidance table below for maintaining non-application buffer widths.
12. Avoid unnecessary contact with chemical fertilizers and organic byproducts. Wear protective clothing when working with plant nutrients. Extra caution should be taken when handling ammonia sources of nutrients, or when dealing with organic wastes in stored or unventilated enclosures.
13. Vehicles used to transport manure on State or federally maintained roads will be covered when the hauling distance is greater than one mile.
14. When manure is removed from facilities, it should be applied directly to the field or if dry enough, stockpiled and covered with plastic or stored in roofed storage facility.
15. Fields receiving nutrients should be soil tested at least every 2 or 3 years or according to soil testing section.
16. Maintain records of where, when and how much nutrients are applied.

**Non-Application Buffer Widths**

Object, Site	Situation	Buffer Width (ft) from Object, Site <sup>1/</sup>
Well	Located up-slope of application site	150
Well	Located down-slope of application site provided conditions warrant application	300
Waterbody or Stream <sup>2/</sup>	Predominate slope <5% with good vegetation <sup>3/</sup>	30
Waterbody or Stream <sup>2/</sup>	Predominate slope 5-8% with good vegetation <sup>3/</sup>	50
Waterbody or Stream <sup>2/</sup>	Poor vegetative cover or Predominate slope >8% <sup>3/</sup>	100
Waterbody or Stream <sup>2/</sup>	Cultivated land, low erosion	30
Public Road	Irrigated wastewater	50
Public Road	Solids applied with spreader truck	50
Dwelling	Other than Producer	300
Public Use Area	All	300
Property Line	Located downslope of application site	30

Waterbody includes pond, lake, wetland, or sinkhole. "Open" sinkholes should be protected the same as a well. Where sinkholes are not "open", a buffer width should be established in the flat area around the rim of the basin before the change in slope up out of the basin begins. Stream includes both perennial and intermittent streams. Good vegetation refers to a well-managed, dense stand which is not overgrazed.

**Grassed loafing lots (pastures):**

1. Cows should be rotated to a rested loafing lot before conditions in the occupied loafing lot deteriorate or vegetation begins to become damaged. During wet weather, restrict cows to the free stall barn.

**Recommended Heights and Rest Period:**

Species	Beginning Height	Ending Height	Days Rest
Tall Fescue/ Bermudagrass Mix	5" to 8"	2" to 4"	14 to 45 days

2. Inspect pastures just prior to University of Tennessee recommended seeding and fertilizer dates. Reseed pastures if tall fescue plants are greater than 6" apart with less than two tillers or bermudagrass is greater than 2' apart. Preferably bermudagrass will be established first with tall fescue established the following fall.
3. When cows are in the loafing lot, readily accessible water must be provided, in the lot, or feed and water may be provided at the barn. Access to the other grassed loafing lots must be restricted. If shading is provided, it should be portable or accessible at the barn.
4. Weed invasion is likely to occur both during and following establishment of the grassed loafing lots. Control broadleaf weeds by mowing. In some cases, it will be necessary to control weeds with herbicides. Consult extension agent or pest management specialist for pest management recommendation. As always, read and follow label directions when using pesticides. Do not allow the milking herd in the sprayed lot(s) for seven days after application or follow directions on the label.
5. Follow University of Tennessee recommendations for amount of N, P, and K to apply and dates to make applications. Apply nitrogen fertilizer as needed to stimulate growth. Nitrogen applied in the spring and fall will favor tall fescue; nitrogen applied in the summer will favor bermudagrass.
6. Harvest hay from the grassed loafing lots when conditions warrant.

Maintain all support practices such as fence, watering facilities, heavy use areas in good working order. Inspect these practices regularly for repairs and maintenance.

**2.6. Planned Manure Exports off the Farm**

Month-Year	Manure Source	Amount	Receiving Operation	Location
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(None)

**2.7. Planned Manure Imports onto the Farm**

Month-Year	Manure's Animal Type	Amount	Originating Operation	Location
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(None)

**2.8. Planned Internal Transfers of Manure**

Month-Year	Manure Source	Amount	Manure Destination
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(None)

## Section 3. Farmstead Safety and Security

### 3.1. Emergency Response Plan

#### In Case of an Emergency Storage Facility Spill, Leak or Failure

**Implement the following first containment steps:**

- a. Stop all other activities to address the spill.
- b. Stop the flow. For example, use skid loader or tractor with blade to contain or divert spill or leak.
- c. Call for help and excavator if needed.
- d. Complete the clean-up and repair the necessary components.
- e. Assess the extent of the emergency and request additional help if needed.

#### In Case of an Emergency Spill, Leak or Failure during Transport or Land Application

**Implement the following first containment steps:**

- a. Stop all other activities to address the spill and stop the flow.
- b. Call for help if needed.
- c. If the spill posed a hazard to local traffic, call for local traffic control assistance and clear the road and roadside of spilled material.
- d. Contain the spill or runoff from entering surface waters using straw bales, saw dust, soil or other appropriate materials.
- e. If flow is coming from a tile, plug the tile with a tile plug immediately.
- f. Assess the extent of the emergency and request additional help if needed.

#### Emergency Contacts

Department / Agency	Phone Number
Fire	
Rescue services	
State veterinarian	
Sheriff or local police	

#### Nearest available excavation equipment/supplies for responding to emergency

Equipment Type	Contact Person	Phone Number

#### Contacts to be made by the owner or operator within 24 hours

Organization	Phone Number
EPA Emergency Spill Hotline	
County Health Department	
Other State Emergency Agency	

**Be prepared to provide the following information:**

- a. Your name and contact information.
- b. Farm location (driving directions) and other pertinent information.
- c. Description of emergency.
- d. Estimate of the amounts, area covered, and distance traveled.
- e. Whether manure has reached surface waters or major field drains.
- f. Whether there is any obvious damage: employee injury, fish kill, or property damage.
- g. Current status of containment efforts.

### 3.2. Biosecurity Measures

Biosecurity is critical to protecting livestock and poultry operations. Visitors must contact and check in with the producer before entering the operation or any production or storage facility.

#### Visitor Control (A "no visitor" policy is recommended)

- Install signs in visible locations indicating a bio security area and directing visitor flow.
- Install gates at all entrances/ exits and any additional fencing needed for security.
- Insure parking areas are kept 100 feet from the livestock
- Security lighting is adequate
- Make all visitors sign in
- Maintain a visitor disinfectant scrubbing area w/ necessary equipment (ie brushes, fresh disinfectant, boots etc.) and a sprayer for vehicles.
- Restrict all non essential vehicles from entering the farm and spray with disinfectant if allowed to enter.

#### Livestock Concerns

- Purchase replacement stock, borrowed bulls, etc. from uninfected herds or herds with known health status.
- Isolate or quarantine replacement stock, returning stock and new additions for an appropriate period.
- Isolate sick animals
- Keep accurate records of medications and vaccinations.
- Utilize the US Animal Identification Number (USAIN)
- Maintain perimeter fences to keep livestock from mixing with neighbors livestock

#### Sanitation

- Disinfect houses between flocks
- Treat mortality safely and quickly—Carcasses are disposed of in a timely manner and according to state regulations
- Employ a rodent, insect and wildlife control (include pets) plan.
- Do not use the same equipment to handle manure and feed.
- Clean up feed spills quickly
- Know the bio-security measures in place where feed is manufactured/processed.

#### Management

- Doors and gates are kept locked
- Employ a training plan for employees
- Have an emergency bio-security plan posted

### 3.3. Catastrophic Mortality Management

***Catastrophic losses due to disease must be reported to the State Veterinarian and the Animal and Plant Health Inspection Service (APHIS).***

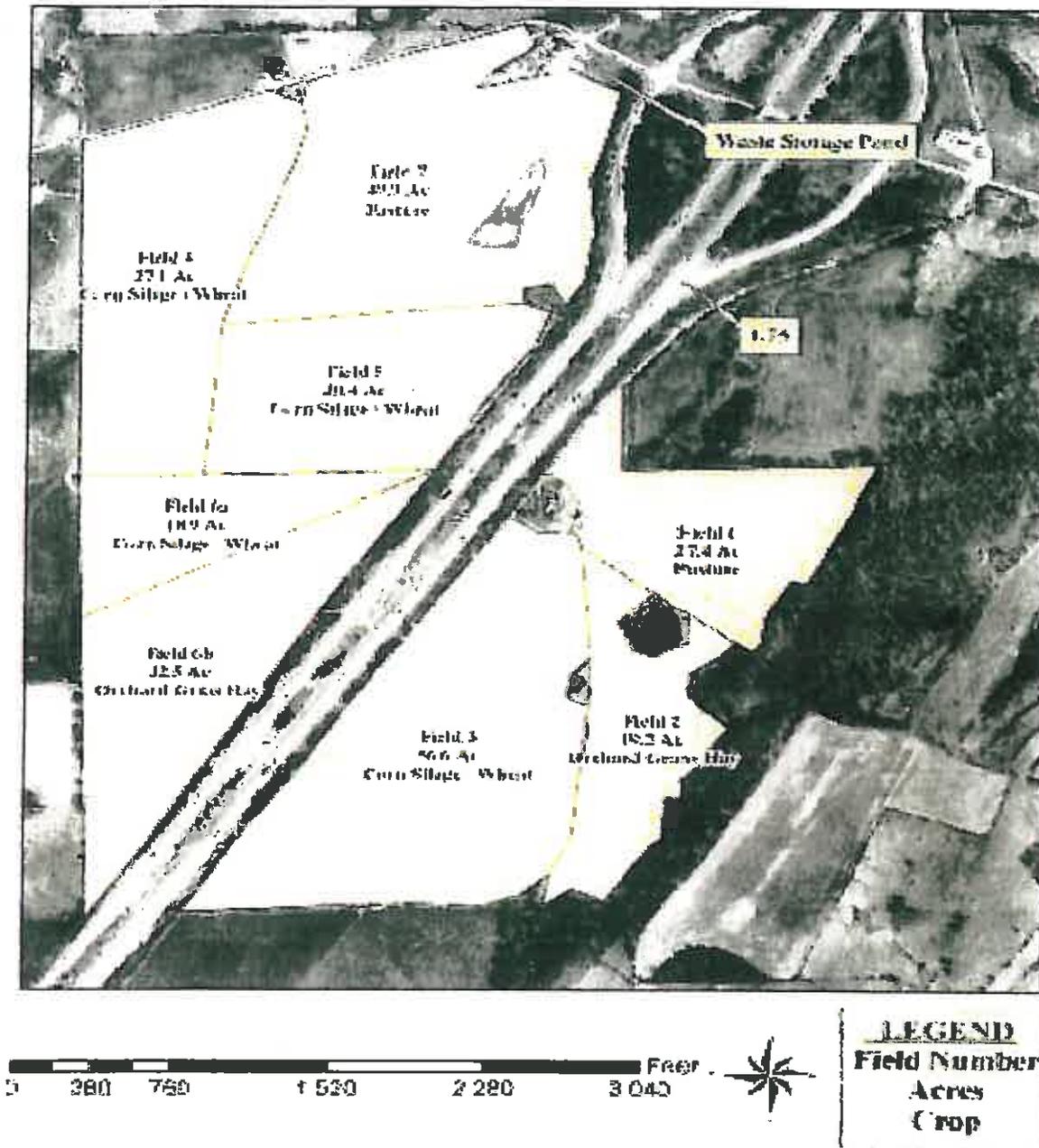
***Important!*** In the event of catastrophic animal mortality, contact the following authority before beginning carcass disposal:

Authority name  
Contact name  
Phone number

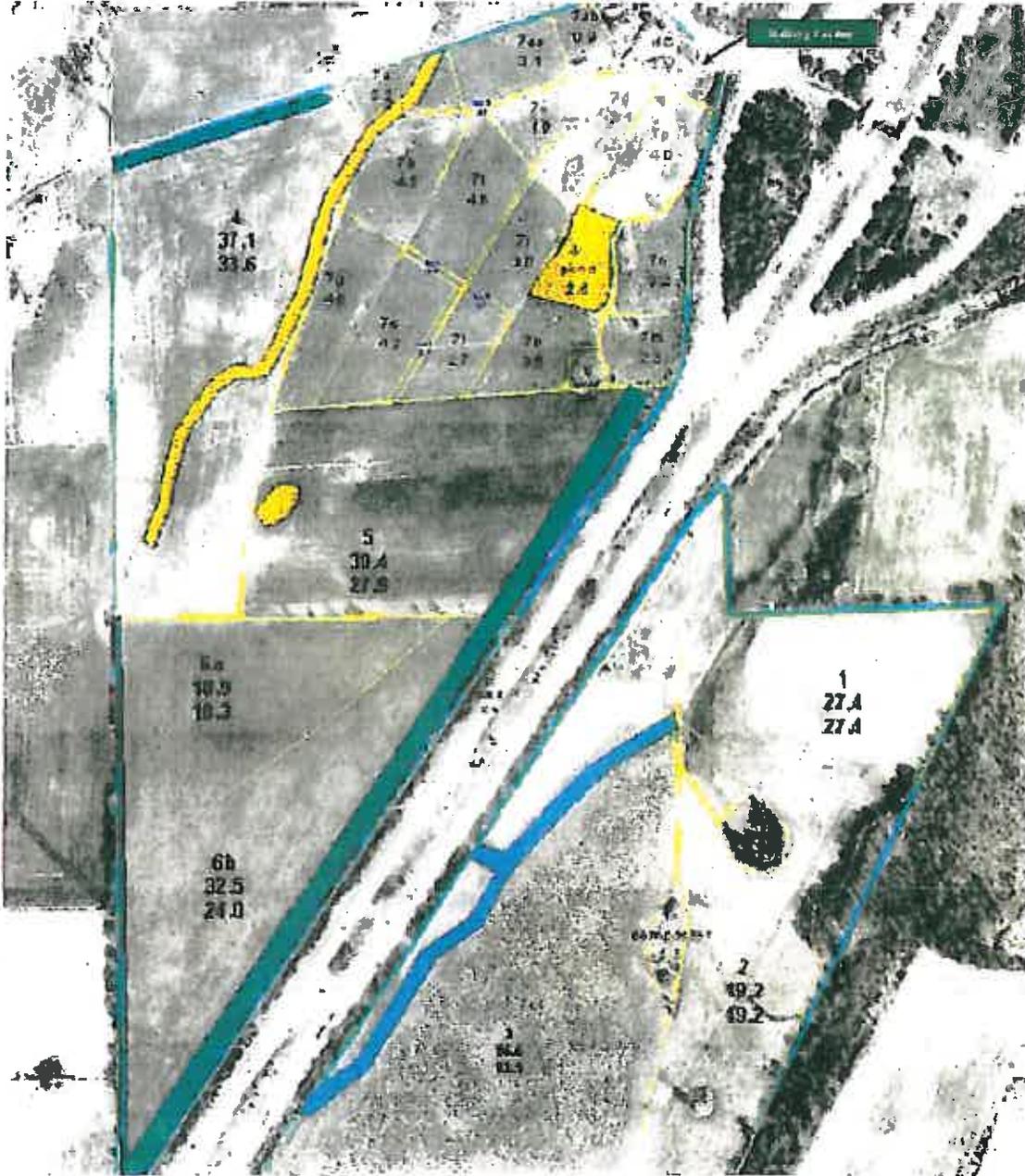
***SEE CNMP FOR Detailed Plan***

## Section 4. Land Treatment

### 4.1. Map(s) of Fields and Conservation Practices



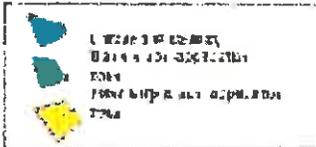
# Filter Strips, Waterways and Manure Application Buffers Map



Field Name  
 Subfield Name (Optional)  
 Acres  
 Spreadable Acres



## BUFFER KEY



## Section 6. Nutrient Management

### 6.1. Field Information

Field ID	Sub-field ID	Total Acres	Spread-able Acres	FSA Farm	FSA Tract	FSA Field	County	Predominant Soil Type	Slope (%)
1		25.5	25.1		1234	1	Loudon	DwD3 (Dewey SIC)	
2		17.5	17.5		1234	2	Loudon	FsE (Dewey SIL)	
3		53.8	50.5		1234	3	Loudon	HeB (Etowah SIL)	
4		33.9	33.9		1234	4	Loudon	Em (Emory SIL)	
5		26.8	26.8		1234	5	Loudon	DeD2 (Dewey SICL)	
6a		17.5	16.9		1234	6	Loudon	DcD2 (Decatur SICL)	
6b		22.8	22.0		1234	6	Loudon	DeD2 (Dewey SICL)	
7		50.5	48.9		1234	7	Loudon	DeC2 (Dewey SICL)	

## 6.2. Manure Application Setback Distances

### Setback Requirements: NRCS Standard

Feature	Setback Criteria	Setback Distance (Feet)
Well	Application upgradient of feature	300
Well	Application down-gradient of feature	150
Waterbody	Predominant slope <5% with good vegetation	30
Waterbody	Predominant slope >8%	100
Waterbody	Poor vegetation	100
Public road	All applications	50
Dwelling (other than producer)	All applications	300
Public use area	All applications	300
Property line	Application upgradient of feature	30

Source: Nutrient Management Standard 590 ([http://efotg.nrcs.usda.gov/references/public/TN/Nutrient\\_Management\\_\(590\)\\_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc))

**6.6. Manure Application Planning Calendar – September 2007 through August 2008**

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2008 Crop (Prev. Primary Crop)	Sep '07	Oct '07	Nov '07	Dec '07	Jan '08	Feb '08	Mar '08	Apr '08	May '08	Jun '08	Jul '08	Aug '08
1	0.0	0.0	Dewey SIC (DwD3 12-20%)	Corn silage (Grass-clover hay maint)												
2	0.0	0.0	Dewey SIL (FsE 20-30%)	Grass-clover hay maint (Grass-clover hay new)												
3	0.0	0.0	Etowah SIL (HeB 2-5%)	Corn silage (Corn silage)												
4	33.9	33.9	Emory SIL (Em 1-3%)	Corn silage (Corn silage)	X	X										
5	26.8	26.8	Dewey SICL (DeD2 12-20%)	Corn silage (Corn silage)							X	X				
6a	17.5	16.9	Decatur SICL (DaD2 12-20%)	Corn silage (Corn silage)		84.5										
6b	0.0	0.0	Dewey SICL (DeD2 12-20%)	Grass-clover hay new (Corn silage)												
7	0.0	0.0	Dewey SICL (DeC2 5-12%)	Bermuda common pasture (Bermuda common pasture)												
<b>Total</b>	<b>78.2</b>	<b>77.6</b>			X	84.5					X	X				

Corp. in field

No. indicates total loads  
"X" indicates other manure apps

**Manure Application Planning Calendar – September 2008 through August 2009**

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2009 Crop (Prev. Primary Crop)	Sep '08	Oct '08	Nov '08	Dec '08	Jan '09	Feb '09	Mar '09	Apr '09	May '09	Jun '09	Jul '09	Aug '09
1	0.0	0.0	Dewey SIC (DwD3 12-20%)	Grass-clover hay new (Corn silage)												
2	0.0	0.0	Dewey SIL (FsE 20-30%)	Corn silage (Grass-clover hay maint)												
3	0.0	0.0	Etowah SIL (HeB 2-5%)	Corn silage (Corn silage)												
4	33.9	33.9	Emory SIL (Em 1-3%)	Corn silage (Corn silage)	X	X										
5	26.8	26.8	Dewey SICL (DeD2 12-20%)	Corn silage (Corn silage)							X	X				
6a	17.5	16.9	Decatur SICL (DcD2 12-20%)	Corn silage (Corn silage)		84.5										
6b	0.0	0.0	Dewey SICL (DeD2 12-20%)	Grass-clover hay maint (Grass-clover hay new)												
7	0.0	0.0	Dewey SICL (DeC2 5-12%)	Bermuda common pasture (Bermuda common pasture)												
<b>Total</b>	<b>78.2</b>	<b>77.6</b>			X	84.5	X				X	X				

Crops in fields

No. indicates total loads  
"X" indicates other manure apps

**Manure Application Planning Calendar – September 2009 through August 2010**

Field	Total Acres	Spread. Acres	Predominant Soil Type	Primary 2010 Crop (Prev. Primary Crop)	Sep '09	Oct '09	Nov '09	Dec '09	Jan '10	Feb '10	Mar '10	Apr '10	May '10	Jun '10	Jul '10	Aug '10
1	0.0	0.0	Dewey SIC (DwD3 12-20%)	Grass-clover hay maint (Grass-clover hay new)												
2	0.0	0.0	Dewey SIL (FsE 20-30%)	Grass-clover hay new (Corn silage)												
3	0.0	0.0	Etowah SIL (HeB 2-5%)	Corn silage (Corn silage)												
4	33.9	33.9	Emory SIL (Em 1-3%)	Corn silage (Corn silage)	X	X										
5	26.8	26.8	Dewey SICL (DeD2 12-20%)	Corn silage (Corn silage)							X	X				
6a	17.5	16.9	Decatur SICL (DcD2 12-20%)	Corn silage (Corn silage)		84.5										
6b	0.0	0.0	Dewey SICL (DeD2 12-20%)	Corn silage (Grass-clover hay maint)												
7	0.0	0.0	Dewey SICL (DeC2 5-12%)	Bermuda common pasture (Bermuda common pasture)												
<b>Total</b>		<b>78.2</b>			<b>X</b>	<b>84.5</b>					<b>X</b>	<b>X</b>				

Crop in field

No. indicates total loads  
"X" indicates other manure apps

**6.7. Planned Nutrient Applications (Manure-spreadable Area)**

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Loads, Speed or Time	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P <sub>2</sub> O <sub>5</sub> (Lbs/A)	Avail K <sub>2</sub> O (Lbs/A)
4	Sep 2007	Corn silage	Holding pond	Splash plate unit, Not incorporated	Custom	19,000 Gal	0.8 mph	553,600 Gal	29.1	86	57	238
4	Oct 2007	Corn silage	Holding pond	Splash plate unit, Not incorporated	Custom	19,000 Gal	0.8 mph	91,200 Gal	4.8	86	57	238
4	Jun 2008	Corn silage	28-0-0	Surface band	Supp. N	22 Gal		746 Gal	33.9	66	0	0
4	Sep 2008	Corn silage	Holding pond	Splash plate unit, Not incorporated	Custom	19,000 Gal	0.8 mph	562,200 Gal	29.6	86	57	238
4	Oct 2008	Corn silage	Holding pond	Splash plate unit, Not incorporated	Custom	19,000 Gal	0.8 mph	81,700 Gal	4.3	86	57	238
4	Jun 2009	Corn silage	28-0-0	Surface band	Supp. N	17 Gal		576 Gal	33.9	51	0	0
4	Sep 2009	Corn silage	Holding pond	Splash plate unit, Not incorporated	Custom	19,000 Gal	0.8 mph	571,000 Gal	30.1	86	57	238
4	Oct 2009	Corn silage	Holding pond	Splash plate unit, Not incorporated	Custom	19,000 Gal	0.8 mph	72,200 Gal	3.8	86	57	238
4	Jun 2010	Corn silage	28-0-0	Surface band	Supp. N	15 Gal		509 Gal	33.9	45	0	0
5	Mar 2008	Corn silage	Holding pond	Aerway unit, Not incorporated	Custom	22,000 Gal	1.1 mph	530,400 Gal	24.1	99	66	275
5	Apr 2008	Corn silage	Holding pond	Aerway unit, Not incorporated	Custom	22,000 Gal	1.1 mph	59,400 Gal	2.7	99	66	275
5	Jun 2008	Corn silage	28-0-0	Surface band	Supp. N	17 Gal		456 Gal	26.8	51	0	0
5	Mar 2009	Corn silage	Holding pond	Aerway unit, Not incorporated	Custom	22,000 Gal	1.1 mph	539,900 Gal	24.5	99	66	275
5	Apr 2009	Corn silage	Holding pond	Aerway unit, Not incorporated	Custom	22,000 Gal	1.1 mph	50,600 Gal	2.3	99	66	275
5	Jun 2009	Corn silage	28-0-0	Surface band	Supp. N	12 Gal		322 Gal	26.8	36	0	0
5	Mar 2010	Corn silage	Holding pond	Aerway unit, Not incorporated	Custom	22,000 Gal	1.1 mph	549,400 Gal	25.0	99	66	275
5	Apr 2010	Corn silage	Holding pond	Aerway unit, Not incorporated	Custom	22,000 Gal	1.1 mph	39,600 Gal	1.8	99	66	275
5	Jun 2010	Corn silage	28-0-0	Surface band	Supp. N	10 Gal		268 Gal	26.8	30	0	0
6a	Oct 2007	Corn silage	Calf shed	Flail spreader, Not incorporated	Custom	15 Ton	84.5 Lds	253.5 Ton	16.9	36	35	41
6a	Jun 2008	Corn silage	28-0-0	Surface band	Supp. N	39 Gal		659 Gal	16.9	116	0	0
6a	Oct 2008	Corn silage	Calf shed	Flail spreader, Not incorporated	Custom	15 Ton	84.5 Lds	253.5 Ton	16.9	36	35	41
6a	Jun 2009	Corn silage	28-0-0	Surface band	Supp. N	36 Gal		608 Gal	16.9	107	0	0
6a	Oct 2009	Corn silage	Calf shed	Flail spreader, Not incorporated	Custom	15 Ton	84.5 Lds	253.5 Ton	16.9	36	35	41
6a	Jun 2010	Corn silage	28-0-0	Surface band	Supp. N	35 Gal		591 Gal	16.9	104	0	0

**Planned Nutrient Applications (Non-manure-spreadable Area)**

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P <sub>2</sub> O <sub>5</sub> (Lbs/A)	Avail K <sub>2</sub> O (Lbs/A)
1	Oct 2007	Corn silage	0-0-60	Surface broadcast	1-yr K	266 Lbs	6,783 Lbs	25.5	0	0	160

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P <sub>2</sub> O <sub>5</sub> (Lbs/A)	Avail K <sub>2</sub> O (Lbs/A)
1	Jun 2008	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	1,301 Gal	25.5	152	0	0
1	Oct 2008	Grass-clover hay new	0-0-60	Surface broadcast	1-yr K	100 Lbs	2,550 Lbs	25.5	0	0	60
1	Jun 2009	Grass-clover hay new	33-0-0	Surface broadcast	1-yr N	90 Lbs	2,295 Lbs	25.5	30	0	0
1	Oct 2009	Grass-clover hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs	1,275 Lbs	25.5	0	0	30
1	May 2010	Grass-clover hay maint	33-0-0	Surface broadcast	1-yr N	181 Lbs	4,616 Lbs	25.5	60	0	0
2	Oct 2007	Grass-clover hay maint	0-0-60	Surface broadcast	1-yr K	50 Lbs	875 Lbs	17.5	0	0	30
2	May 2008	Grass-clover hay maint	33-0-0	Surface broadcast	1-yr N	181 Lbs	3,168 Lbs	17.5	60	0	0
2	Oct 2008	Corn silage	0-0-60	Surface broadcast	1-yr K	266 Lbs	4,655 Lbs	17.5	0	0	160
2	Jun 2009	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	893 Gal	17.5	152	0	0
2	Oct 2009	Grass-clover hay new	0-0-60	Surface broadcast	1-yr K	100 Lbs	1,750 Lbs	17.5	0	0	60
2	Jun 2010	Grass-clover hay new	33-0-0	Surface broadcast	1-yr N	90 Lbs	1,575 Lbs	17.5	30	0	0
3	Jun 2008	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	2,744 Gal	53.8	152	0	0
3	Jun 2009	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	2,744 Gal	53.8	152	0	0
3	Jun 2010	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	2,744 Gal	53.8	152	0	0
6a	Jun 2008	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	31 Gal	0.6	152	0	0
6a	Jun 2009	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	31 Gal	0.6	152	0	0
6a	Jun 2010	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	31 Gal	0.6	152	0	0
6b	Jun 2008	Grass-clover hay new	33-0-0	Surface broadcast	1-yr N	90 Lbs	2,052 Lbs	22.8	30	0	0
6b	May 2009	Grass-clover hay maint	33-0-0	Surface broadcast	1-yr N	181 Lbs	4,127 Lbs	22.8	60	0	0
6b	Jun 2010	Corn silage	28-0-0	Surface band	1-yr N	51 Gal	1,163 Gal	22.8	152	0	0
7	Oct 2007	Bermuda common pasture	33-0-0	Surface broadcast	Custom	90 Lbs	4,545 Lbs	50.5	30	0	0
7	May 2008	Bermuda common pasture	33-0-0	Surface broadcast	Custom	303 Lbs	15,302 Lbs	50.5	100	0	0
7	Jul 2008	Bermuda common pasture	33-0-0	Surface broadcast	Custom	303 Lbs	15,302 Lbs	50.5	100	0	0

Field	App. Month	Target Crop	Nutrient Source	Application Method	Rate Basis	Rate/Acre	Total Amount Applied	Acres Cov.	Avail N (Lbs/A)	Avail P <sub>2</sub> O <sub>5</sub> (Lbs/A)	Avail K <sub>2</sub> O (Lbs/A)
7	Oct 2008	Bermuda common pasture	33-0-0	Surface broadcast	Custom	90 Lbs	4,545 Lbs	50.5	30	0	0
7	May 2009	Bermuda common pasture	33-0-0	Surface broadcast	Custom	303 Lbs	15,302 Lbs	50.5	100	0	0
7	Jul 2009	Bermuda common pasture	33-0-0	Surface broadcast	Custom	303 Lbs	15,302 Lbs	50.5	100	0	0
7	Oct 2009	Bermuda common pasture	33-0-0	Surface broadcast	Custom	90 Lbs	4,545 Lbs	50.5	30	0	0
7	May 2010	Bermuda common pasture	33-0-0	Surface broadcast	Custom	303 Lbs	15,302 Lbs	50.5	100	0	0
7	Jul 2010	Bermuda common pasture	33-0-0	Surface broadcast	Custom	303 Lbs	15,302 Lbs	50.5	100	0	0

### 6.10. Fertilizer Material Annual Summary

Product Analysis	Plan Period	Product Needed Sep - Dec	Product Needed Jan - Aug	Total Product Needed	Units
0-0-60	Sep '07 - Aug '08	7,658	0	7,658	Lbs
28-0-0	Sep '07 - Aug '08	0	5,936	5,936	Gal
33-0-0	Sep '07 - Aug '08	4,545	35,824	40,369	Lbs
0-0-60	Sep '08 - Aug '09	7,205	0	7,205	Lbs
28-0-0	Sep '08 - Aug '09	0	5,173	5,173	Gal
33-0-0	Sep '08 - Aug '09	4,545	37,026	41,571	Lbs
0-0-60	Sep '09 - Aug '10	3,025	0	3,025	Lbs
28-0-0	Sep '09 - Aug '10	0	5,306	5,306	Gal
33-0-0	Sep '09 - Aug '10	4,545	36,795	41,340	Lbs

## Section 9. Recordkeeping Forms

### 9.1. Producer Activity Checklist

Activity	Calendar Year												
	Jan.	Feb	Mar	April	May	June	July	August	Sept	Oct	Nov	Dec	
Soil Sampling													
Manure Sampling Date / Initials													
Manure Sampling Date / Initials													
Spreader or Equipment Calibration													
Spreader or Equipment Calibration Date / Initials													
Record Manure Volume Storage:	X	X	X	X	X	X	X	X	X	X	X	X	X
Record Manure Volume Storage:													
Record Manure Volume Storage:													
Record Manure Volume Storage:													
Mow Grass on Earthen Berm													
Mow Grass on Earthen Berm Date / Initials													
Other													
Other Date / Initials													
Recordkeeping (see forms on following pages)	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes: An X indicates that the indicated activity is scheduled for that month. Duplicate this form as needed for additional years.





### 9.4. Manure Application Records

App. #	Field	Date	Manure Source	Equipment	Days to Incorpor.	Rate/A Gal or Ton	Loads	Total Applied Gal or Ton	Acres Cov.
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

App. #	Hauler's Name (1)	Ground Cover % (2)	Soil Condition (3)	Air Temp. (4)	Wind Speed (5)	Wind Dir. (6)	Weather (7)	Rain Before (8)	Rain After (9)	Notes/Comments
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

- (1) Name or initials of the person who applied the manure.
- (2) Percent residue or ground cover at time of application.
- (3) Soil condition at time of application: Dry, Firm, Wet, Muddy, Snow-Covered, Frozen.
- (4) Air temperature at time of application.
- (5) Wind speed at time of application: Calm (0-2 mph), Light (2-5 mph), Breezy (5-15 mph), Windy (>15 mph).
- (6) Wind direction at time of application: N, NE, E, SE, S, SW, W, NW.
- (7) Weather condition at time of application: Sunny, Partly Cloudy, Cloudy, Rain, Snow.
- (8) Amount of rainfall during the 24 hours prior to application.
- (9) Amount of rainfall during the 24 hours after application.









## **Section 10. References**

### **10.1. Publications**

#### **Animal Waste**

AWMFH Chapter 4, Table 4-5(b), March 2008

#### **Crop Fertilizer Recommendations**

"Lime and Fertilizer Recommendations for the Various Crops of Tennessee," BEES Info #100, Aug 2008  
<http://soilplantandpest.utk.edu/publications/soilfertilizerpubs.htm>

#### **Manure Application Setback Features/Distances**

Nutrient Management Standard 590  
[http://efotg.nrcs.usda.gov/references/public/TN/Nutrient\\_Management\\_\(590\)\\_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc)

#### **Manure Nutrient Availability**

"Manure Application Management," Tables 3 and 4, Tennessee Extension, PB1510, 2/94  
[http://wastemgmt.ag.utk.edu/ExtensionProjects/extension\\_publications.htm](http://wastemgmt.ag.utk.edu/ExtensionProjects/extension_publications.htm)

#### **Phosphorus Assessment**

"Tennessee Phosphorus Index," Tennessee NRCS, Nov. 2001

#### **Practice Standards**

Tennessee NRCS Nutrient Management Standard (590), Jan. 2003  
[http://efotg.nrcs.usda.gov/references/public/TN/Nutrient\\_Management\\_\(590\)\\_Standard.doc](http://efotg.nrcs.usda.gov/references/public/TN/Nutrient_Management_(590)_Standard.doc)