BENTON COUNTY CONSERVATION DISTRICT

101 Northeast Third Street
Bentonville, AR 72712-5398

Phone: 501-273-2622
Extension #3

Animal Waste Management Plan

FOR:
Danny Griffin
12651 Rutherford Rd.
Gentry, AR 72734

PLAN PERPARED BY:

JOSHUA FORTENBERRY, BCCD
WATER QUALITY TECHNICIAN

All programs and services of the Benton County Conservation District are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, marital status, age, or handicap.

USDA-Natural Conservation Service
Prepared by Joshua Fortenberry, Water Quality Technician
101 NE 3rd St. Bentonville, AR.
(501) 273-2622 ext. 3

Danny Griffin 1/4/02
12651 Rutherford Rd.
Gentry, AR 72734
501-736-4611

This is a BROILER operation. There are three houses in this operation; all being 40x400.
In addition to the three houses owned, Mr. Griffin leases two houses from H.C. Rutherford.
The two lease houses are located north of Mr. Griffin's farm.
Operation capacity of the three houses is 60,000 birds.
Operation capacity of the two leased houses is 40,000 birds. (Total capacity = 100,000 birds)
Average flock life is 6 weeks, 5 flocks per year.
Finish weight of birds is 4.80 lbs.
Houses receive one total clean-out per year.
Cakeout operations are conducted between each flock.
Dead birds are incinerated.
There is a total of 10 acres at this farm.
All litter is sold from this operation. No litter is spread at this farm.
Litter will only be spread in an emergency situation, such as a water leak.

Best Management Practices (BMP's) when properly constructed or applied constitute the conservation system necessary to protect the Natural Resources and meet planning objectives. Apply and maintain each practice according to specifications included.
Sufficient vegetative cover should be maintained to prevent sediment and animal waste from reaching receiving water bodies.
The following BMP's will be needed to obtain the maximum benefits from this water quality plan.

1. Prescribed Grazing
2. Pasture Management
3. Waste Storage Structure (within houses)
4. Nutrient Management
5. Waste Utilization (Code 633)
6. Waste Management System
7. Record Keeping
8. Annual Soil Testing
9. Buffer Zones

Catastrophic death losses should be reported to the Livestock and Poultry Commission for disposal instructions. Telephone No 501-751-4869

Litter applications should be made to maximize beneficial use of nitrogen.
Litter should be applied during the growth cycle of the forage crop being grown. The growth cycle will normally be in the spring or fall for cool season forages and spring to summer for warm season forages.
Annual soil test should be performed on all spread sites to determine nutrients in soil and to avoid under applying or over applying litter. Records should be kept on litter production and to whom litter is sold or traded.
In the event that litter has to be temporarily stored outside the houses during clean-out, stockpile in such a manner that all surface water is diverted around litter piles. Place a temporary cover over stockpiled litter.

OPERATION AND MAINTENANCE
WASTE UTILIZATION

GENERAL

At present litter is not regulated and the following are recommendations for litter application.

WASTE UTILIZATION

Litter is to be applied by means of a dry litter spreader. Applications in flood prone areas should not be made during flooding season. Application of waste are not to be made on frozen or snow covered ground, when the soil is saturated, during rainy weather, or when significant rainfall is anticipated within the next 24 hours.
Surface applications of litter should not be made within 100 feet of rock outcrops, streams, ponds, lakes, springs, sinkholes, wells and water supplies.
Litter should be distributed as evenly as possible.
Litter should not be applied on slopes with grades in excess of 15 percent, or in any manner that will allow litter to enter the waters of the state.

ODOR RECOMMENDATIONS

Waste will be spread by any method that will result in uniform application of material at specified rates.
Avoid spreading when the wind will blow toward populated areas.
Avoid spreading just before weekends and holidays when people are more likely to be outdoors.
Avoid spreading near heavily traveled roadways.
Spreading in the mornings when the air is warming and rising, rather than in the late afternoon.
Consider weather conditions, sunny low humid days reduce odors, turbulent breezes will dilute and dissipate odors.

DRY LITTER IS NOT REGULATED IN ARKANSAS

It is suggested that fields with Phosphorus Index's of 1.2 or greater not receive animal manure as a source of fertilizer. An alternative to litter or animal manure would be to purchase commercial fertilizer such as (34-0-0) until Phosphorus Index is below 1.2.
Apply BMP's in order to reach a Phosphorus Index of below 1.2.

USDA | A C P | Bird Growth and Litter Production | WS-04
Comprehensive Nutrient Management Plan
Arkansas Conservation Partnership 2001

Landowner Griffin, Danny Date: 1/4/02

Manure Production:: Broiler

According to landowner records and other operations of similar size the average manure production per year is appox. **600** tons

Nutrient Content of the manure is estimated to be:

Nitrogen	60 pounds per ton *before losses
Phosphorus (P2O5)	58 pounds per ton
Potash (K2O)	52 pounds per ton

Average moisture content is estimated at 23% H2O
Plant available Nitrogen is estimated at 36 pounds per ton:

Estimated Total Nutrient Production:

Nitrogen	**21600** pounds per year *after losses
Phosphorus (P2O5)	**34800** pounds per year
Potash (K2O)	**31200** pounds per year

P-Index was not calculated because no litter is spread.

Application operations should not occur under the following conditions:
- Saturated soil conditions
- Frozen or snow covered surfaces
- When rainfall is in the immediate forecast

Records should be kept on all litter applications and/or transactions.
All litter is sold from this operation

Nutrient Balance Worksheet

Danny Griffin Date: 1/4/02 By: Joshua Fortenberry

Location: Gentry	Fields	all	10 acres
Crop:	Fescue		
Target Yield/tons	5 tons/ac		Litter(tons) 600

Nutrient:	N	P205	K20
Nutrient needed for target yield in pounds from Soil Test	0	0	0
(+) Normal soil release			
(+) Nitrogen from prior crop			
(-) Nitrogen for additional residue			
(+) Commercial Fertilizer			
(+) Litter	21,600	34,800	31,200
Total added/subtracted			

Balance	Excess (+)	21,600	34,800	31,200
	Deficient (-)			

Comments/Recommendations:
Nitrogen content of litter was calculated after losses.

Nutrients generated at this operation is in excess of what can safely be applied to this land.
No litter is applied at this farm.
All litter is sold from this operation.

Phosphorus Index was not calculated.

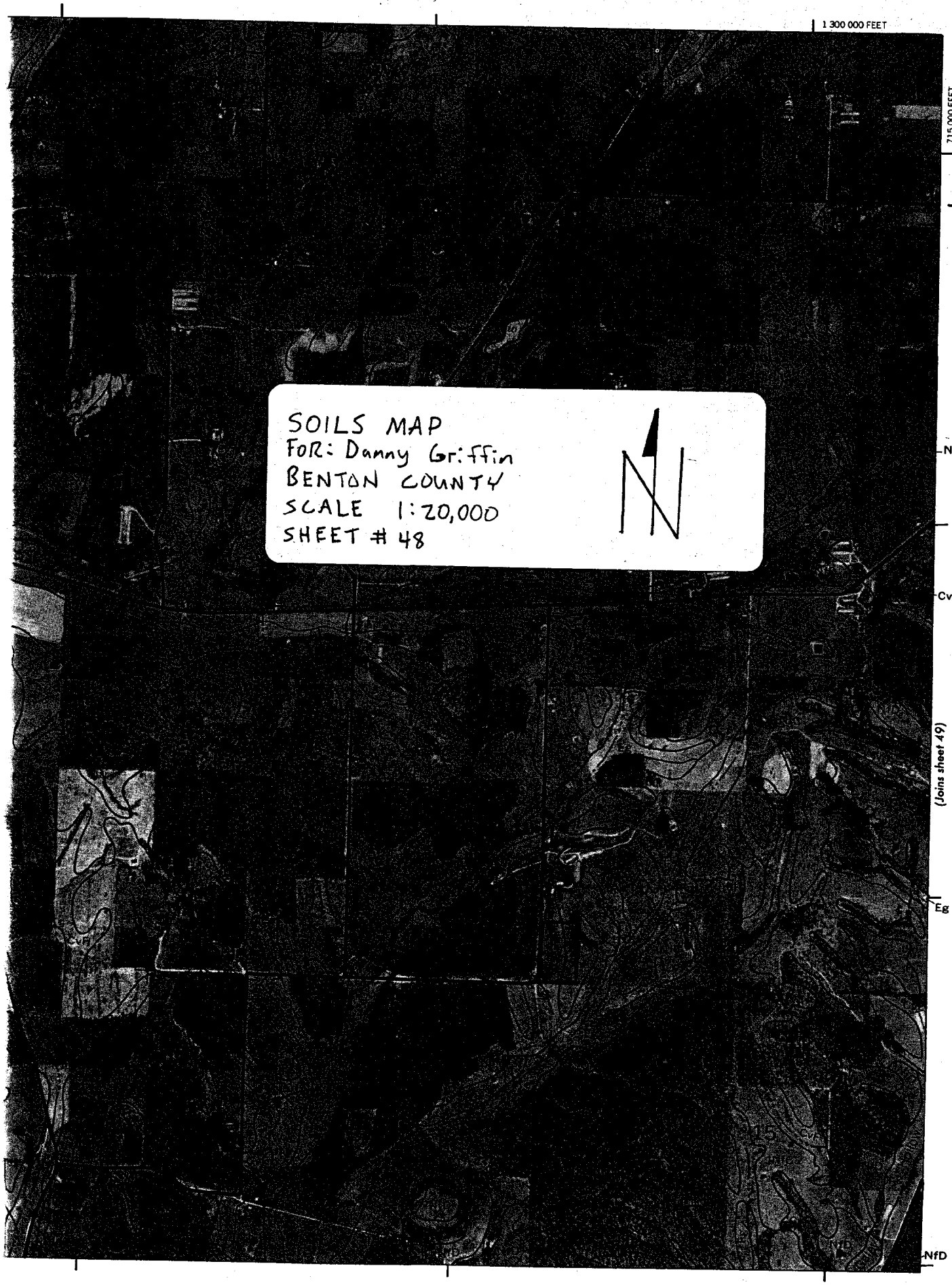
Nutrient uptake of P2O5 is expected to be 23-30 pounds per acre.

Monitor fields yearly to determine Phosphorus levels.
Consider only nitrogen fertilizer on fields with Phosphorus Index greater than 1.2
Apply litter fall or early spring to get maximum utilization of nutrients.

Soil Phosphorus Management Practices:
Keep water, shade, minerals and feed dispersed from each other to help move and evenly distribute animal manure and urine, on fields being used by grazing animals.
Vary locations of hay feeding and mineral placement each year. Monitor each pasture with soil test and adjust fertility programs accordingly.
Delaying litter application until the months of June and October would decrease the risk of soluble Phosphorus entering the surface water.

Nutrient content of litter is estimated to be Nitrogen 60 LBS/ton; P205 58 LBS/ton; K20 52 Pounds per ton.

AS — SHEET NUMBER 48



BENTON COUNTY, ARKANSAS NO. 48

This map is compiled on 1973 aerial photography by the U. S. Department of Agriculture, Soil Conservation Service and cooperating agencies. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

Non-Technical Descriptions

Soil Survey Area: 7 BENTON COUNTY, ARKANSAS

Map unit: *CvF* Clarksville cherty silt loam, 12 to 50 percent slopes

Description Category: **AGR**

These soils are severely limited for pasture and are unsuited for cultivated crops. Slope and surface stones severely restrict the use of farm equipment. Where pasture is established, plants include tall fescue and native grasses. Some areas can be used for native grass pasture if brush is controlled; however, controlled grazing and fire protection are needed to maintain soil cover and prevent excessive erosion.

Map unit: *NfD* Nixa cherty silt loam, 8 to 12 percent slopes

Description Category: **AGR**

These soils are moderately suited for pasture and poorly suited for cultivated crops. Slope and high content of chert fragments on the surface are the main restrictions. Erosion is also a severe hazard in areas without adequate cover. Suitable pasture plants include tall fescue, common and improved bermudagrass, and native grasses. Good management practices include controlled grazing and proper stocking. Conservation practices need to be intensified as slope length and gradient increase.

CONFIDENTIAL
PFIRWP-000191

Non-Technical Descriptions

Soil Survey Area: 7 BENTON COUNTY, ARKANSAS

Map unit: CvF Clarksville cherty silt loam, 12 to 50 percent slopes

Description Category: **WQL**

These soils have a severe surface runoff potential and a high leaching index. Nutrient movement to surface and ground waters is a hazard on these soils. A system of intense nutrient management practices that reduces runoff and erosion and minimizes the movctices should be applied to minimize the movement of soluble nutrients below the root zone. Soluble forms of nutrients should be applied with caution or avoided if other forms of nutrients are available.

Map unit: NfD Nixa cherty silt loam, 8 to 12 percent slopes

Description Category: **WQL**

These soils have an moderate surface runoff potential and a low leaching index. Nutrient movement to surface waters could be a hazard on these soils. In addition to management practices such as soil tests and proper application rates, a system of practices that reduces runoff and erosion should be planned on these soils.

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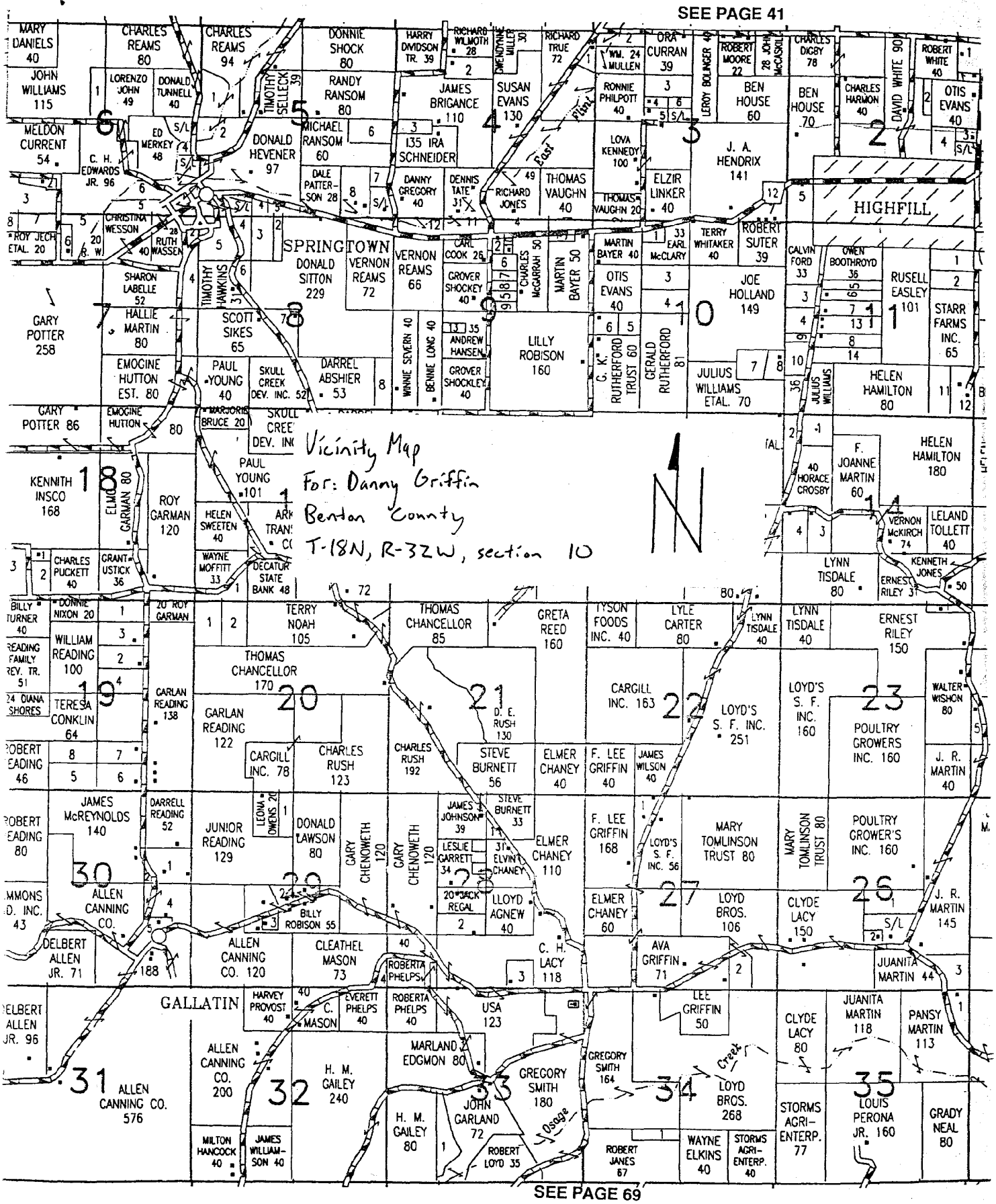
PFIRWP-000192

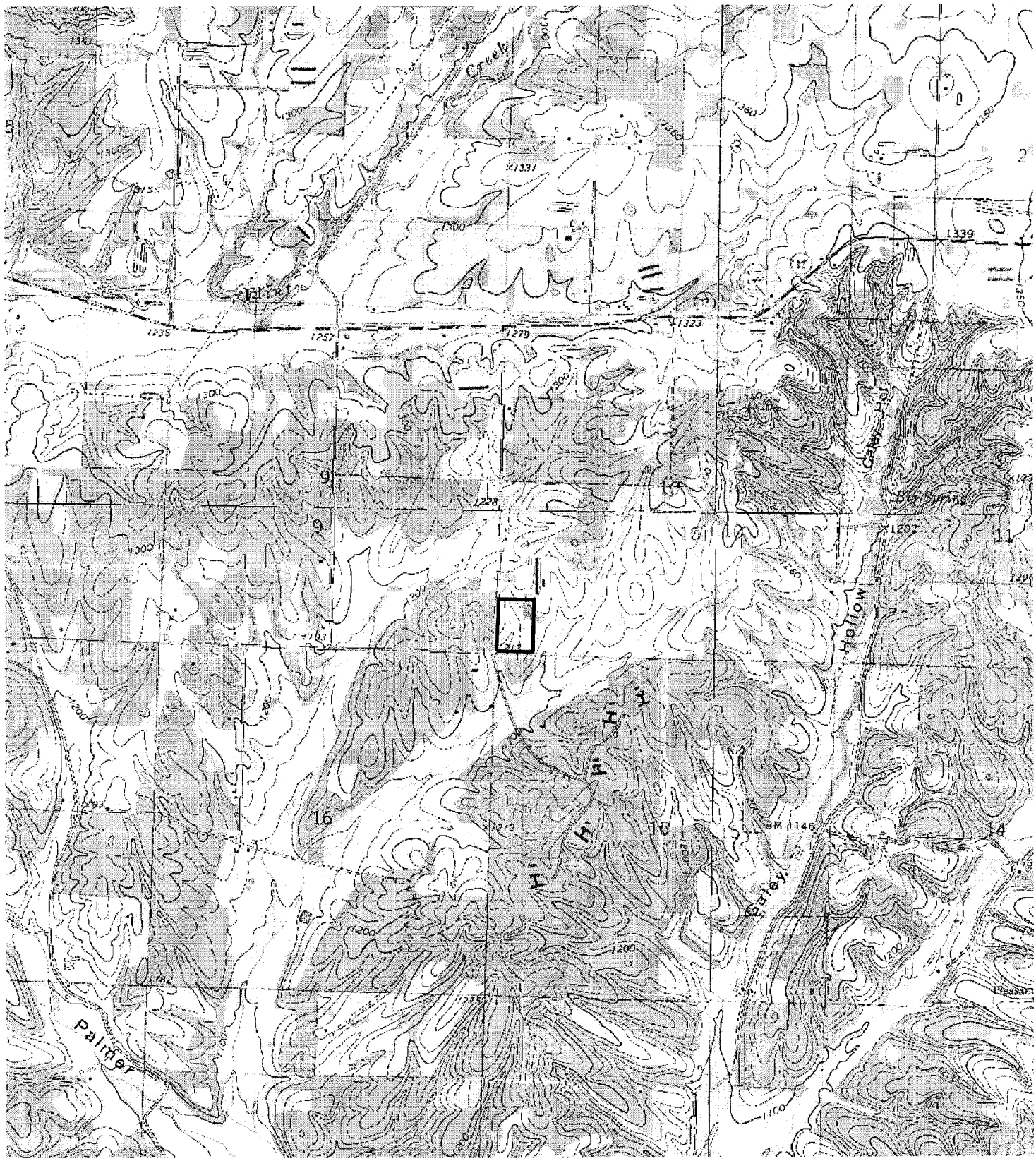


994 Miller Management Services, Inc.

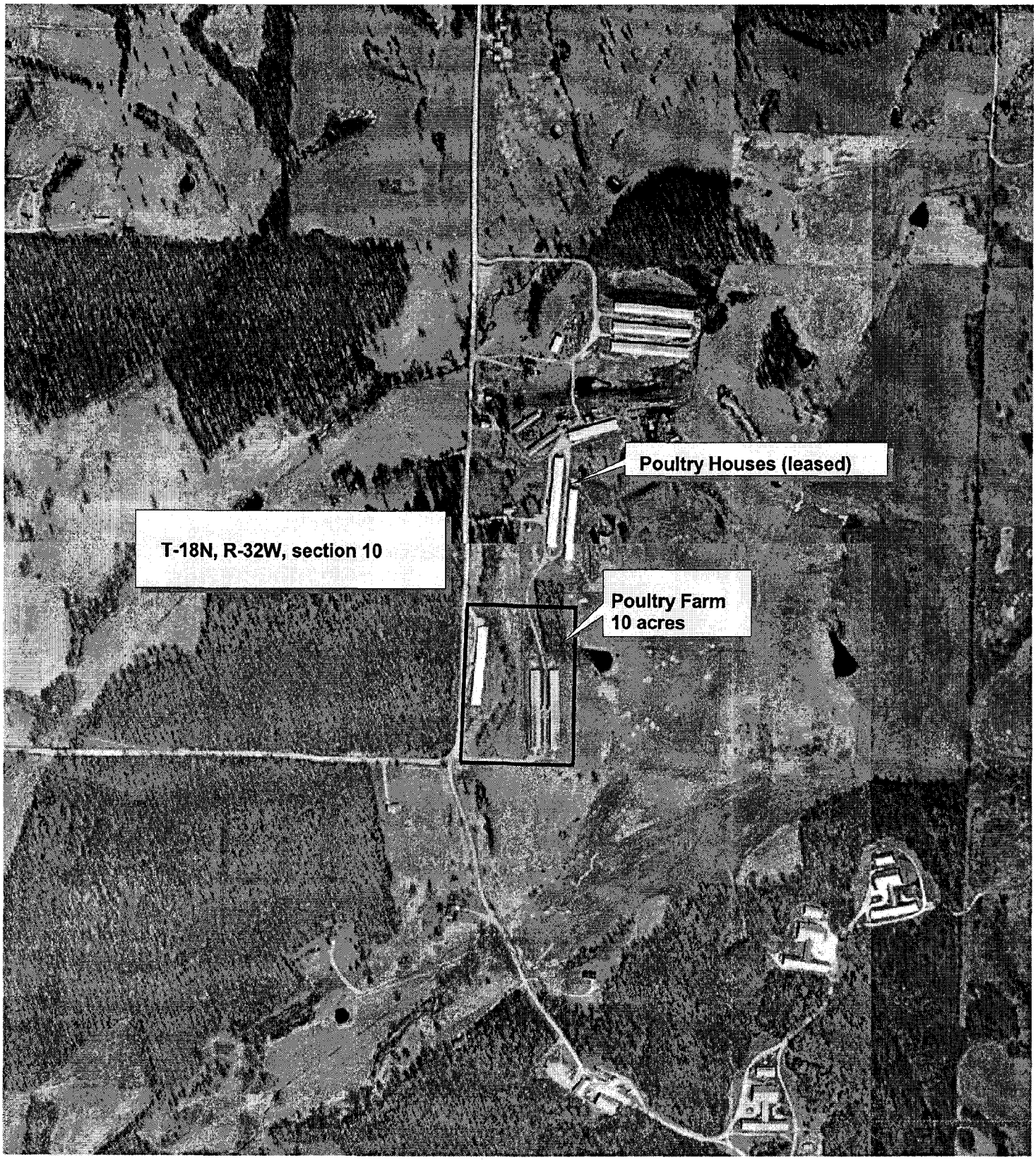
Topography Map
Gallatin, AR Quadrangle

Danny Griffin
Benton County
Approx. acres:
Date: 1/04/02

Bentonville Field Service Center
Benton County Conservation District
Joshua Fortenberry WQT
Scale: 1: 24,000



Conservation Plan Map

Danny Griffin
Benton County
Approx. acres:
Date: 1/04/02

Bentonville Field Service Center
Benton County Conservation District
Joshua Fortenberry WQT
Scale: 1"= 660'