SOIL MAP WITH INTERPRETATIONS

Owner: Robert Schwabe Operator: same

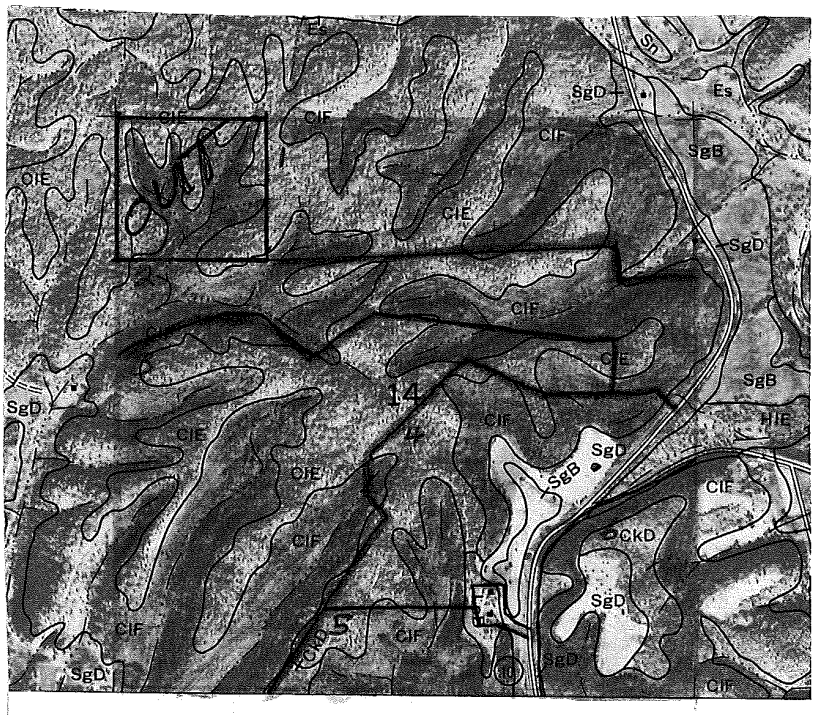
County: Cherokee Oklahoma, Date: 9/99

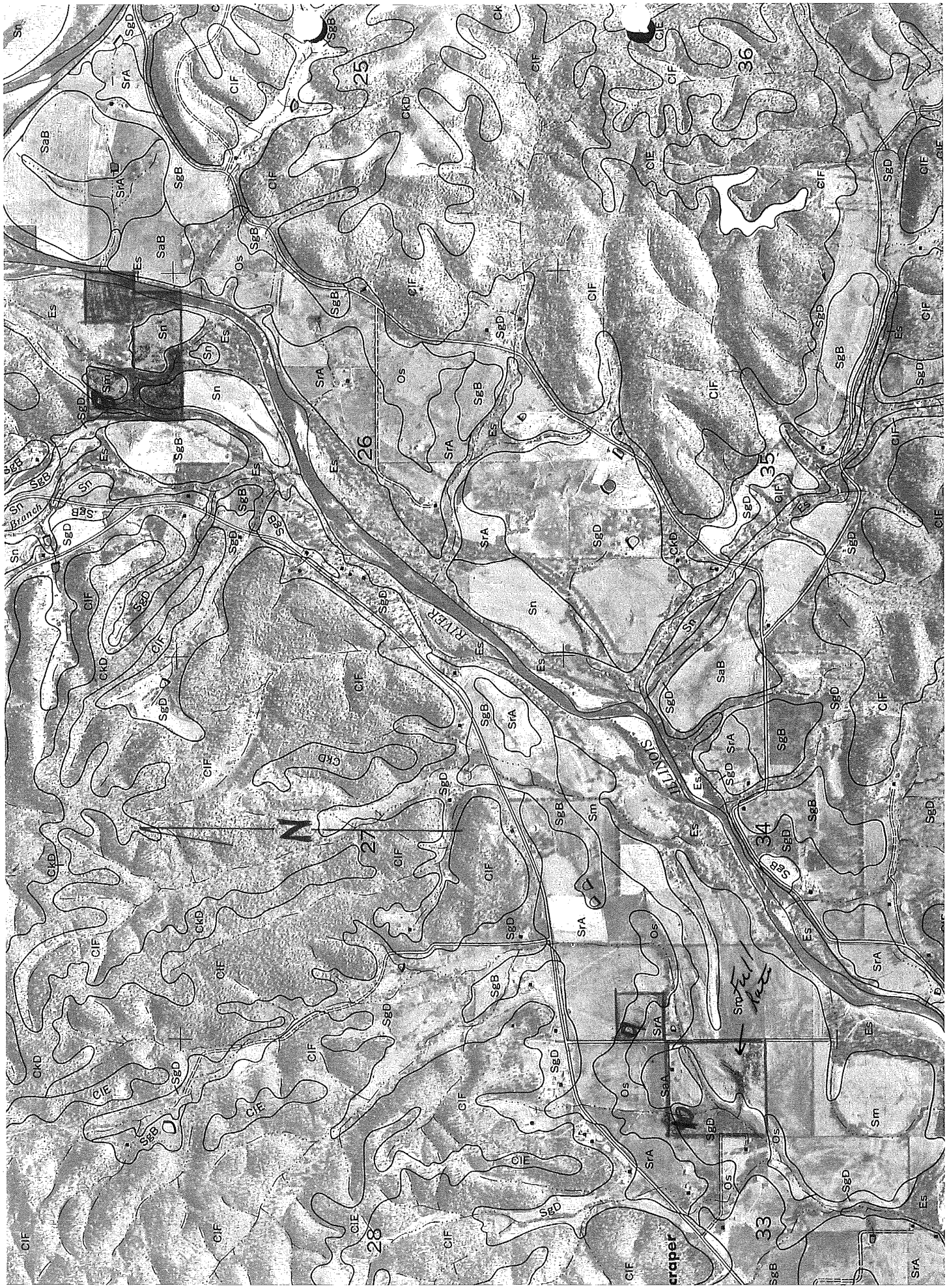
Approximate acres: 600 Approximate scale:

Cooperating with: Cherokee County Conservation District

Plan identification: 812 Photo number: 67

Prepared by USDA Soil Conservation Service 14-19-23




25
26
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ILLINOIS
RIVER
Branch
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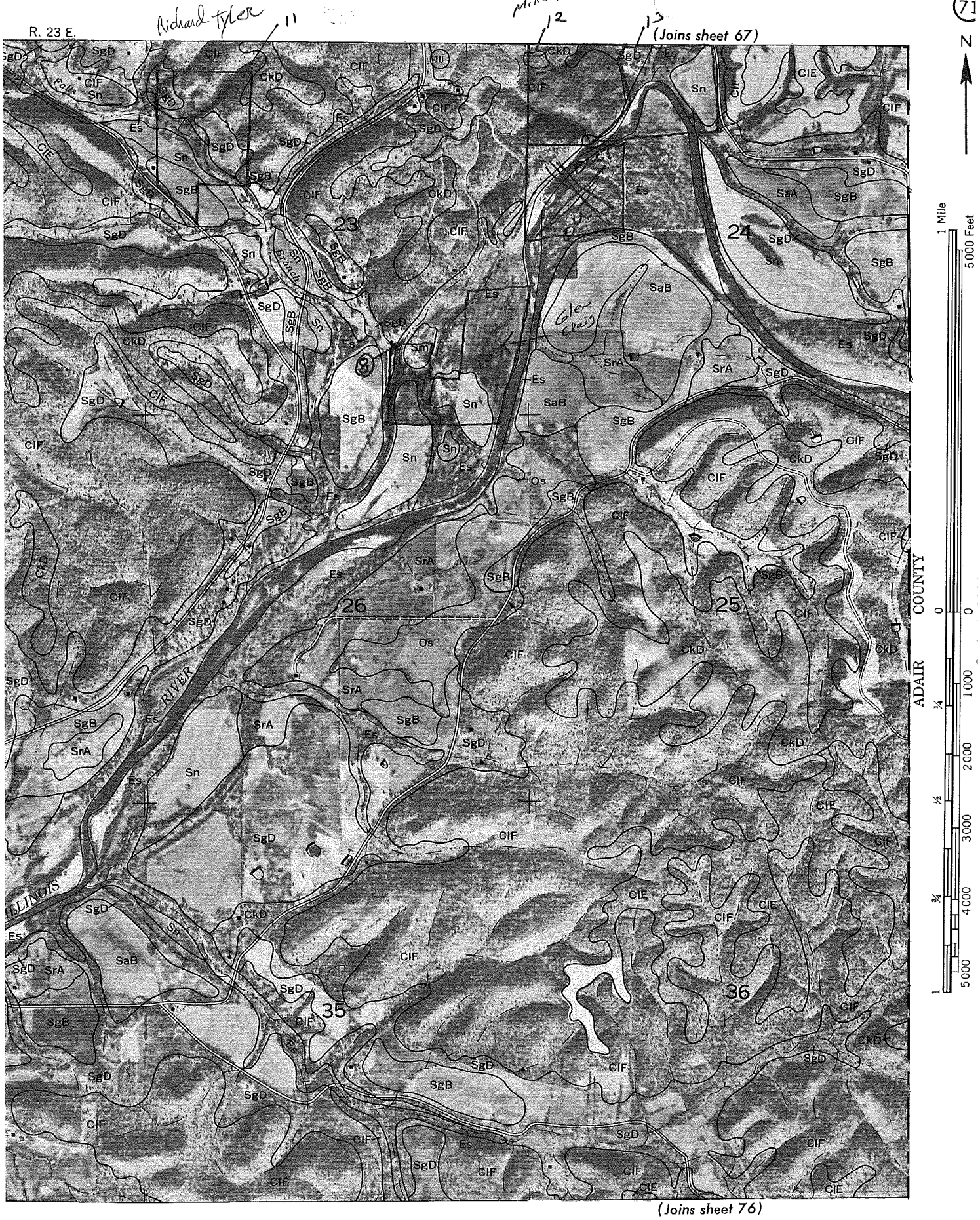
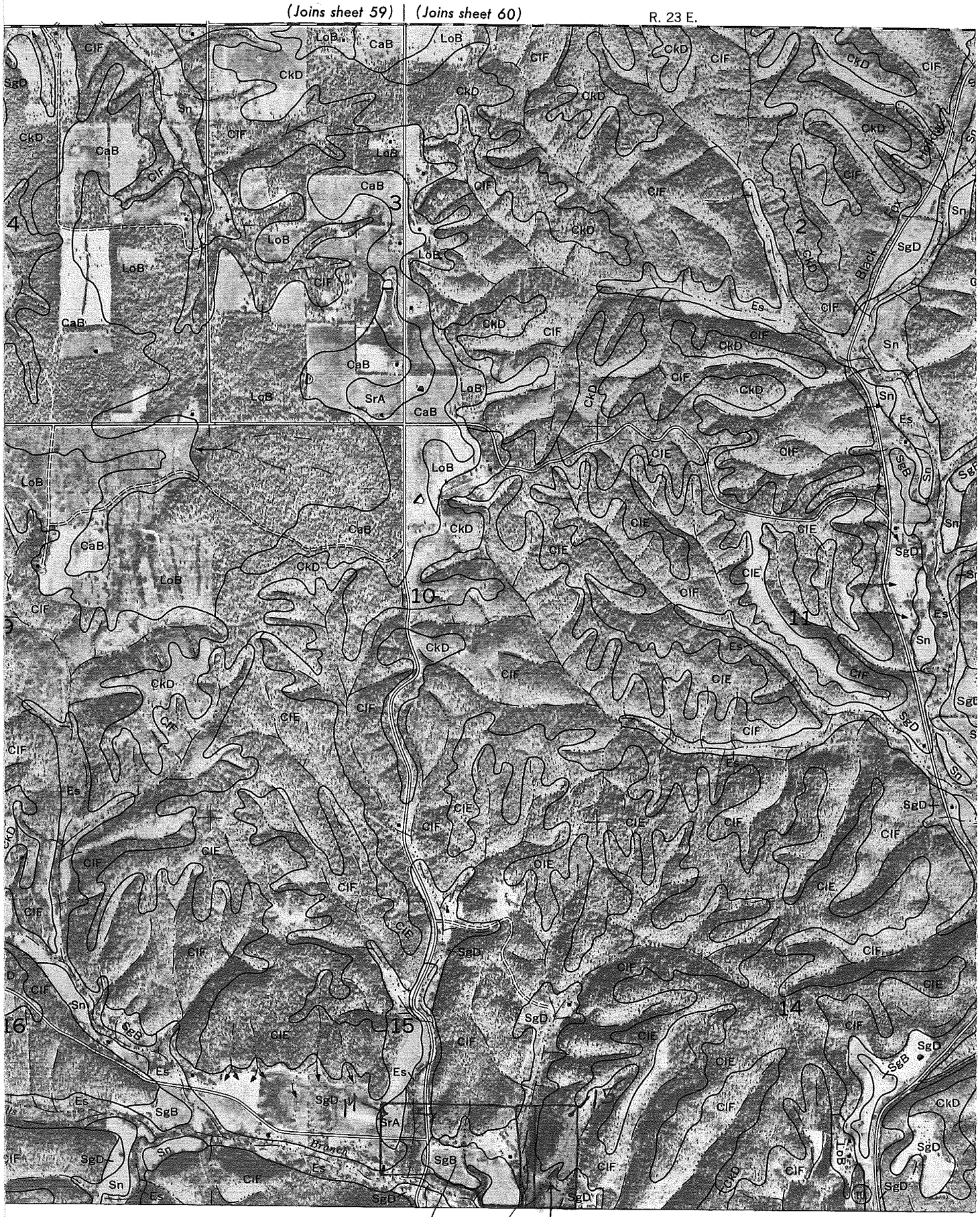
Full Rate
craper

JNTIES, OKLAHOMA — SHEET NUMRER 71



CHEROKEE AND DELAWARE COUNTIES, OKLAHOMA - SHEET NUMBER 67



BOB SCHWABE
14-19-23
NUTRIENT MANAGEMENT PLAN
POULTRY FACILITY
APRIL 2004

DESCRIPTION OF OPERATION

This nutrient management plan includes the production, handling, and distribution of wastes in a manner that prevents or minimizes degradation of air, soil, and water resources. Best Management Practices such as prescribed grazing, nutrient management, waste utilization, pest management, and heavy use area protection may be used as components of the waste management system.

This plan pertains to a 32,000 bird TURKEY operation located in 3 houses in Cherokee County. The houses are cleaned out only as needed due to disease or excess volume. The houses are decaked after each flock. The cake is land applied by the producer. Full clean out waste over the amount of 774 tons (including cake amount) will be sold or applied off site. Dead birds are disposed of in a dead bird incinerator.

APPLICATION

Waste can be applied to fields 2, 3, 4, 8, 9, 10, 11, 12, 13, 14, and 15 at a maximum rate of 2.3 tons per acre per year. Waste can be applied to fields 1, 6, and 9 at a maximum rate of 1.2 tons per acre per year. Refer to soils map for application areas. DO NOT APPLY TO AREAS MARKED IN RED. BLUE AREAS ARE FOR HALF RATE APPLICATION ONLY. DO NOT APPLY TO STEEP SLOPES.

In the event the waste cannot be spread at cleanout, due to weather conditions, etc.; the waste will be temporarily stored and covered to prevent runoff. Maintain a filter strip of bermudagrass or other forage between pens/lots, and any natural drainage areas. Protect the filter strip from grazing by use of a fence.

Estimated nutrients available to plants (lbs/ton):

N	=	40	lbs/ton	(50% application loss)
P2O5	=	86	lbs/ton	(No application loss)
K2O	=	48	lbs/ton	(No application loss)

Total waste production is estimated, by NRCS AWMFH, to be 1500 tons per year. This is assuming that the grow-out house is cleaned out in addition to the brooder houses. In a normal year when the houses are decaked only waste production is estimated, by the producer, to be 450 tons per year.

Total nutrients produced each year and available for delivery to the field, after storage and application losses for the decake only, are as follows:

N	=	18,225 lbs
P2O5	=	38,745 lbs
K2O	=	21,870 lbs

An initial soil test is required for each field to determine current phosphorus (P) levels in the soil. Recommendations made in this plan are based on the landowners' actual soil and litter tests. In the event of a full cleanout the producer must sell or give the litter to someone else for offsite application. This will only include the amount above the 774 tons which can be properly applied to land under the control of the producer.

A soil map is included as a part of this nutrient management plan. If any areas are not suitable for litter application, due to soil conditions, it will be colored red on the soil map. This is the do not apply area.

RECORD KEEPING

Producers should contact their state poultry inspector for record keeping information and the appropriate forms to use.

EMERGENCY DISPOSAL OF DEAD BIRDS DUE TO CATASTROPHIC LOSS

In the event of a catastrophic death loss caused by weather, fire, etc., the producer should contact Oklahoma Department of Agriculture for disposal recommendations.

TELEPHONE NUMBERS

Oklahoma Department of Agriculture
Dan Parish, Water Quality Director -------- 405-521-3864

Exhibit 1 Nutrient Budget Worksheet

Landowner: Bob Schwabe	Field No.: 1	50 Acres

Purpose (Check all that apply)

- ☐ Budget and supply nutrients for plant production
- ☑ Minimize agricultural nonpoint source pollution
- ☑ Utilize organic material as nutrient source
- ☐ Maintain or improve soil condition

Crop Sequence/Rotation	Expected Yield
Continuous graze pasture	4

Nutrient Content of Manure per ton

N Test	N Remaining	P_2O_5	K_2O
81	40	86.1	48.6

Current Soil Test Levels

N	P	K	pH	SOM%	EC
22	202	481	6.0		

Recommended Nutrients to Meet Expected Yield and Grass Establishment (See Tables in 590 Standard)

N	N for Grass Est.	P_2O_5	K2O	Lime	Other
200		0	0	0.7	

Nutrient Sources

Credits	N	P_2O_5	K_2O
1. Nitrogen credits from previous legume crop	0		
2. Residual from long-term manure application	0		
3. Irrigation water	0		
4. Other (Atmosphere, etc.)	0		
5. Total Credits	0	0	0

Applied Nutrients		N		P_2O_5		K_2O	
		Alt. 1	Alt. 2	Alt. 1	Alt. 2	Alt. 1	Alt. 2
6. Fertilizer	Starter						
	Other	0	178	0	0	0	0
7. Manure or Organic by-products		40	0	95	0	53	0
8. Total Applied Nutrients		40	178	95	0	53	0
9. Total Nutrients (add lines 5 and 8 plus N from Soil Test)		62	200	95	0	53	0
10. Recommended Nutrients		200	200	0	0	0	0
11. Nutrient Status (subtract line 10 from 9)		-138	0	95	0	53	0

If line 11 is a negative number, this is the amount of additional nutrients needed to meet the crop recommendation.
If line 11 is a positive number, this is the amount by which the applied nutrients exceed the crop requirements.

Nutrient Management Decision - Including method, rate, form and timing of application.	Producer Selected Alternative:	1

Alternative 1 assumes applying 1.1 tons per acre per year of Turkey litter. At this rate you will not meet the nitrogen requirements and exceed the Phosphorus and Potasium requirements.
Alternative 2 assumes that you would sell your litter and supplement with 178 pounds per acre of commercial nitrogen fertilizer, 0.0 pounds of commercial phosphorus fertilizer per acre, and 0.0 pounds per acre of commercial potassium fertilizer per acre.

10/2002

OKLAHOMA PHOSPHORUS ASSESSMENT WORKSHEET

Client Name:	Bob Schwabe	Field(s):	1	Date:	4/16/2004
Planner:	Marty Hern	Location:	14-19-23	Crop:	pasture
Nutrient Limited Watershed (yes/no):	no			Ctrl + C clears worksheet	

Soil Test P Index Mehlich III (lbs./ac)	202			
Application Method	Surface applied and incorporated within 7 days or injected 2" below the surface	Surface applied or incorporated more than 7 days after application	Surface applied on frozen or snow covered ground	
		x		
Land Slope %	0 - 8 %	8.1 - 15 %	> 15.1 %	
	x			
Erosion Rate Greater Than "T"	No	Yes		
	x			
Flooding Frequency	None	Occasionally	Frequently	
	x			
Distance of Manure Application to Perennial Stream, Pond, Well, or Sinkhole	> 100 ft. or Buffer Strip Established	0 - 100 ft.		
	x			
Distance of Manure Application to Intermittent Stream	> 50 ft. or Buffer Strip Established	0 - 50 ft.		
	x			
Depth of Soil	> 20.1 in.	10.1 - 20 in.	0 - 10 in.	
	x			
Rock Fragments in soil surface 3" to 10 " in diameter and exceed 50% by weight or > 10" in diameter and exceed 25% by weight	No	Yes		
	x			
Rocks > 10" in diameter which cover > 3% of the soil surface	No	Yes		
		x		

Non - Nutrient Limited Watershed - Waste Application Rates		
Moderate Rating	Apply at half rate	Apply up to the following rates of P2O5 annually not to exceed the Nitrogen requirement of the crop: Application of up to 100 lbs/ac P2O5 when surface applied. Application of up to 150 lbs/ac P2O5 when applied through sprinkler irrigation and managed to prevent runoff. Application of up to 200 lbs/ac P2O5 when incorporated within 7 days. When a Split Application is designated, no more than 1/2 the allowed rate of P2O5 will be applied per application at least 30 days apart. On occassionally flooded soils, application may be made between June 20 through September 20. Application may also be made between February 1 through April 20 on established cool season grasses with at least 4 inches of height.
Nutrient Limited Watershed - Waste Application Rates		

Exhibit 1 Nutrient Budget Worksheet

Landowner: Bob Schwabe	Field No.: 2	20 Acres

Purpose (Check all that apply)

- [ ] Budget and supply nutrients for plant production
- [x] Minimize agricultural nonpoint source pollution
- [x] Utilize organic material as nutrient source
- [ ] Maintain or improve soil condition

Crop Sequence/Rotation	Expected Yield
Continuous graze pasture	4

Nutrient Content of Manure per ton

N Test	N Remaining	P_2O_5	K_2O
81	40	86.1	48.6

Current Soil Test Levels

N	P	K	pH	SOM%	EC
21	205	356	6.4		

Recommended Nutrients to Meet Expected Yield and Grass Establishment (See Tables in 590 Standard)

N	N for Grass Est.	P_2O_5	K2O	Lime	Other
200		0	0	0	

Nutrient Sources

Credits	N	P_2O_5	K_2O
1. Nitrogen credits from previous legume crop	0		
2. Residual from long-term manure application	0		
3. Irrigation water	0		
4. Other (Atmosphere, etc.)	0		
5. Total Credits	0	0	0

Applied Nutrients		N		P_2O_5		K_2O	
		Alt. 1	Alt. 2	Alt. 1	Alt. 2	Alt. 1	Alt. 2
6. Fertilizer	Starter						
	Other	0	179	0	0	0	0
7. Manure or Organic by-products		80	0	198	0	112	0
8. Total Applied Nutrients		80	179	198	0	112	0
9. Total Nutrients (add lines 5 and 8 plus N from Soil Test)		101	200	198	0	112	0
10. Recommended Nutrients		200	200	0	0	0	0
11. Nutrient Status (subtract line 10 from 9)		-99	0	198	0	112	0

If line 11 is a negative number, this is the amount of additional nutrients needed to meet the crop recommendation.
If line 11 is a positive number, this is the amount by which the applied nutrients exceed the crop requirements.

Nutrient Management Decision - Including method, rate, form and timing of application.	Producer Selected Alternative:	1

Alternative 1 assumes applying 2.3 tons per acre per year of [redacted] litter. At this rate you will not meet the nitrogen requirements and exceed the Phosphorus and Potasium requirements.
Alternative 2 assumes that you would sell your litter and supplement with 179 pounds per acre of commercial nitrogen fertilizer, 0.0 pounds of commercial phosphorus fertilizer per acre, and 0.0 pounds per acre of commercial potassium fertilizer per acre. At t

10/2002

OKLAHOMA PHOSPHORUS ASSESSMENT WORKSHEET

Client Name:	Bob Schwabe	Field(s):	2	Date:	1/10/2004
Planner:	Marty Hern	Location:	14-19-23	Crop:	pasture
Nutrient Limited Watershed (yes/no):	no			Ctrl + C clears worksheet	

Soil Test P Index Mehlich III (lbs./ac)	205			
Application Method	Surface applied and incorporated within 7 days or injected 2" below the surface	Surface applied or incorporated more than 7 days after application	Surface applied on frozen or snow covered ground	
		x		
Land Slope %	0 - 8 %	8.1 - 15 %	> 15.1 %	
	x			
Erosion Rate Greater Than "T"	No	Yes		
	x			
Flooding Frequency	None	Occasionally	Frequently	
	x			
Distance of Manure Application to Perennial Stream, Pond, Well, or Sinkhole	> 100 ft. or Buffer Strip Established	0 - 100 ft.		
	x			
Distance of Manure Application to Intermittent Stream	> 50 ft. or Buffer Strip Established	0 - 50 ft.		
	x			
Depth of Soil	> 20.1 in.	10.1 - 20 in.	0 - 10 in.	
	x			
Rock Fragments in soil surface 3" to 10 " in diameter and exceed 50% by weight or > 10" in diameter and exceed 25% by weight	No	Yes		
	x			
Rocks > 10" in diameter which cover > 3% of the soil surface	No	Yes		
	x			

Non - Nutrient Limited Watershed - Waste Application Rates

Moderate Rating	Apply at full rate	Apply up to the following rates of P2O5 annually not to exceed the Nitrogen requirement of the crop: Application of up to 200 lbs/ac P2O5 when surface applied. Application of up to 300 lbs/ac P2O5 when applied through sprinkler irrigation and managed to prevent runoff. Application of up to 400 lbs/ac P2O5 when incorporated within 7 days. When a Split Application is designated, no more than 1/2 the allowed rate of P2O5 will be applied per application at least 30 days apart. On occassionally flooded soils, application may be made between June 20 through September 20. Application may also be made between February 1 through April 20 on established cool season grasses with at least 4 inches of height.

Nutrient Limited Watershed - Waste Application Rates

Exhibit 1 Nutrient Budget Worksheet

Landowner: Bob Schwabe	Field No.: 3	70 Acres

Purpose (Check all that apply)

- ☐ Budget and supply nutrients for plant production
- ☑ Minimize agricultural nonpoint source pollution
- ☑ Utilize organic material as nutrient source
- ☐ Maintain or improve soil condition

Crop Sequence/Rotation	Expected Yield
Continuous graze pasture	4

Nutrient Content of Manure per ton

N Test	N Remaining	P_2O_5	K_2O
81	40	86.1	48.6

Current Soil Test Levels

N	P	K	pH	SOM%	EC
38	152	229	5.8		

Recommended Nutrients to Meet Expected Yield and Grass Establishment (See Tables in 590 Standard)

N	N for Grass Est.	P_2O_5	K2O	Lime	Other
200		0	30	0.7	

Nutrient Sources

Credits	N	P_2O_5	K_2O
1. Nitrogen credits from previous legume crop	0		
2. Residual from long-term manure application	0		
3. Irrigation water	0		
4. Other (Atmosphere, etc.)	0		
5. Total Credits	0	0	0

Applied Nutrients		N		P_2O_5		K_2O	
		Alt. 1	Alt. 2	Alt. 1	Alt. 2	Alt. 1	Alt. 2
6. Fertilizer	Starter						
	Other	0	162	0	0	0	30
7. Manure or Organic by-products		80	0	198	0	112	0
8. Total Applied Nutrients		80	162	198	0	112	30
9. Total Nutrients (add lines 5 and 8 plus N from Soil Test)		118	200	198	0	112	30
10. Recommended Nutrients		200	200	0	0	30	30
11. Nutrient Status (subtract line 10 from 9)		-82	0	198	0	82	0

If line 11 is a negative number, this is the amount of additional nutrients needed to meet the crop recommendation.
If line 11 is a positive number, this is the amount by which the applied nutrients exceed the crop requirements.

Nutrient Management Decision - Including method, rate, form and timing of application.	Producer Selected Alternative:	1

Alternative 1 assumes applying 2.3 tons per acre per year of [redacted] litter. At this rate you will not meet the nitrogen requirements and exceed the Phosphorus and Potasium requirements.
Alternative 2 assumes that you would sell your litter and supplement with 162 pounds per acre of commercial nitrogen fertilizer, 0.0 pounds of commercial phosphorus fertilizer per acre, and 30 pounds per acre of commercial potassium fertilizer per acre. At t

10/2002

OKLAHOMA PHOSPHORUS ASSESSMENT WORKSHEET

Client Name:	Bob Schwabe	Field(s):	3	Date:	1/10/2004
Planner:	Marty Hern	Location:	14-19-23	Crop:	pasture
Nutrient Limited Watershed (yes/no):	no			Ctrl + C clears worksheet	

Soil Test P Index Mehlich III (lbs./ac)	152			
Application Method	Surface applied and incorporated within 7 days or injected 2" below the surface	Surface applied or incorporated more than 7 days after application	Surface applied on frozen or snow covered ground	
		x		
Land Slope %	0 - 8 %	8.1 - 15 %	> 15.1 %	
	x			
Erosion Rate Greater Than "T"	No	Yes		
	x			
Flooding Frequency	None	Occasionally	Frequently	
	x			
Distance of Manure Application to Perennial Stream, Pond, Well, or Sinkhole	> 100 ft. or Buffer Strip Established	0 - 100 ft.		
	x			
Distance of Manure Application to Intermittent Stream	> 50 ft. or Buffer Strip Established	0 - 50 ft.		
	x			
Depth of Soil	> 20.1 in.	10.1 - 20 in.	0 - 10 in.	
	x			
Rock Fragments in soil surface 3" to 10 " in diameter and exceed 50% by weight or > 10" in diameter and exceed 25% by weight	No	Yes		
	x			
Rocks > 10" in diameter which cover > 3% of the soil surface	No	Yes		
	x			

Non - Nutrient Limited Watershed - Waste Application Rates		
Moderate Rating	Apply at full rate	Apply up to the following rates of P2O5 annually not to exceed the Nitrogen requirement of the crop: Application of up to 200 lbs/ac P2O5 when surface applied. Application of up to 300 lbs/ac P2O5 when applied through sprinkler irrigation and managed to prevent runoff. Application of up to 400 lbs/ac P2O5 when incorporated within 7 days. When a Split Application is designated, no more than 1/2 the allowed rate of P2O5 will be applied per application at least 30 days apart. On occassionally flooded soils, application may be made between June 20 through September 20. Application may also be made between February 1 through April 20 on established cool season grasses with at least 4 inches of height.
Nutrient Limited Watershed - Waste Application Rates		

Exhibit 1 Nutrient Budget Worksheet

Landowner: Bob Schwabe	Field No.: 4	67 Acres

Purpose (Check all that apply)

- ☐ Budget and supply nutrients for plant production
- ☑ Minimize agricultural nonpoint source pollution
- ☑ Utilize organic material as nutrient source
- ☐ Maintain or improve soil condition

Crop Sequence/Rotation	Expected Yield
Continuous graze pasture	4

Nutrient Content of Manure per ton

N Test	N Remaining	P_2O_5	K_2O
81	40	86.1	48.6

Current Soil Test Levels

N	P	K	pH	SOM%	EC
24	236	181	5.8		

Recommended Nutrients to Meet Expected Yield and Grass Establishment (See Tables in 590 Standard)

N	N for Grass Est.	P_2O_5	K2O	Lime	Other
200		0	30	0.7	

Nutrient Sources

Credits	N	P_2O_5	K_2O
1. Nitrogen credits from previous legume crop	0		
2. Residual from long-term manure application	0		
3. Irrigation water	0		
4. Other (Atmosphere, etc.)	0		
5. Total Credits	0	0	0

Applied Nutrients		N		P_2O_5		K_2O	
		Alt. 1	Alt. 2	Alt. 1	Alt. 2	Alt. 1	Alt. 2
6. Fertilizer	Starter						
	Other	0	176	0	0	0	30
7. Manure or Organic by-products		80	0	198	0	112	0
8. Total Applied Nutrients		80	176	198	0	112	30
9. Total Nutrients (add lines 5 and 8 plus N from Soil Test)		104	200	198	0	112	30
10. Recommended Nutrients		200	200	0	0	30	30
11. Nutrient Status (subtract line 10 from 9)		-96	0	198	0	82	0

If line 11 is a negative number, this is the amount of additional nutrients needed to meet the crop recommendation.
If line 11 is a positive number, this is the amount by which the applied nutrients exceed the crop requirements.

Nutrient Management Decision - Including method, rate, form and timing of application.	Producer Selected Alternative:	1

Alternative 1 assumes applying 2.3 tons per acre per year of [redacted] litter. At this rate you will not meet the nitrogen requirements and exceed the Phosphorus and Potasium requirements.
Alternative 2 assumes that you would sell your litter and supplement with 176 pounds per acre of commercial nitrogen fertilizer, 0.0 pounds of commercial phosphorus fertilizer per acre, and 30 pounds per acre of commercial potassium fertilizer per acre. At t

10/2002

OKLAHOMA PHOSPHORUS ASSESSMENT WORKSHEET

Client Name:	Bob Schwabe	Field(s):	4	Date:	1/10/2004
Planner:	Marty Hern	Location:	14-19-23	Crop:	pasture
Nutrient Limited Watershed (yes/no):	no			Ctrl + C clears worksheet	

Soil Test P Index Mehlich III (lbs./ac)	236			
Application Method	Surface applied and incorporated within 7 days or injected 2" below the surface	Surface applied or incorporated more than 7 days after application	Surface applied on frozen or snow covered ground	
		x		
Land Slope %	0 - 8 %	8.1 - 15 %	> 15.1 %	
	x			
Erosion Rate Greater Than "T"	No	Yes		
	x			
Flooding Frequency	None	Occasionally	Frequently	
	x			
Distance of Manure Application to Perennial Stream, Pond, Well, or Sinkhole	> 100 ft. or Buffer Strip Established	0 - 100 ft.		
	x			
Distance of Manure Application to Intermittent Stream	> 50 ft. or Buffer Strip Established	0 - 50 ft.		
	x			
Depth of Soil	> 20.1 in.	10.1 - 20 in.	0 - 10 in.	
	x			
Rock Fragments in soil surface 3" to 10 " in diameter and exceed 50% by weight or > 10" in diameter and exceed 25% by weight	No	Yes		
	x			
Rocks > 10" in diameter which cover > 3% of the soil surface	No	Yes		
	x			

Non - Nutrient Limited Watershed - Waste Application Rates		
Moderate Rating	Apply at full rate	Apply up to the following rates of P2O5 annually not to exceed the Nitrogen requirement of the crop: Application of up to 200 lbs/ac P2O5 when surface applied. Application of up to 300 lbs/ac P2O5 when applied through sprinkler irrigation and managed to prevent runoff. Application of up to 400 lbs/ac P2O5 when incorporated within 7 days. When a Split Application is designated, no more than 1/2 the allowed rate of P2O5 will be applied per application at least 30 days apart. On occassionally flooded soils, application may be made between June 20 through September 20. Application may also be made between February 1 through April 20 on established cool season grasses with at least 4 inches of height.
Nutrient Limited Watershed - Waste Application Rates		