Site Management Plan

for

EC FARMS

AFIN No. 51-00020 **Permit No. 3540-WR-6**

Owner: Ellis Campbell

Address: P.O. Box 52

City: Vendor, Arkansas **Zip:** 72683

Telephone: (870) 688-8992

Location(s): Township 15 N, Range 21 W, Section 34

Latitude: 35° 54' 43'' N **Longitude:** 93° 12' 09'' W

Newton County, Arkansas

Hydrologic Unit #: 11010005 0101

Watershed: Shop Creek-Little Buffalo River-Buffalo River

June 2015

Site Management Plan
EC FARMS
Newton County, Arkansas

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SECTION 7 SITE MANAGEMENT PLAN REFERENCES

Documentation of compliance

Site Management Plan Signature Page

The following individuals have assisted in the development of this Site Management Plan and certify their elements meet the nutrient management planning requirements for the State of Arkansas.

Nutrient Management Planner:

Name: Monica Hancock Certification No.: 10591004-0056

Title: Land Resource Specialist – Water Quality Technician

Signature: Monica Hancock Date: 6-18-15

Decision Maker:

As the decision maker for the operation associated with this Site Management Plan, I certify that I have been involved in the planning process and agree with the practices herein. I understand that I am responsible for keeping all necessary records associated with the Site Management Plan.

Signature: Ellis Campbell Date: 7-28-15

Ellis Campbell

Section 1 BACKGROUND AND SITE INFORMATION

General description of operation
Names, phone numbers, and address of owners and operators
Location of receiving site: legal, latitude and longitude
Land base table
Operation procedures specific to site

SECTION 1 – BACKGROUND AND SITE INFORMATION

Location and General Information

This is a site management plan update for a depopulated swine farm which would like to receive and apply swine fertilizer from C & H Hog Farm Inc., AFIN # 51-00164 in Newton County, AR. There are no plans at this time to repopulate this farm. Signed land use agreements between the previous landowners associated with this permit and the new owner have been obtained and are included with this plan update. All land included in this plan was originally approved by ADEQ for application under the previous permit 3540-WR-5 which was issued on April 1, 2012.

This depopulated swine facility is located approximately 2 miles north of the Hwy 16 and Hwy 21 junction at Deer, then approximately 3 miles north on Smith Mountain Road. The legal description for this depopulated facility is SW ¼ of the NW ¼ of Section 34, Township 15 North, Range 21 West in Newton County, Arkansas. The new owner's mailing address is P.O. Box 52, Vendor, Arkansas, 72683 and phone number is 870-434-5123. The entrance to the farm is located at Latitude 35° 54' 36" N, Longitude 93° 12'09" W in the Parthenon Quad. This depopulated facility is located 2,035 feet from Shop Creek-East Fork in Stream Segment 4J of the White River basin.

Phosphorous Index calculations were made for each field for the most restrictive timing window (November to February) which will allow for land application during all months of the year based on the nutrient uptake found on the land application sites. Calculations were made for each field and for each source of fertilizer (HP 1 and HP 2) due to the difference in nutrient content. Only one field recommendation from one fertilizer source is to be used each year.

Waste Management System

This is a depopulated swine farm and no new waste will be generated by this farm. A letter dated March 17, 2014 from NRCS to the previous owner of this permit, certified that the closure of the waste management system was completed according to NRCS guidelines. Please see attached letter on the following two pages.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
402 N. Walnut, Suite 125
Harrison, AR 72601
(870) 741-8600 Ext. 3

March 17, 2014

ADEQ
Attn. Permits Branch
8001 National Drive
P.O.Box 8913
Little Rock, AR 72219-8913

To whom it may concern:

This letter is certifying closure of the waste system on the C and C Hog Farm, Owner Richard Campbell, Permit No. 3540-WR-5 has been completed. The liquid and solid waste have been removed and spread on the pastureland underlined in the conditions of the permit and according to the Animal Waste Management Closure Plan.

The holding pond and settling basin of the waste system have been cleaned out and filled in meeting NRCS standards and specifications and also in accordance with current permit requirements.

The surrounding areas are seeded for revegetation purposes over the disturbed area. There does not appear to be any problems existing at this location.

Respectfully,

M. Lonadier

Margaret Lonadier
District Conservationist
Natural Resources Conservation Service
402 N. Walnut, Suite 125
Harrison, AR 72601

Cc: Richard Campbell, C and C Hog Farm
Stan Rose, Area Engineer, USDA-NRCS

USDA NATURAL RESOURCES CONSERVATION SERVICE
ANIMAL WASTE MANAGEMENT SYSTEM CLOSURE CERTIFICATION

DATE: _____

FARM NAME: C and C Hog Farm

PERMIT No. 3450-WR-5

On 9-11-2013 (date) a closure check was made on the animal waste storage structures on your farm in Section 34, Township 15 N., Range 21 W., in Newton County,

Arkansas. The volume for each structure follows:

STRUCTURE	*Wastes Removed*	*Gallons Removed*
Concrete Tank		
Settling Basin		50,000
Holding Pond		220,000
Dry Stack Area		

NOTES:

This check shows the system does meet closure plan requirements. This form, and needed attachments, should be sent to the Water Permits Section of the ADEQ, P.O. Box 9583, Little Rock, Arkansas 72209.

M. Goodwin	District Conservationist	3/17/14
Signature	**Title**	**Date**

Land Base

There is approximately 596.5 **(557.8 acs, see note on next page)** acres of pastureland/hayland available for nutrient application and utilization. Mr. Ellis Campbell has obtained land use agreements with the following previously permitted landowners: John Gunter with 17.0 acres, Daryl Campbell with 15.7 acres, Harl Bohannon with 24.2 acres, Robert/Wilma Middleton with 103.6 acres, Charles/Joy Burdine with 199.1 acres, Philip Campbell with 18.3 acres, Richard Campbell with 55.6 acres, Mike L. Middleton with 54.5 acres, Lynn Carl Middleton with 53.8 acres, Ed/Patrisia Mills with 6.6 acres, Gary Dotson with 10.2 acres, Ricky Campbell with 33.1 acres and Eugene/Phyllis Casey with 4.8 acres. Signed easements, with these adjacent landowners, have been obtained to allow nutrient application. All nutrient application areas are predominantly mixed warm and cool season grasses used for pasture and hay production. The following table summarizes the application areas:

Field No.	Owner Name	Section	Township	Range	Total Available Acres
*CCGW	Richard Campbell	34	15 N	21 W	20.0
CC1	Richard Campbell	34	15 N	21 W	5.2
JG-A	John Gunter	33,34	15 N	21 W	14.0
*JG-B	John Gunter	34	15 N	21 W	3.0
EC-A	Phyllis/Eugene Casey	4	14 N	21 W	4.8
*DC	Daryl Campbell	34	15 N	21 W	15.7
HB1	Harl Bohannon	30	14 N	21 W	11.1
HB2	Harl Bohannon	20,29	14 N	21 W	13.1
LCM1	Lynn Carl Middleton	14,22,23	14 N	21 W	18.5
LCM2	Lynn Carl Middleton	14,22,23	14 N	21 W	16.2
LCM3	Lynn Carl Middleton	14,22,23	14 N	21 W	19.1
RM1	Robert/Wilma Middleton	25 & 36	15 N	21 W	82.2
RM2	Robert/Wilma Middleton	36	15 N	21 W	21.4
MM1	Mike L. Middleton	29	15 N	20 W	13.8
MM2	Mike L. Middleton	28 & 29	15 N	20 W	29.8
MM3	Mike L. Middleton	29	15 N	20 W	10.9
RC3	Richard Campbell	29	15 N	20 W	12.0
RC4	Richard Campbell	33	15 N	20 W	18.4
PC1	Philip Campbell	28 & 33	15 N	20 W	18.3
CB1	Joy/Charles Burdine	21	15 N	20 W	12.5
CB2	Joy/Charles Burdine	20 & 21	15 N	20 W	37.5
CB3	Joy/Charles Burdine	21	15 N	20 W	3.8
CB4	Joy/Charles Burdine	20 & 21	15 N	20 W	16.1
CB5	Joy/Charles Burdine	20	15 N	20 W	1.8
CB6	Joy/Charles Burdine	20	15 N	20 W	13.3
CB7	Joy/Charles Burdine	20	15 N	20 W	44.0
CB8	Joy/Charles Burdine	20	15 N	20 W	6.5
CB9	Joy/Charles Burdine	19 & 20	15 N	20 W	19.7

CB10	Joy/Charles Burdine	19 & 20	15 N	20 W	22.5
CB11	Joy/Charles Burdine	20	15 N	20 W	8.5
CB12	Joy/Charles Burdine	20	15 N	20 W	4.4
CB13	Joy/Charles Burdine	19	15 N	20 W	8.5
EM1	Patrisia/ Ed Mills	33	15 N	21 W	6.6
GD1	Gary Dotson	5	13 N	20 W	10.2
VIV1	Ricky Campbell	15	14 N	21 W	22.9
VIV1A	Ricky Campbell	15	14 N	21 W	10.2
Total Acres	**596.5 (557.8)**				

*No application will be made to these fields based on the ARNMP Phosphorous Index calculations that placed these fields in the high or very high range. These fields will be left in the Site Management Plan and retested for future revisions to the SMP. 38.7 acres will be subtracted from the total acres of 596.5 which leaves **557.8** total acres available to apply swine nutrients.

Pasture Management

Land application areas used for nutrient utilization are predominantly mixed warm and cool season grasses used for pasture and hay production. Phosphorous Index calculations were made for each field for the most restrictive timing window (November to February) which will allow for land application during all months of the year based on the nutrient uptake of the forage.

Mortality Management

There will be no confined animals located on this farm, therefore mortality management will not be needed on this farm.

Irrigation Water Management

All swine fertilizer will be land applied via liquid tank trucks (honeywagons), therefore irrigation water management will not be needed on this farm.

Operation and Maintenance

General

- Regulations of the Arkansas Department of Environmental Quality will be followed.
- This is a site management plan update for a depopulated swine farm which would like to receive and apply swine fertilizer from C & H Hog Farm Inc. in Newton County, AR. There are no plans at this time to repopulate the farm. The liquid fertilizer shall be land applied using liquid tank trucks (honeywagons).

Waste Management

- The liquid fertilizer is to be applied to the pastures and hay fields by means of liquid tank trucks. Applications of nutrients shall not to be made on frozen or snow-covered ground, when the ground is saturated, during rainy weather, or within 24 hours of predicted rainfall (greater than 50%).
- It is required that surface application of animal wastes shall not be made within 50 feet of property lines; 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; 300 feet of extraordinary resource waters and 500 feet of neighboring occupied buildings (see setback waivers).
- Nutrients shall be distributed as evenly as possible.
- Nutrients shall not be applied on slopes with a grade in excess of 15 percent or in any manner that will allow nutrients to enter the waters of the state.
- ADEQ has developed a standard form entitled "Animal Waste Application Records" for use in logging nutrient applications. This form is located is Section 6 under "Recordkeeping".
- Potential odor management strategies
  a) avoid spreading just before weekends and holidays when people are more likely to be outdoors.
  b) spread in the morning when the air is warming and rising rather than in the late afternoon.
  c) consider weather conditions - sunny, low humidity days reduce odors; turbulent breezes will dilute and dissipate odors.

Section 2 MANURE & WASTEWATER HANDLING FOR RECEIVING LITTER

All manure and wastewater applied to the fields included in this plan will be received from C & H Hog Farm Inc., AFIN # 51-00164. EC Farms will have no production or manure storage components.

Section 3 Collected Information

Land Use Agreements
County Road Maps for all application sites
Aerial maps showing buffered land application sites
Soils Maps
Topo Maps
Soil Test Results
Manure Analysis

LAND USE CONTRACT

I, Harl Bohannon (Name of Landowner), agree to allow EC farms (Name of Permittee) to land apply swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 24.2 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
HB1	E½	30	14N	21W	11.1
HB2	SW, NW	20,29	14N	21W	13.1

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Campbell 5-27-15
Permittee's Signature Date

Harl Bohannon 5-27-15
Landowner Signature Date

LAND USE CONTRACT

I, Philip Campbell (Name of Landowner), agree to allow EC Farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 18.5 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
PC 1	SE/NW	28/33	15N	20W	18.3

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Campbell — Permittee's Signature
1-15-15 — Date
Philip Campbell — Landowner Signature
1-15-15 — Date

LAND USE CONTRACT

I, Patricia Mills (Name of Landowner), agree to allow E C Farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 6.6 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
EM1	SE	33	T15N	21W	6.6

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Cox, Jr. 1-15-15
Permittee's Signature Date

Patricia C Mills 1-15-15
Landowner Signature Date

LAND USE CONTRACT

I, Jay Burdine (Name of Landowner), agree to allow EC farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 199.1 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section 5	Township	Range	Available Acreage*
CB1	Varying	19,20,21	15N	20W	199.1
thru					
CB13					

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Campben — Permittee's Signature — 5-27-15 — Date

Jay Burdine — Landowner Signature — 5-26-15 — Date

LAND USE CONTRACT

I, John Gunter (Name of Landowner), agree to allow EC Farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 17 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
JG A	NE	33	15N	21W	14.0
JG B	NW	34	15N	21W	3.0

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Company 1-15-15
Permittee's Signature Date

John Gunter 1-15-15
Landowner Signature Date

LAND USE CONTRACT

I, Gary Dutton (Name of Landowner), agree to allow EC Farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Lawton (County of Operation) County to 10.2 (Total Acreage Available) acres of my property located in Lawton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
G01	SW	5	13N	20W	10.2

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis County 1-15-13
Permittee's Signature Date

Gary Dutton 1-15-13
Landowner Signature Date

LAND USE CONTRACT

I, Richard campbell (Name of Landowner), agree to allow EC Farms (Name of Permittee) to land apply swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 55.6 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
CCGW	E ½	34	15N	21 W	20
CC1	E ½	34	15N	21 W	5.2
RC3	SE	29	15N	20 W	12
RC4	NW	33	15N	20 W	15.4

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Campbell — Permittee's Signature — Date

Richard Campbell — Landowner Signature — 1-26-1[illegible] — Date

LAND USE CONTRACT

I, Phyllis Casey (Name of Landowner), agree to allow E C Farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 4.8 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
ECA	NE	4	14N	21W	4.5

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Campbell — Permittee's Signature — 1-15-15 — Date

Phyllis Casey — Landowner Signature — 1-15-15 — Date

LAND USE CONTRACT

I, Don Campbell, agree to allow EC Farms to land apply Swine waste from his/her operation located in the Newton County to 15.7 acres of my property located in Newton County.

(Name of Landowner; Name of Permittee; Type of Waste; County of Operation; Total Acreage Available; County of Application Site)

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
DC	NW ¼	34	15N	21W	15.7

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Carmichael 1-13-15 — Permittee's Signature — Date

Don Campbell 1-13-15 — Landowner Signature — Date

LAND USE CONTRACT

I, Lynn middleton (Name of Landowner), agree to allow EC Farms (Name of Permittee) to land apply swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 53.8 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
Lcm1	sw cor 14	14, 22, 23	14 N	21 w	19.5
Lcm2	NE cor 22	14, 22, 23	14 N	21 w	16.2
Lcm3	NW cor 23	14, 22, 23	14 N	21 w	19.1

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Carmichael 1-15-15
Permittee's Signature Date

Lynn Middleton 1-15-15
Landowner Signature Date

LAND USE CONTRACT

I, Ricky Campbell (Name of Landowner), agree to allow EC farms (Name of Permittee) to land apply swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 33.1 (Total Acreage Available) acres of my property located in Newton (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
VIV1	NE	15	14N	21W	22.9
VIV1A	NE	15	14N	21W	10.2

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

Ellis Campbell — Permittee's Signature
5-27-15 — Date
Ricky Campbell — Landowner Signature
5-27-15 — Date

LAND USE CONTRACT

I, Michael L. Middleton (Name of Landowner), agree to allow EC farms (Name of Permittee) to land apply Swine (Type of Waste) waste from his/her operation located in the Newton (County of Operation) County to 54.5 (Total Acreage Available) acres of my property located in _____ (County of Application Site) County.

A description of the areas to be used as waste application sites are as follows:

Site No.	¼ Section	Section	Township	Range	Available Acreage*
mm1	E 1/2	29	15N	20W	13.8
mm2	E 1/2 W 1/2	28,29	15N	20W	29.8
mm3	SE	29	15N	20W	10.9

*Available acreage is the total acreage minus buffer zone areas.

I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

_____

_____

_____

_____

Ellis Campbell [redacted] 5-27-15
Permittee's Signature Date

Michael L Middleton 5-27-15
Landowner Signature Date

LAND USE CONTRACT

I, Robert / Wilma Middleton, agree to allow EC Farms
Name of Landowner — Name of Permittee

to land apply Swine waste from his/her operation located in the Newton
Type of Waste — County of Operation

County to 10.36 acres of my property located in Newton County.
Total Acreage Available — County of Application Site

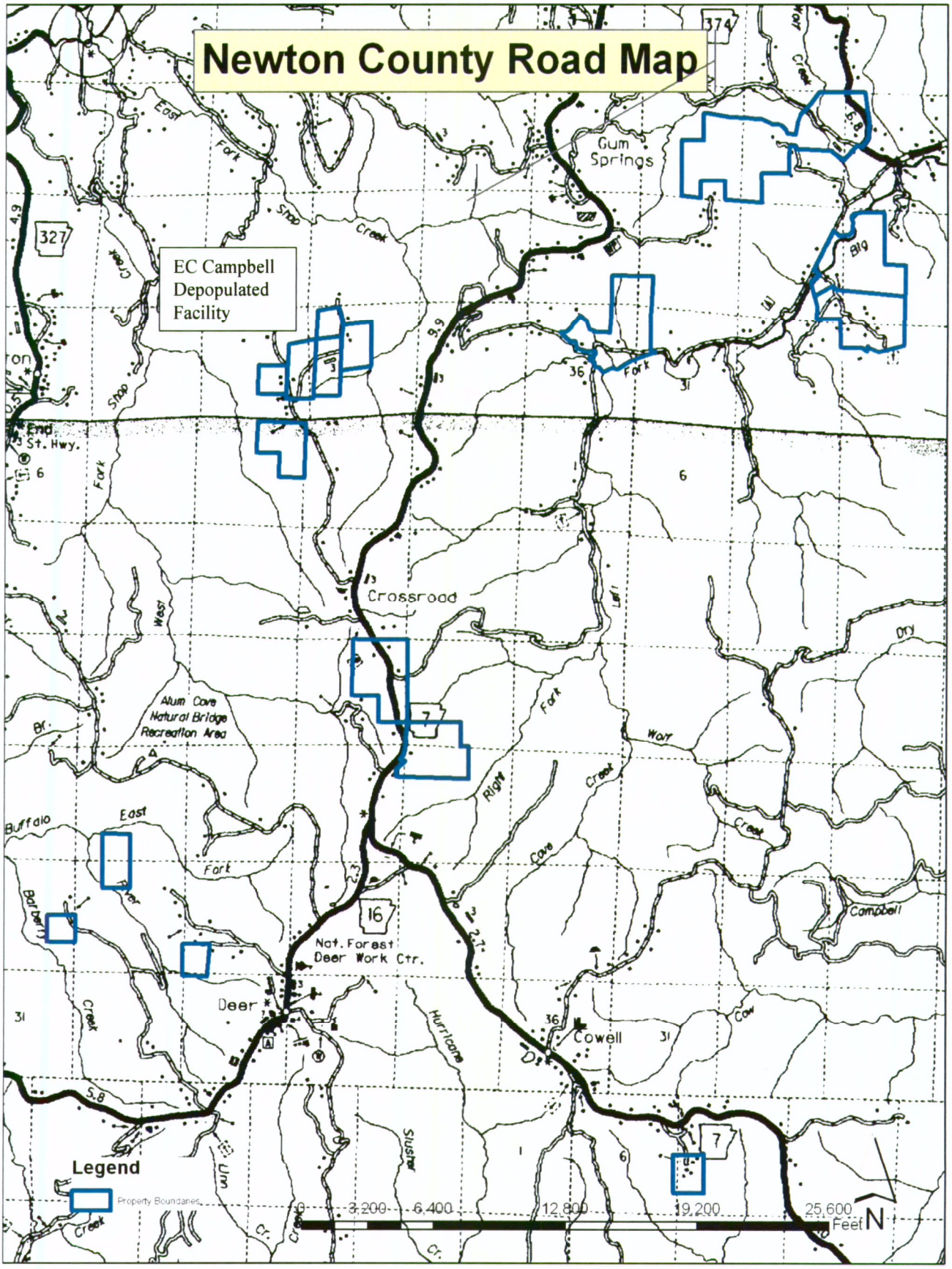
A description of the areas to be used as waste application sites are as follows:

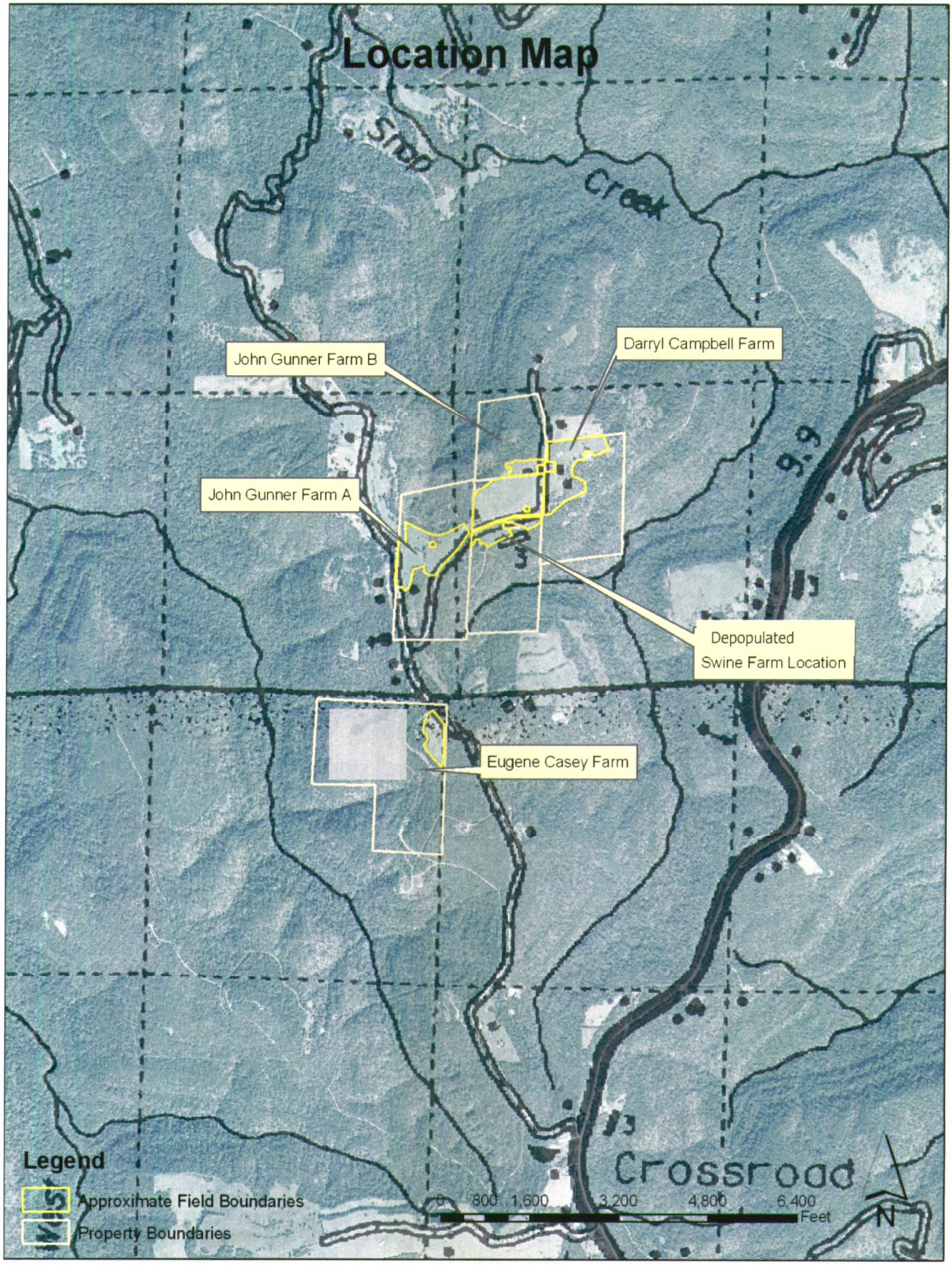
Site No.	¼ Section	Section	Township	Range	Available Acreage*
RM1	NW, SW SE, NE	31 / 30 25 / 36	15 N 15 N	20 W 21 W	82.2
RM2	SE, NE	36	15 N	21 W	21.4

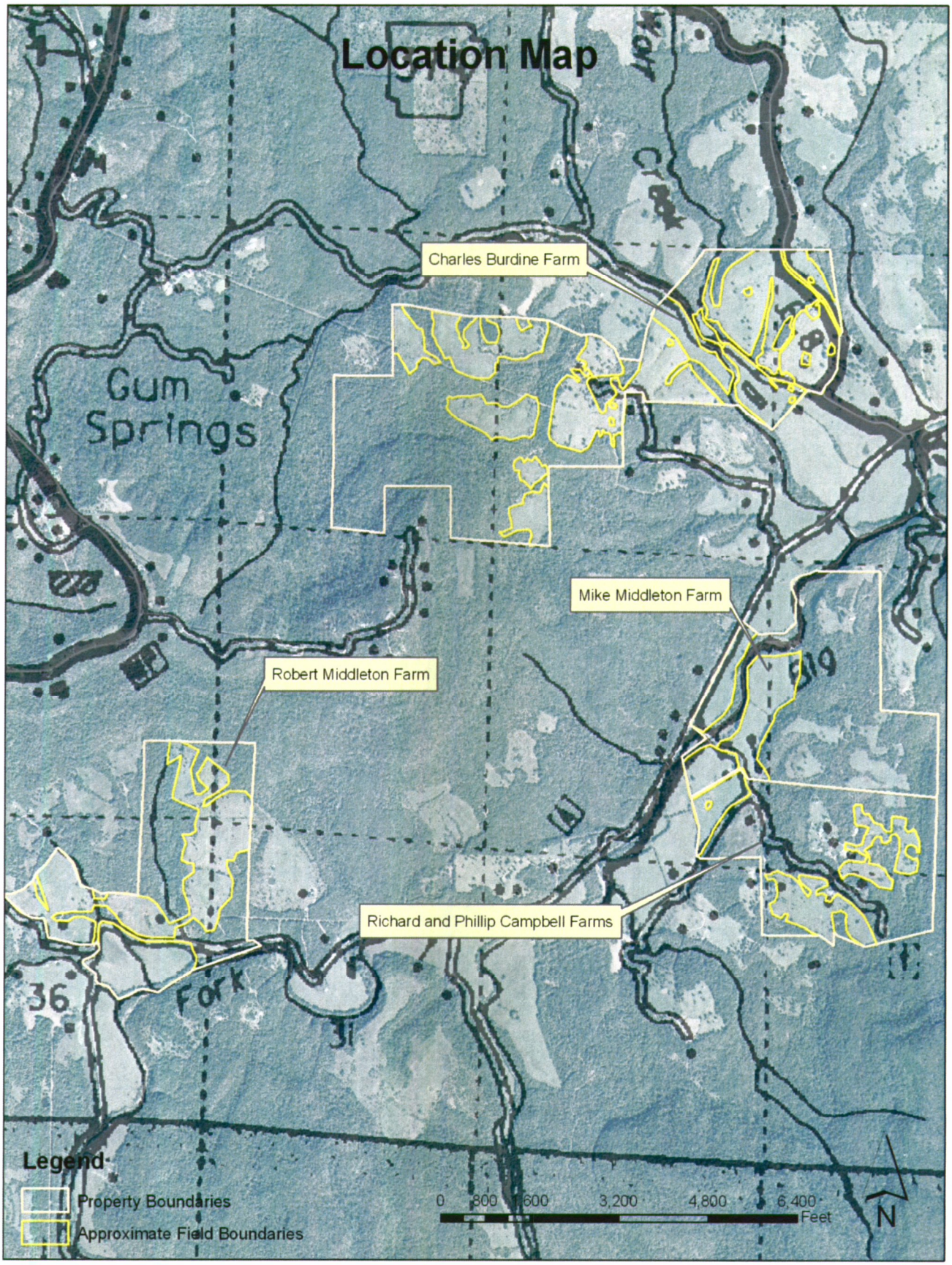
*Available acreage is the total acreage minus buffer zone areas.

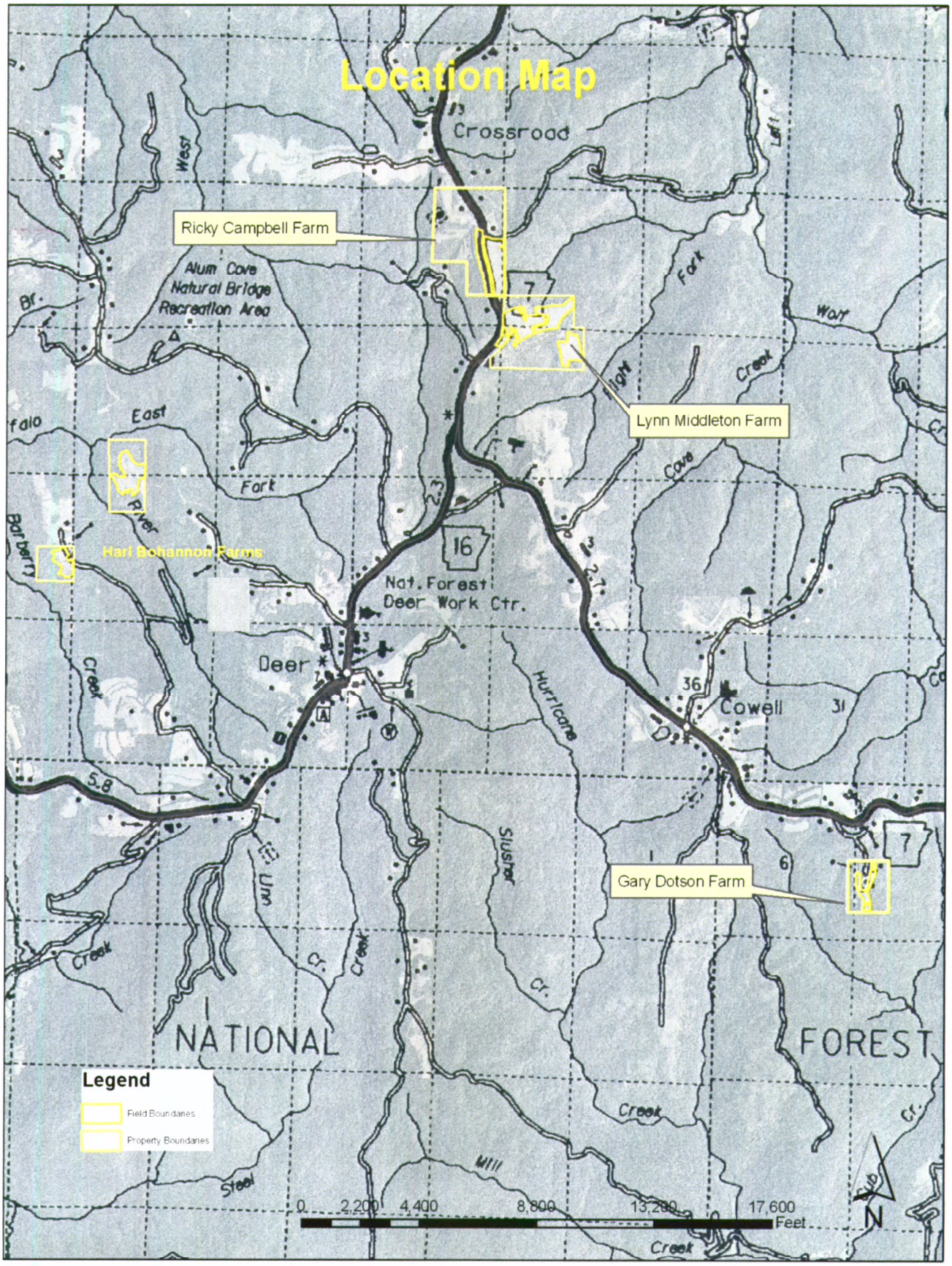
I am also aware that the land applicator or the owner of the operation is to apply waste according to the management plan developed and submitted by the Natural Resource Conservation Service or a registered professional engineer or an Arkansas Natural Resources District Water Quality Technician and as per guidelines and conditions set forth by the Arkansas Department of Environmental Quality. In addition to these guidelines, the following requirements must also be satisfied when applying waste to my land:

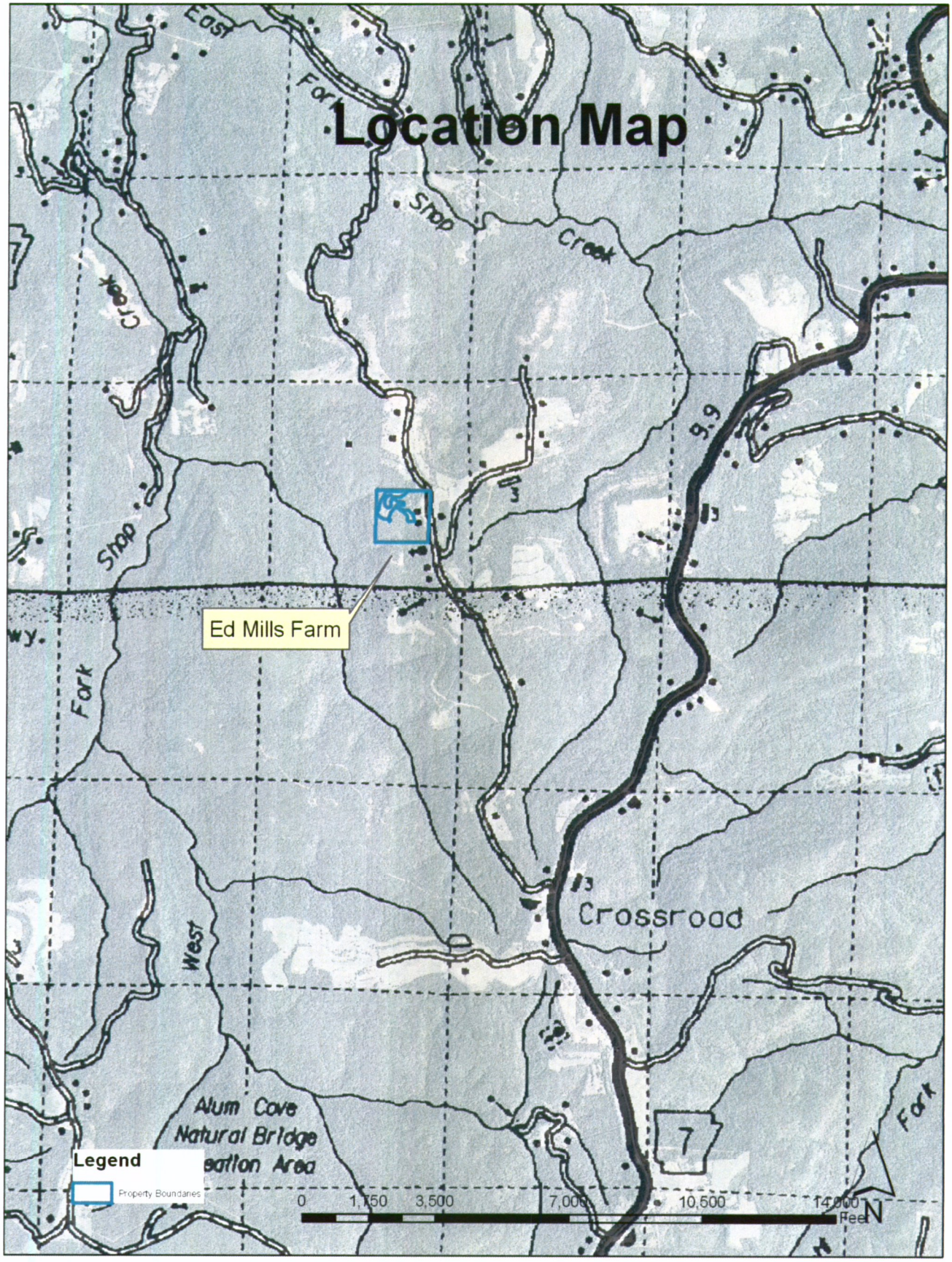
Ellis Campbell — Permittee's Signature
1-3-15 — Date
Wilma Middleton — Landowner Signature
1-3-15 — Date


Newton County Road Map
EC Campbell
Depopulated
Facility
Gum
Springs
Crossrod
Deer
Cowell
Nat. Forest
Deer Work Ctr.
Alum Cave
Natural Bridge
Recreation Area
Legend
Property Boundaries
0
3,200
6,400
12,800
19,200
25,600
Feet
N

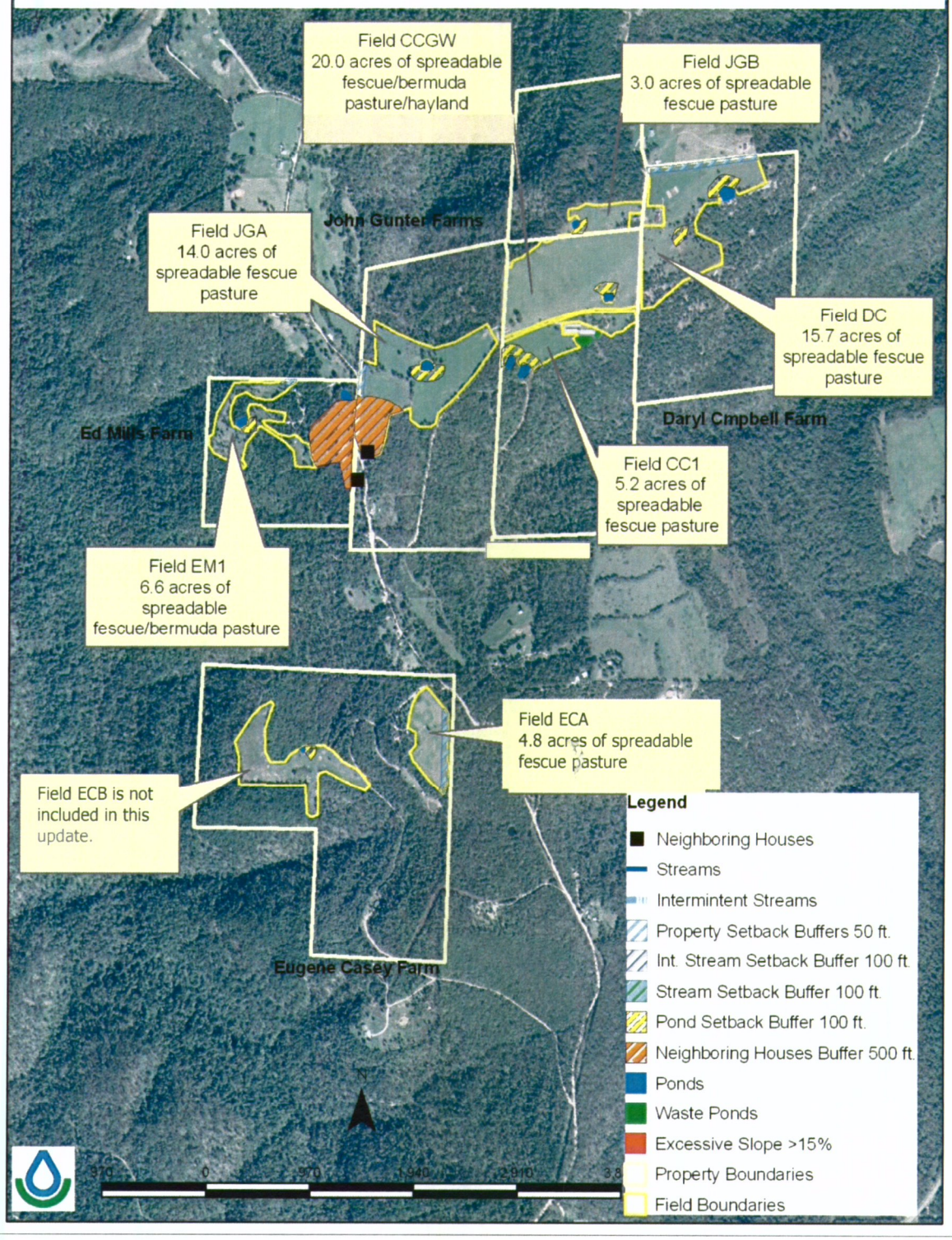

Location Map
Stop
Creek
John Gunner Farm B
Darryl Campbell Farm
John Gunner Farm A
Depopulated
Swine Farm Location
Eugene Casey Farm
Crossroad
Legend
Approximate Field Boundaries
Property Boundaries
0 800 1,600 3,200 4,800 6,400
Feet
N

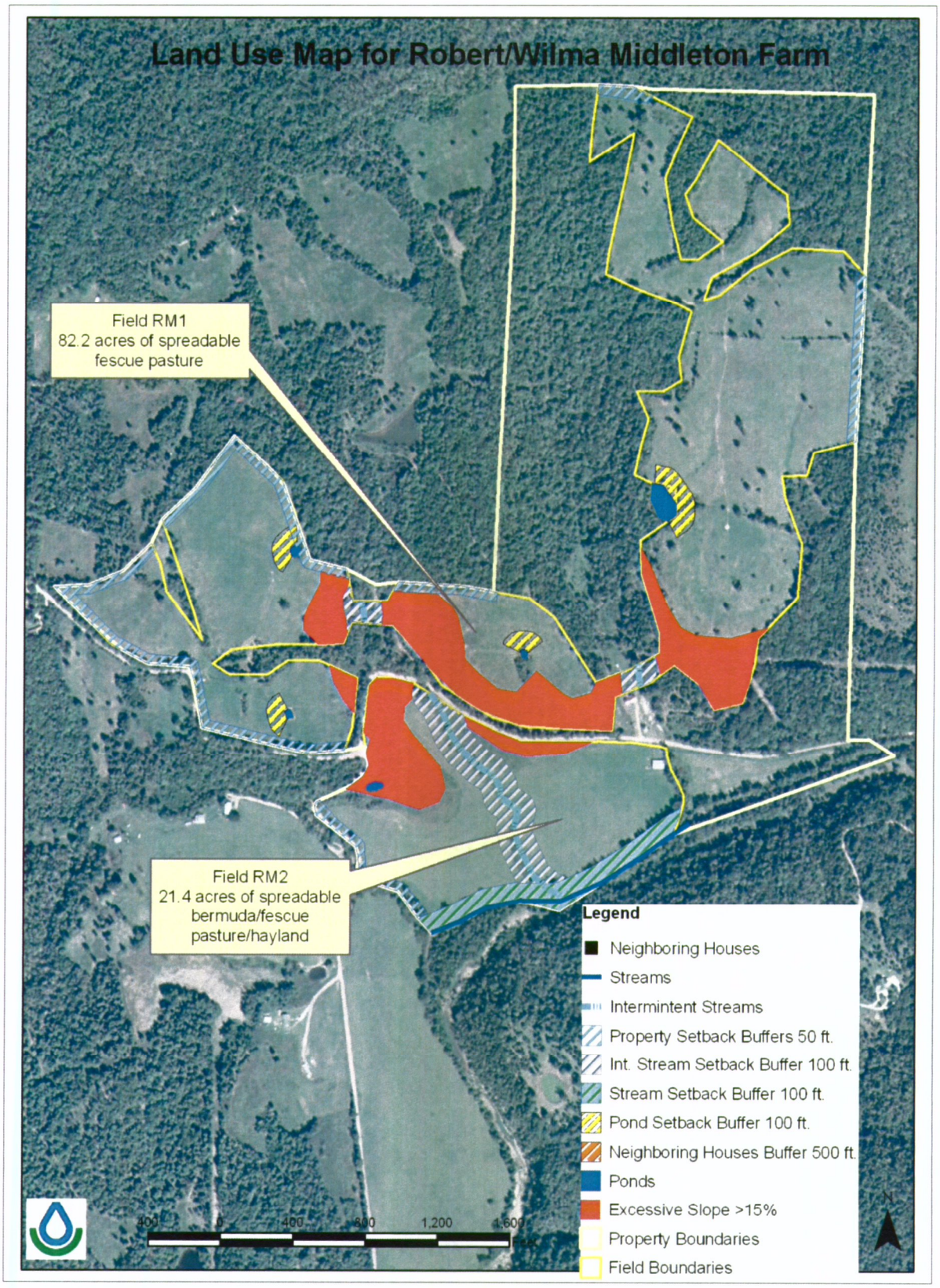

Location Map
Charles Burdine Farm
Mike Middleton Farm
Robert Middleton Farm
Richard and Phillip Campbell Farms
Gum Springs
Fork
36
31
Legend
Property Boundaries
Approximate Field Boundaries
0 800 1,600 3,200 4,800 6,400
Feet
N

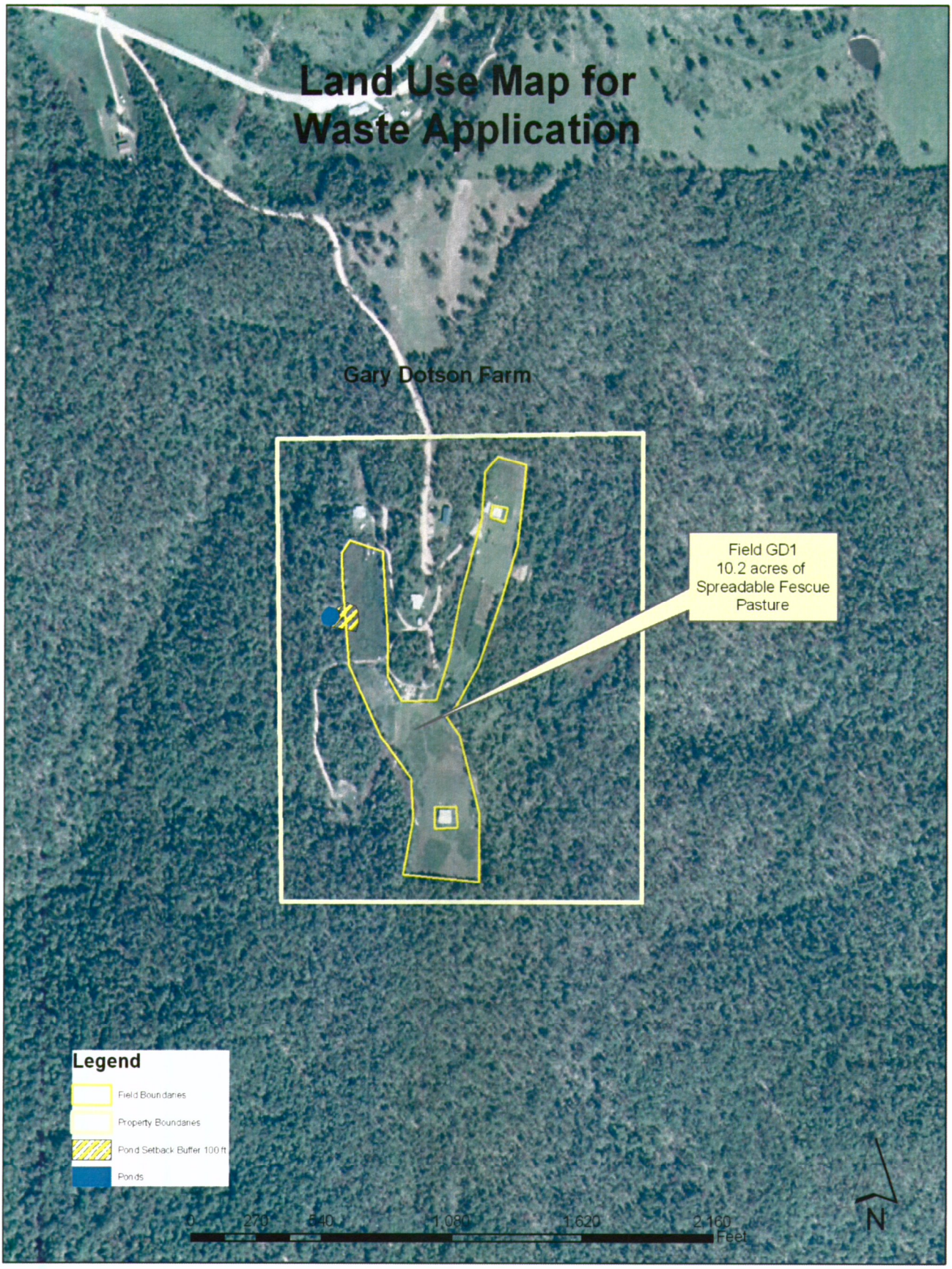

Location Map
Crossroad
Ricky Campbell Farm
Alum Cave
Natural Bridge
Recreation Area
Lynn Middleton Farm
East
Fork
River
Barberry
Hari Bohannon Farms
16
Nat. Forest
Deer Work Ctr.
Deer
Hurricane
Cowell
36
31
Gary Dotson Farm
7
6
NATIONAL
FOREST
Legend
Field Boundaries
Property Boundaries
0
2,200
4,400
8,800
13,200
17,600
Feet
N

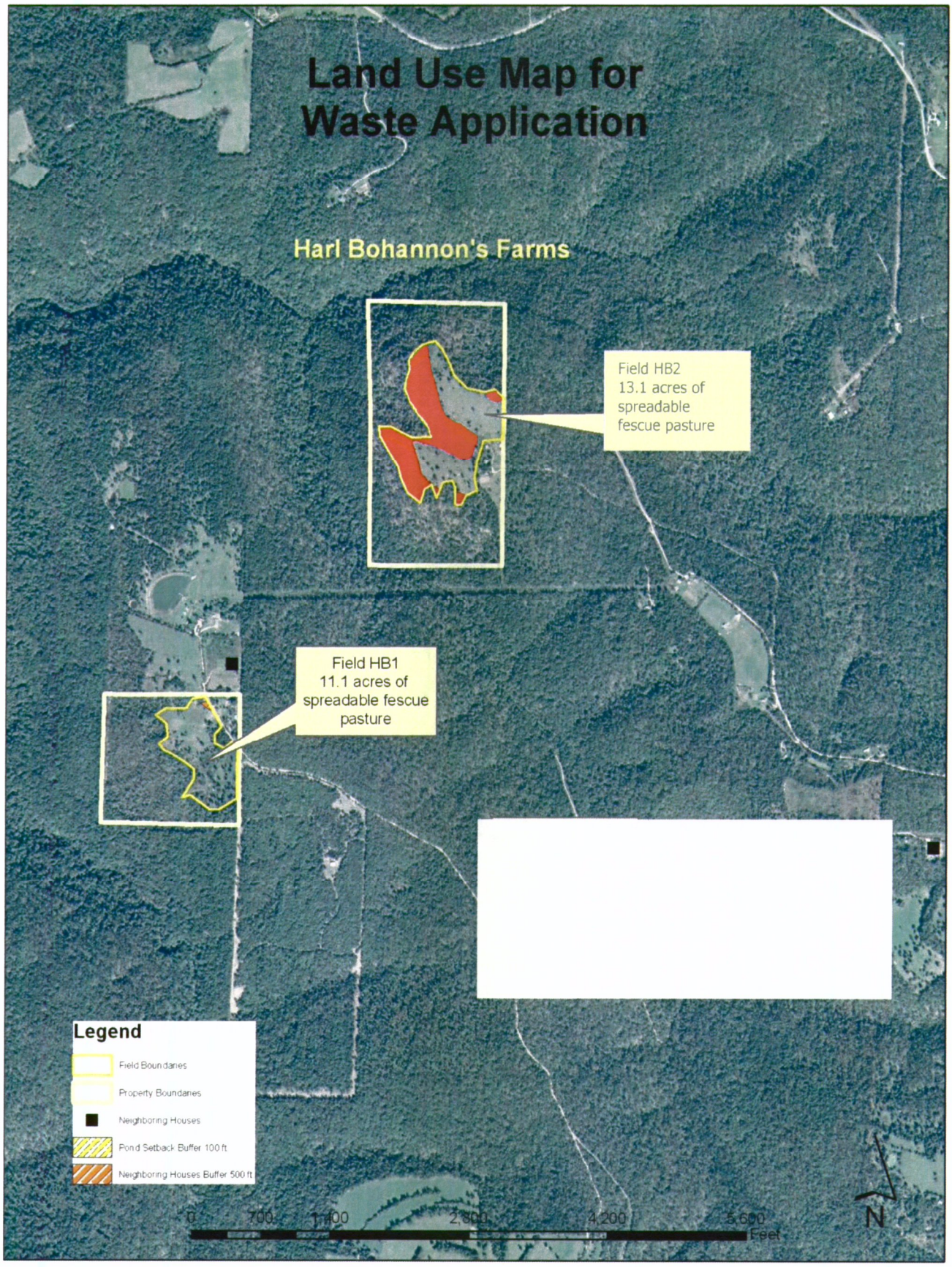

Location Map
East
Fork
Shop
Creek
Creek
Shop
9.9
Ed Mills Farm
Fork
West
Crossroad
Alum Cove
Natural Bridge
Fork
7
Legend
Property Boundaries
0
1,750
3,500
7,000
10,500
14,000
Feet
N

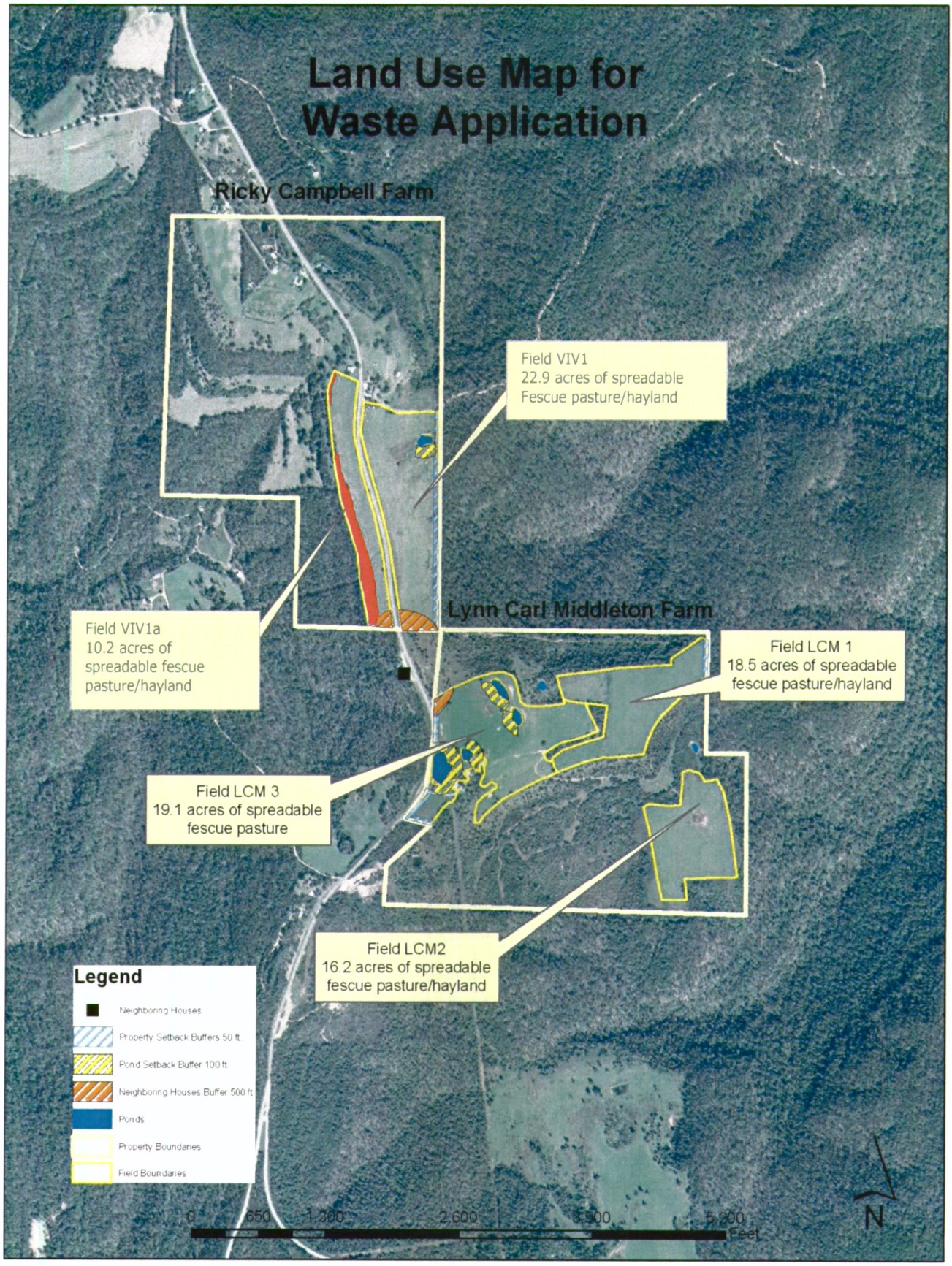
Land use Map for EC Farms, Daryl Campbell Farm , John Gunter Farms, Eugene Casey Farm , Ed Mills Farm and Richard Campbell



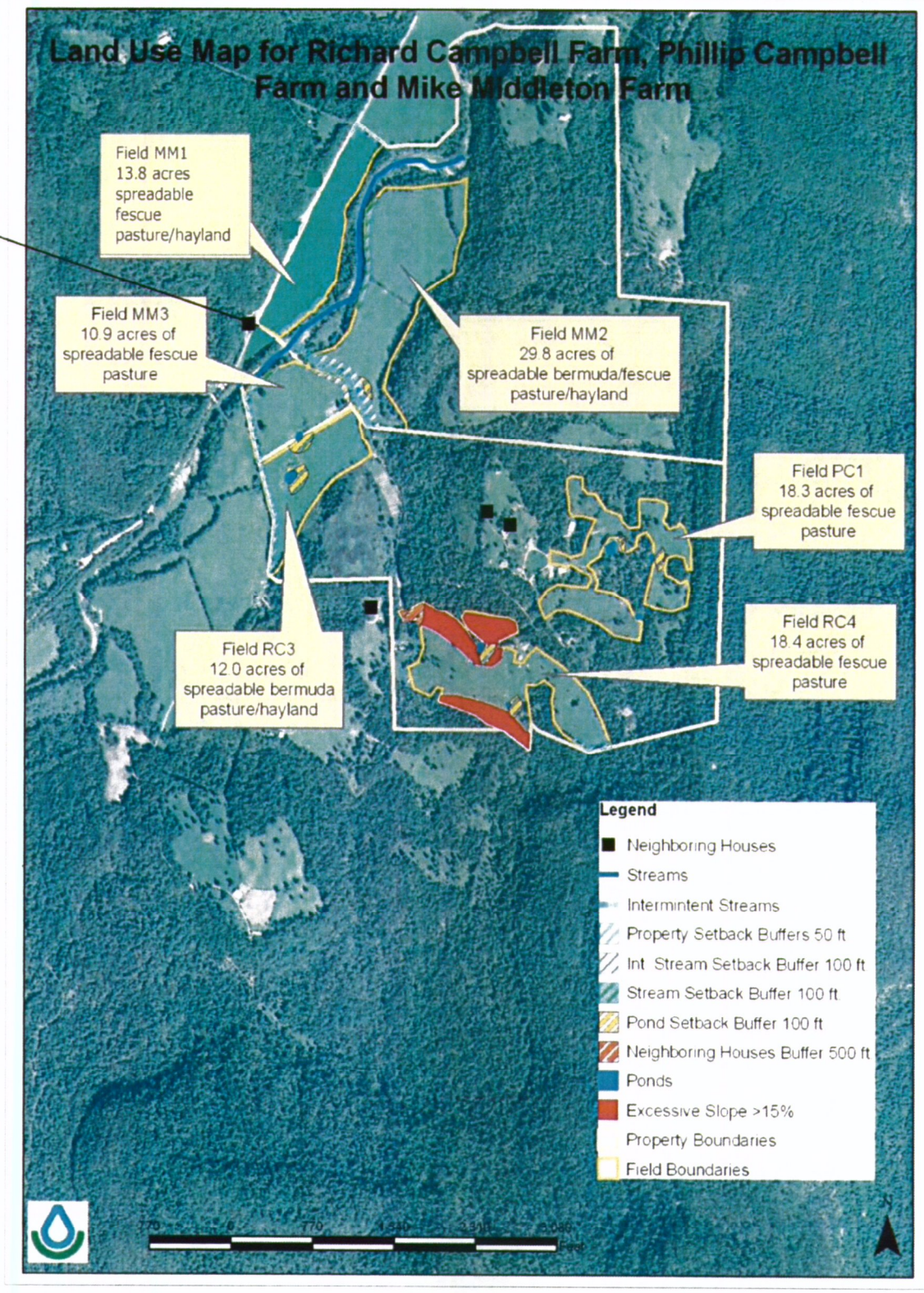

Land Use Map for Robert/Wilma Middleton Farm
Field RM1
82.2 acres of spreadable
fescue pasture
Field RM2
21.4 acres of spreadable
bermuda/fescue
pasture/hayland
Legend
Neighboring Houses
Streams
Intermintent Streams
Property Setback Buffers 50 ft.
Int. Stream Setback Buffer 100 ft.
Stream Setback Buffer 100 ft.
Pond Setback Buffer 100 ft.
Neighboring Houses Buffer 500 ft.
Ponds
Excessive Slope >15%
Property Boundaries
Field Boundaries
400
0
400
800
1,200
1,600
N


Land Use Map for
Waste Application
Gary Dotson Farm
Field GD1
10.2 acres of
Spreadable Fescue
Pasture
Legend
Field Boundaries
Property Boundaries
Pond Setback Buffer 100 ft
Ponds
0
270
540
1,080
1,620
2,160
Feet
N


Land Use Map for Waste Application
Harl Bohannon's Farms
Field HB2
13.1 acres of spreadable fescue pasture
Field HB1
11.1 acres of spreadable fescue pasture
Legend
Field Boundaries
Property Boundaries
Neighboring Houses
Pond Setback Buffer 100 ft
Neighboring Houses Buffer 500 ft
0
700
1,400
2,800
4,200
5,600
Feet
N


Land Use Map for Waste Application
Ricky Campbell Farm
Field VIV1
22.9 acres of spreadable Fescue pasture/hayland
Field VIV1a
10.2 acres of spreadable fescue pasture/hayland
Lynn Carl Middleton Farm
Field LCM 1
18.5 acres of spreadable fescue pasture/hayland
Field LCM 3
19.1 acres of spreadable fescue pasture
Field LCM2
16.2 acres of spreadable fescue pasture/hayland
Legend
Neighboring Houses
Property Setback Buffers 50 ft
Pond Setback Buffer 100 ft
Neighboring Houses Buffer 500 ft
Ponds
Property Boundaries
Field Boundaries
0
650
1,300
2,600
3,900
5,200
Feet
N

Kathern Riddell



Setback Requirement Waiver

I, Kathleen Riddell, do hereby give consent to E C Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows E C Farms g to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

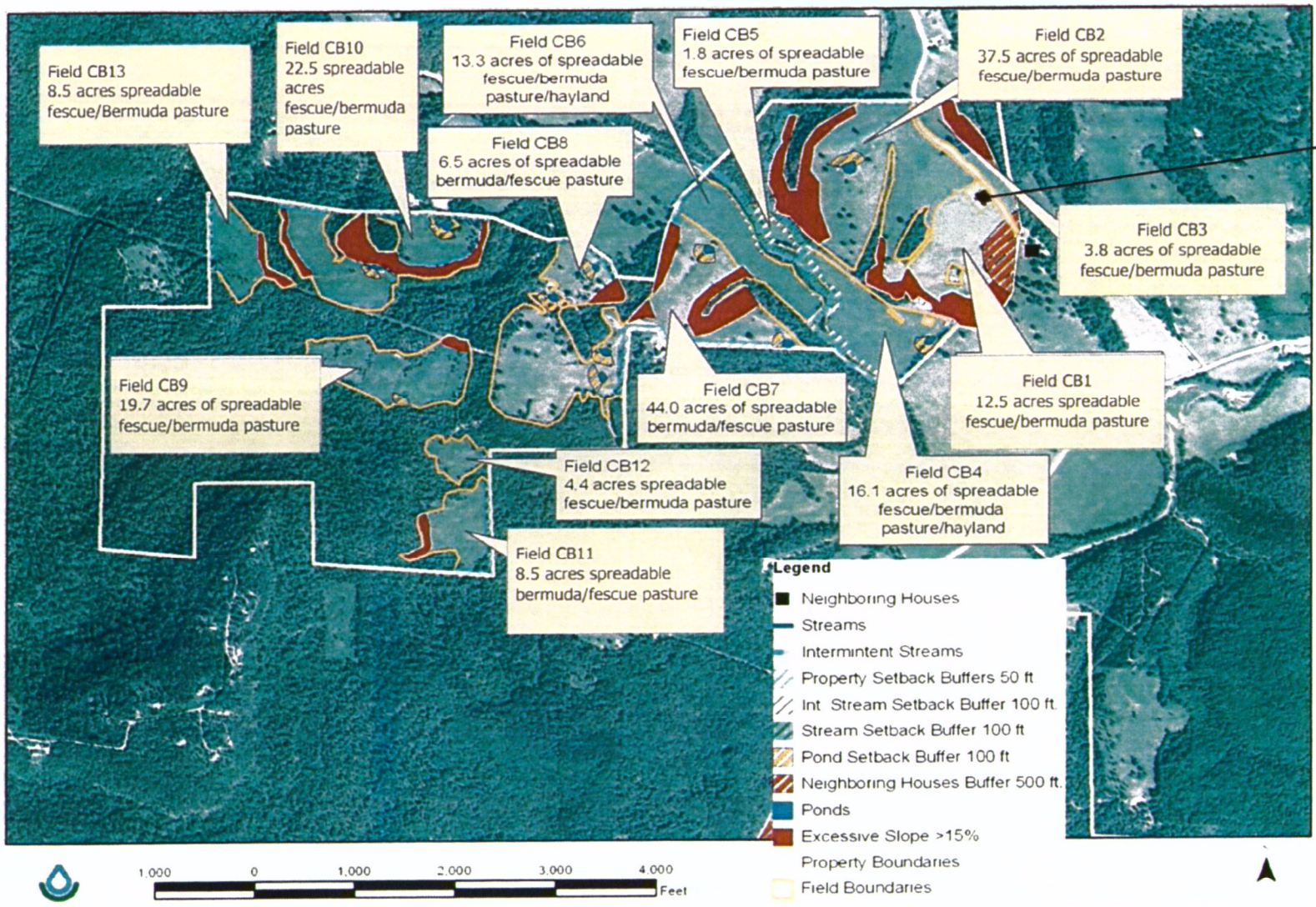
Kathleen Riddell
Landowner Signature

5-31-15
Date

Ellis Campbell
E C Farms, Inc. Representative

5-31-15
Date

Land Use Map for Charles Burdine Farm



Setback Requirement Waiver

I, Johnny James, do hereby give consent to E C Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows E C Farms g to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

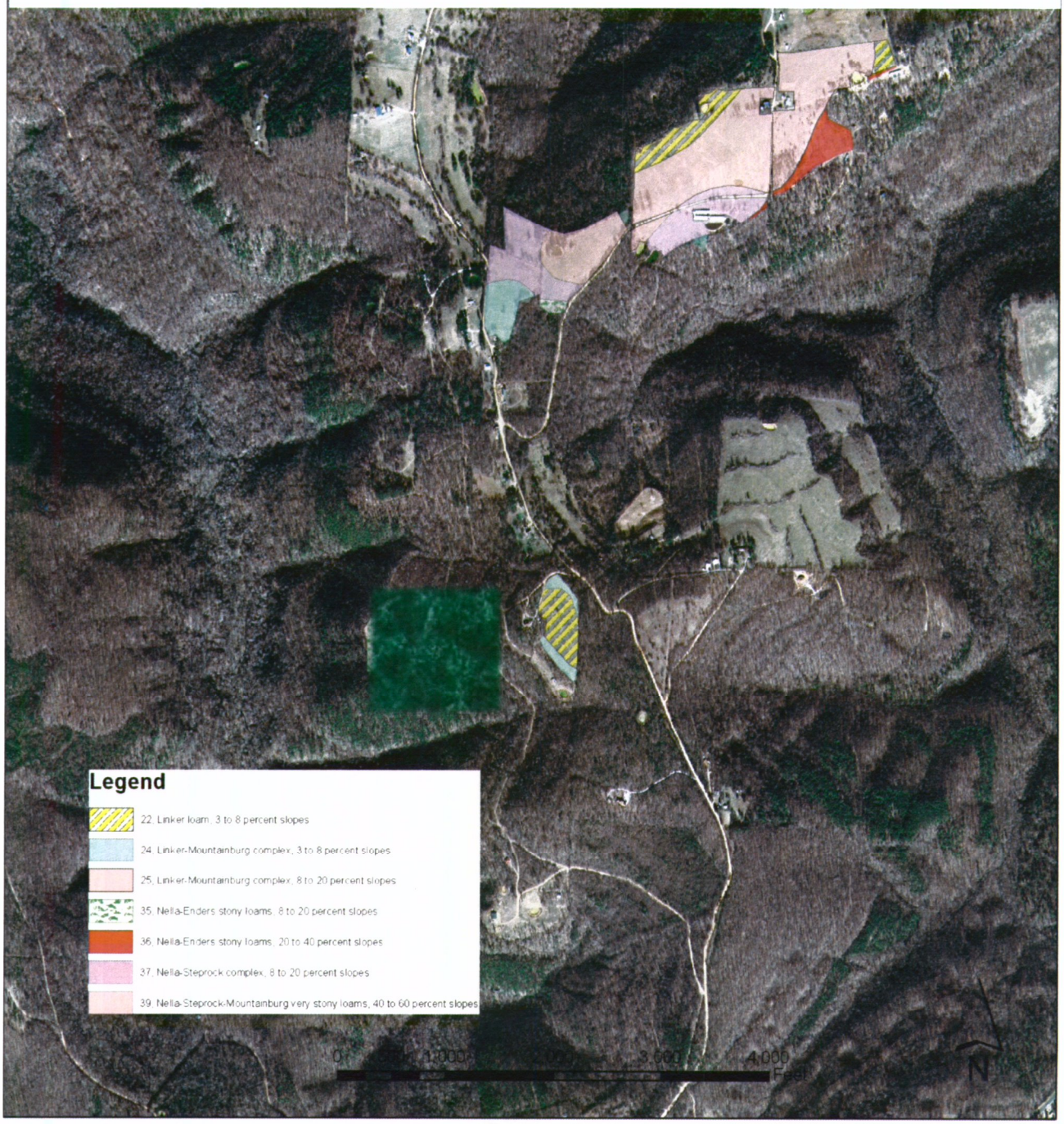
Johnny James — 05-31-15

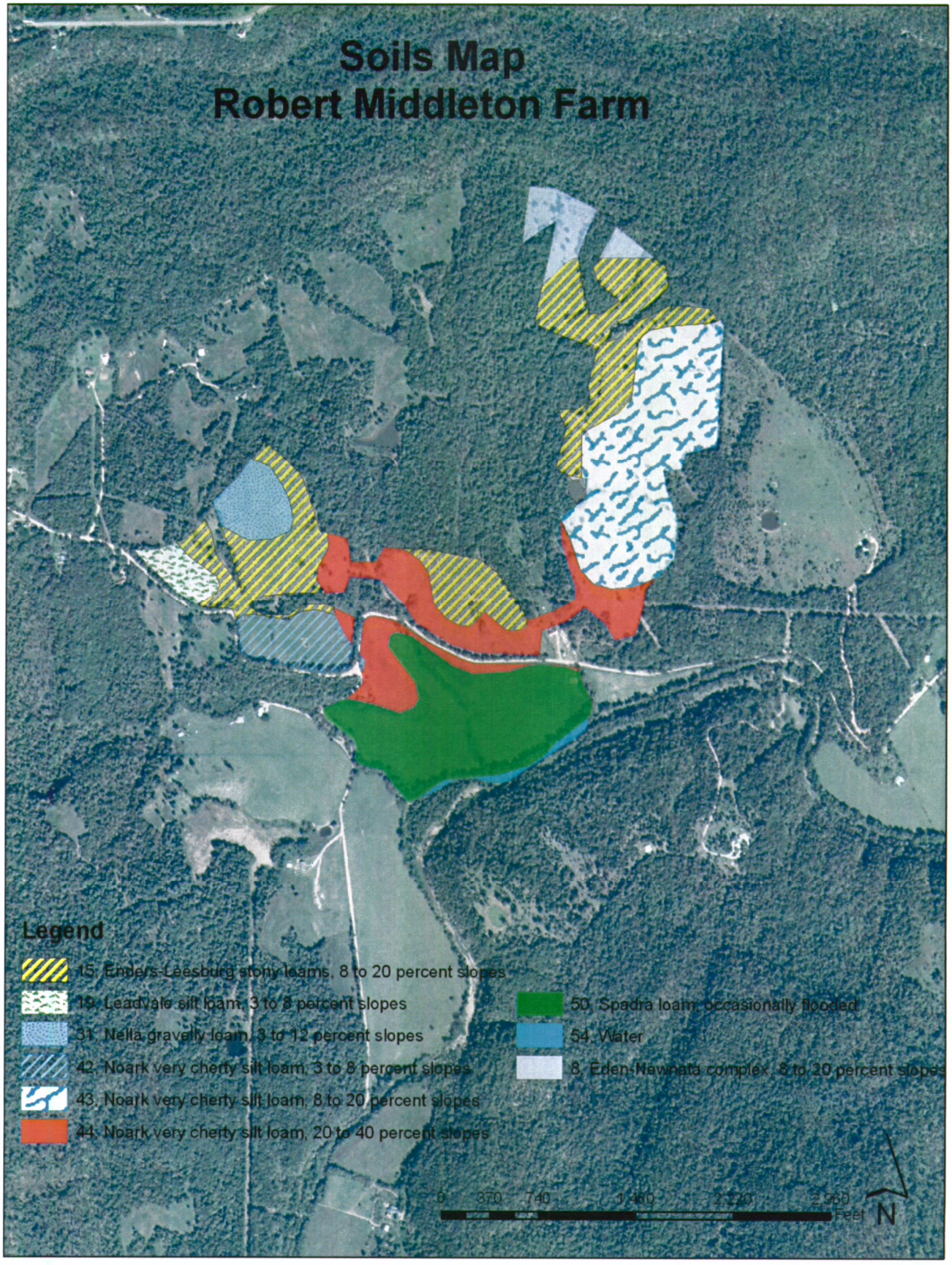
Landowner Signature — Date

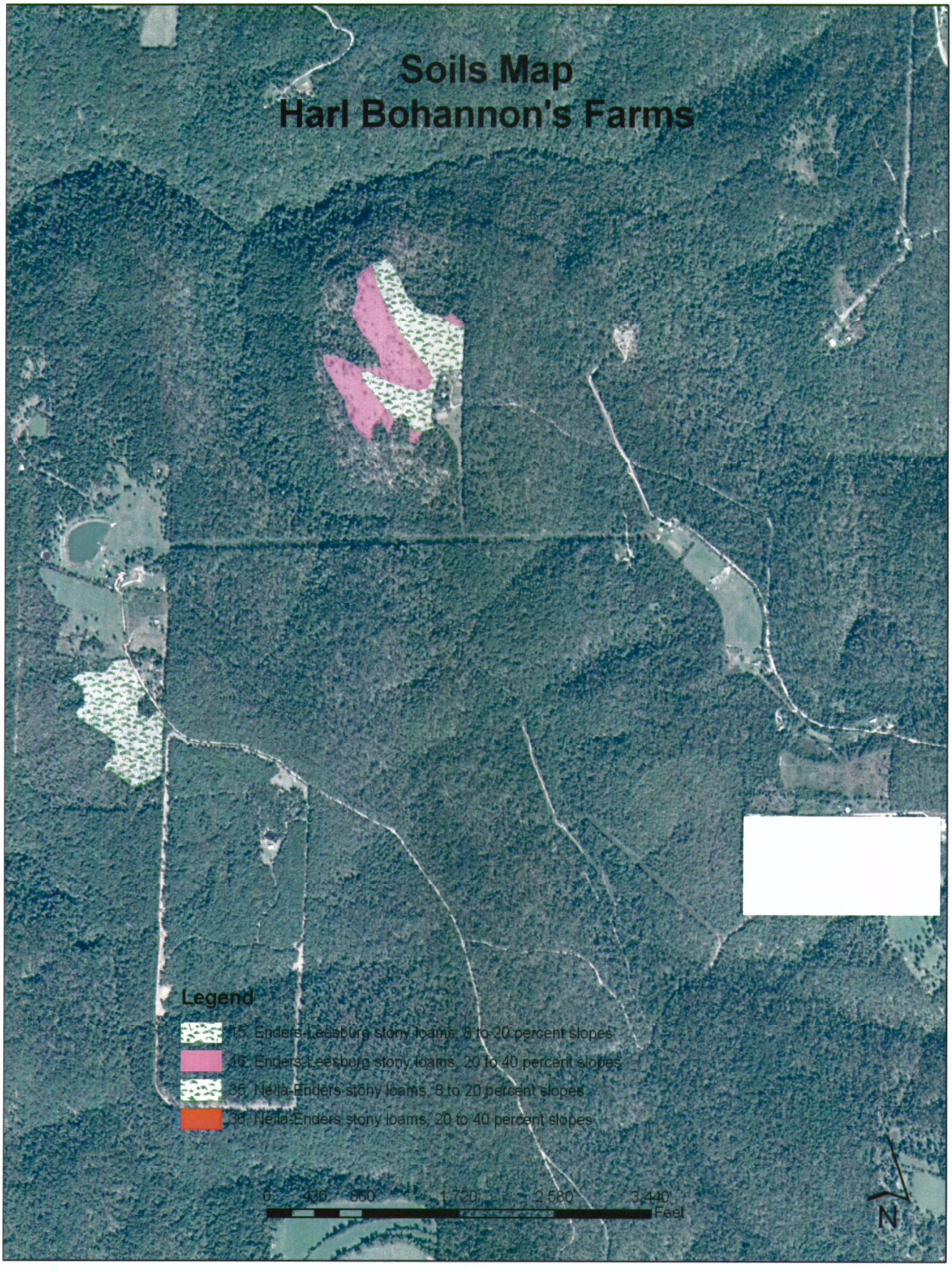
Ellis Campbell — 5-31-15

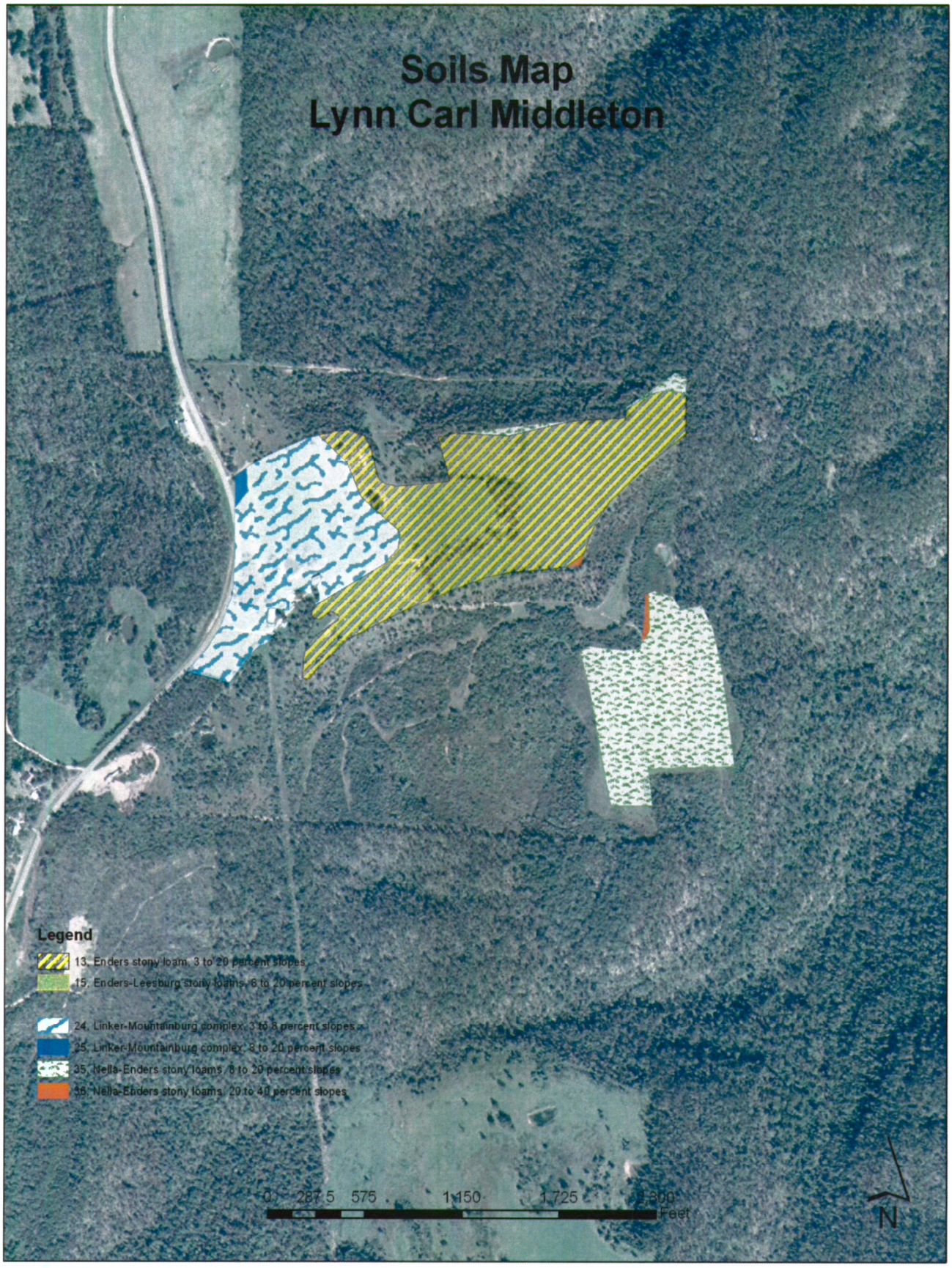
E C Farms, Inc. Representative — Date

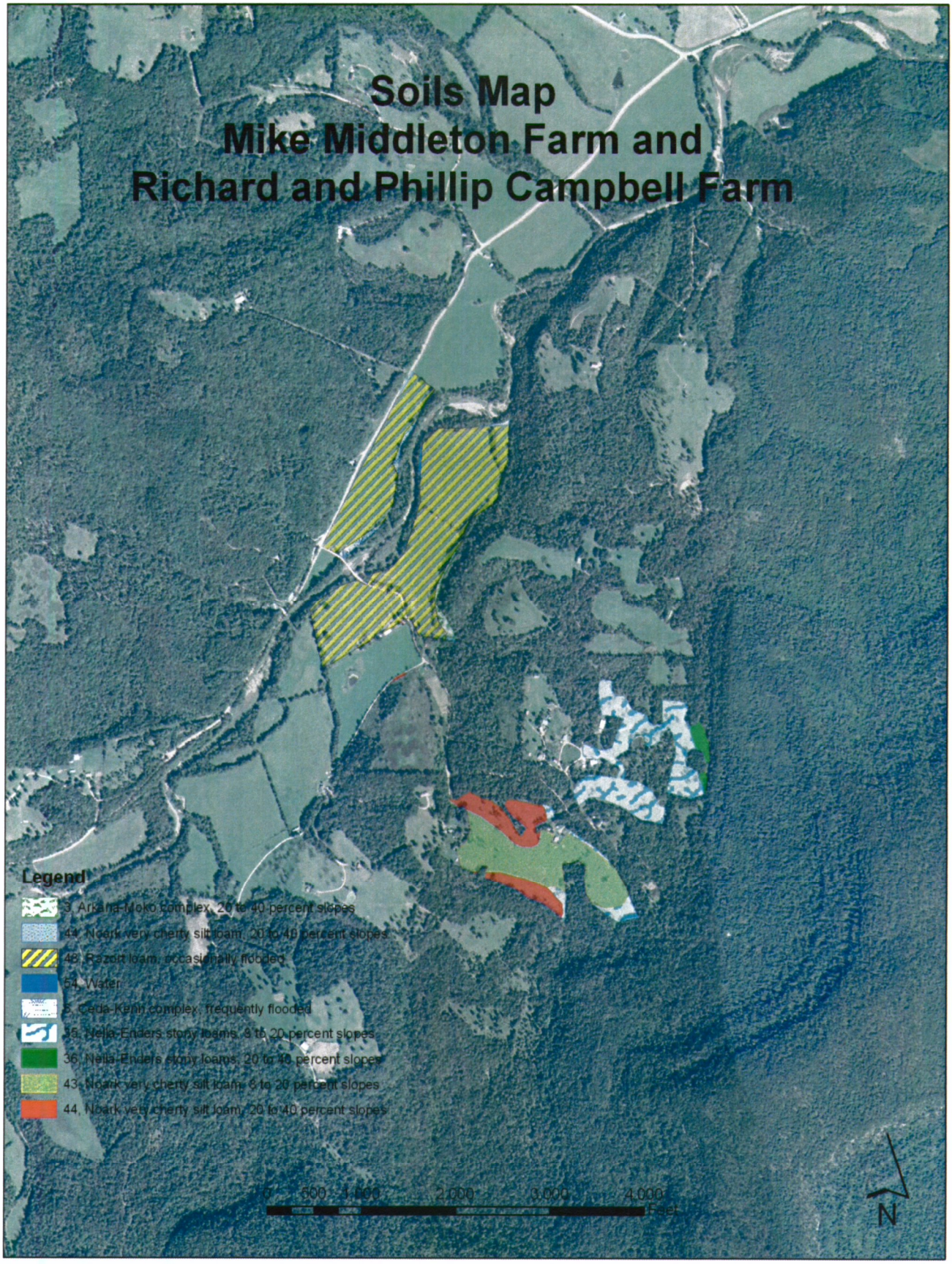
Soils Maps
Darryl Campbell Farm
Eugene Casey Farm and John Gunter Farm

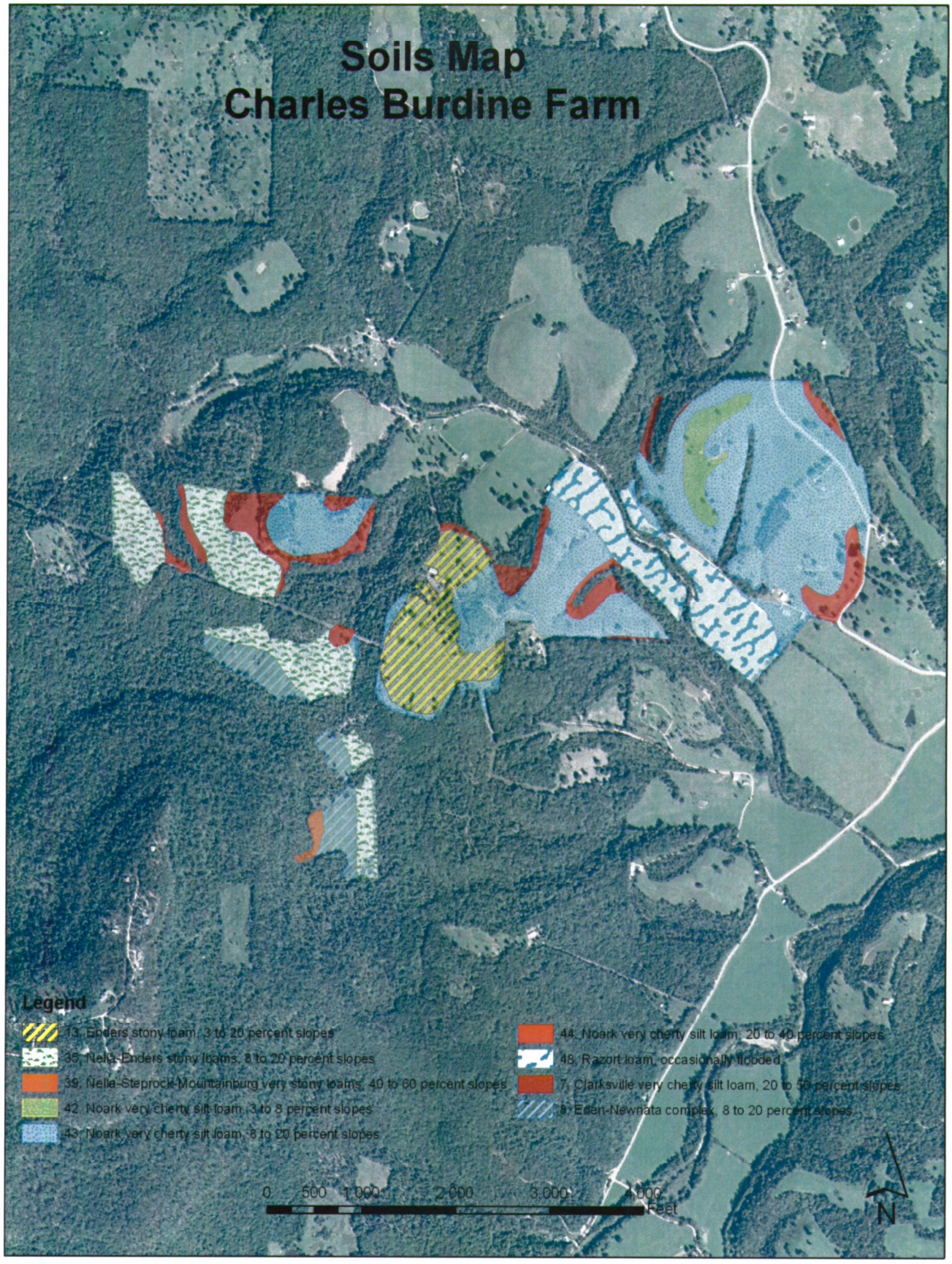


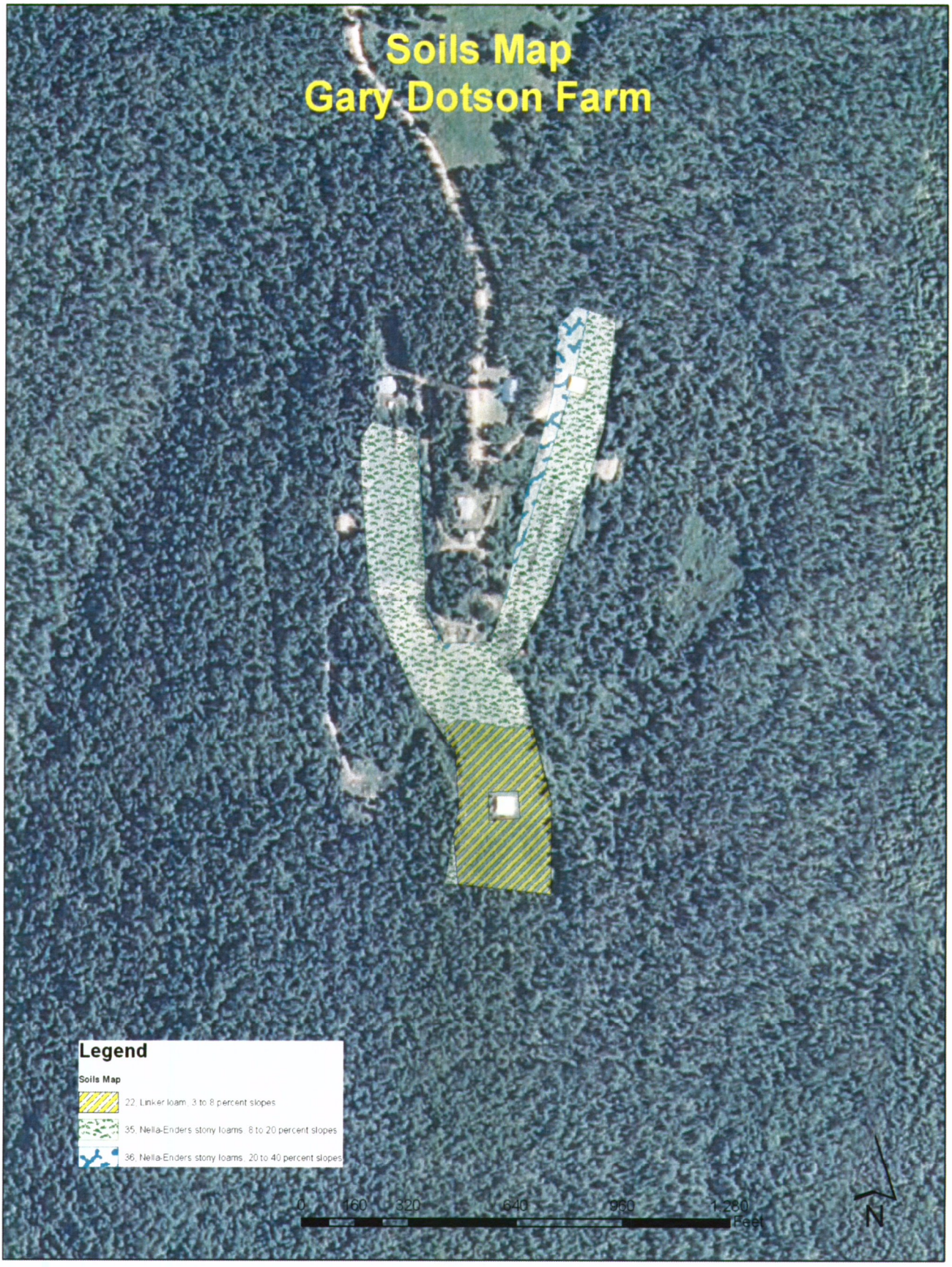

Soils Map
Robert Middleton Farm
Legend
15, Enders-Leesburg stony loams, 8 to 20 percent slopes
19, Leadvale silt loam, 3 to 8 percent slopes
31, Nella gravelly loam, 3 to 12 percent slopes
42, Noark very cherty silt loam, 3 to 8 percent slopes
43, Noark very cherty silt loam, 8 to 20 percent slopes
44, Noark very cherty silt loam, 20 to 40 percent slopes
50, Spadra loam, occasionally flooded
54, Water
8, Eden-Newnata complex, 8 to 20 percent slopes
0 370 740 1,480 2,220 2,960
Feet
N

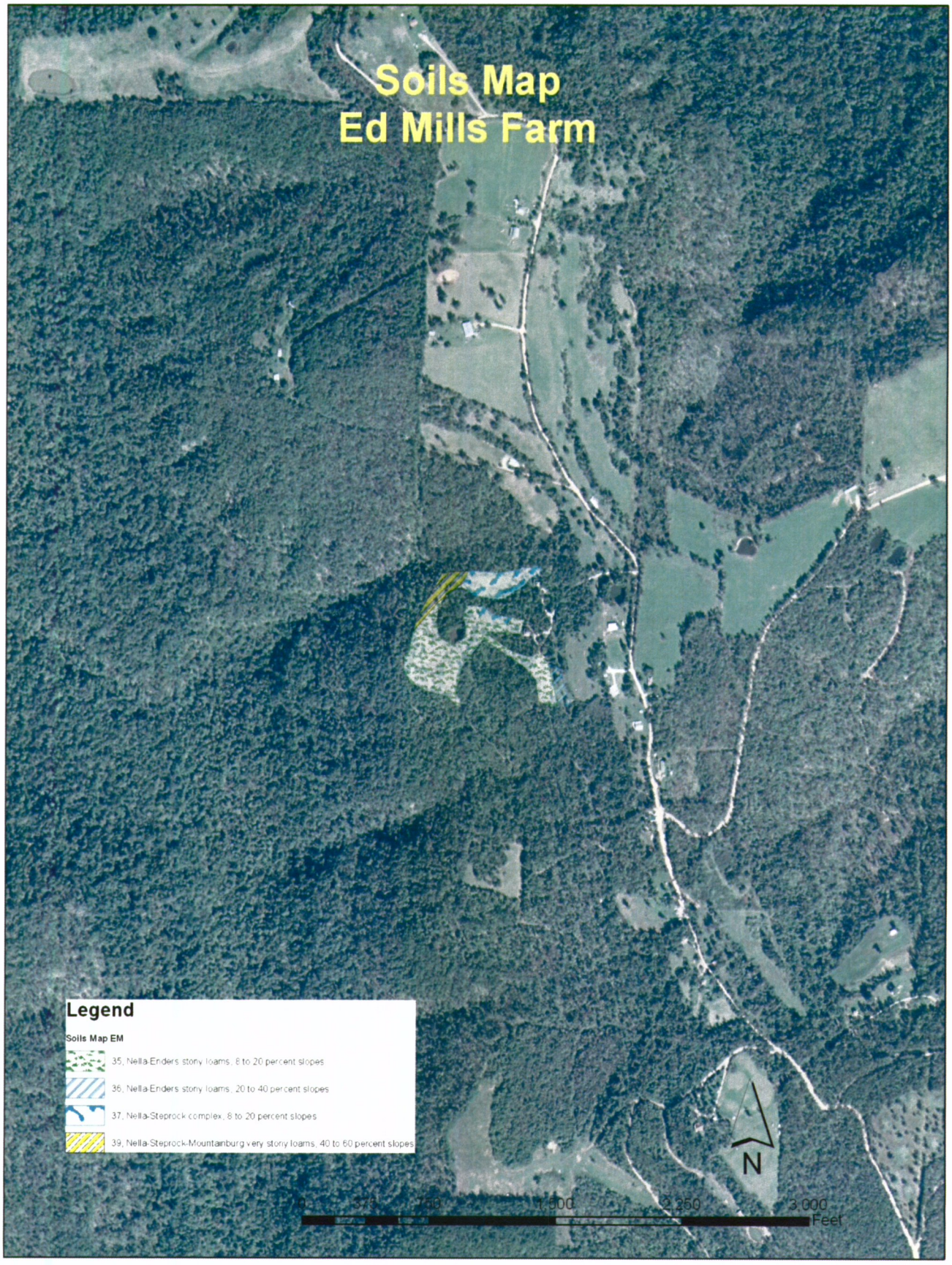

Soils Map
Harl Bohannon's Farms
Legend
15, Enders-Leesburg stony loams, 8 to 20 percent slopes
16, Enders-Leesburg stony loams, 20 to 40 percent slopes
35, Nella-Enders stony loams, 8 to 20 percent slopes
36, Nella-Enders stony loams, 20 to 40 percent slopes
0
430
860
1,720
2,580
3,440
Feet
N

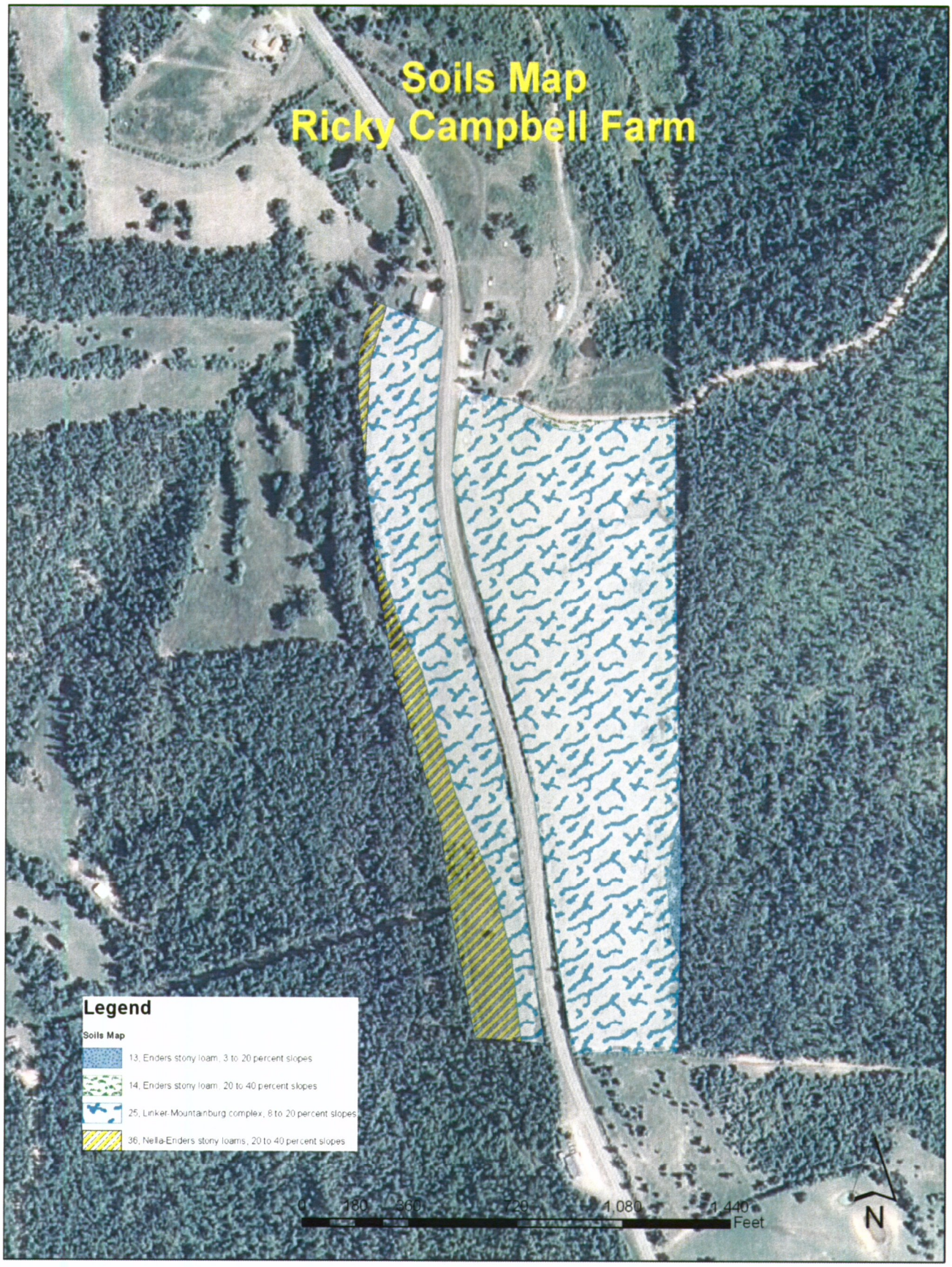

Soils Map
Lynn Carl Middleton
Legend
13, Enders stony loam, 3 to 20 percent slopes
15, Enders-Leesburg stony loams, 6 to 20 percent slopes
24, Linker-Mountainburg complex, 3 to 8 percent slopes
25, Linker-Mountainburg complex, 8 to 20 percent slopes
35, Nella-Enders stony loams, 8 to 20 percent slopes
36, Nella-Enders stony loams, 20 to 40 percent slopes
0 287.5 575 1,150 1,725 2,300
Feet
N


Soils Map
Mike Middleton Farm and
Richard and Phillip Campbell Farm
Legend
3, Arkana-Moko complex, 20 to 40 percent slopes
44, Noark very cherty silt loam, 20 to 40 percent slopes
48, Razort loam, occasionally flooded
54, Water
5, Ceda-Kenn complex, frequently flooded
35, Nella-Enders stony loams, 8 to 20 percent slopes
36, Nella-Enders stony loams, 20 to 40 percent slopes
43, Noark very cherty silt loam, 8 to 20 percent slopes
44, Noark very cherty silt loam, 20 to 40 percent slopes
0 500 1,000 2,000 3,000 4,000
Feet
N


Soils Map
Charles Burdine Farm
Legend
13, Enders stony loam, 3 to 20 percent slopes
35, Nella-Enders stony loams, 8 to 20 percent slopes
39, Nella-Steprock Mountainburg very stony loams, 40 to 60 percent slopes
42, Noark very cherty silt loam, 3 to 8 percent slopes
43, Noark very cherty silt loam, 8 to 20 percent slopes
44, Noark very cherty silt loam, 20 to 40 percent slopes
48, Razort loam, occasionally flooded
7, Clarksville very cherty silt loam, 20 to 50 percent slopes
8, Eden-Newnata complex, 8 to 20 percent slopes
0 500 1,000 2,000 3,000 4,000
Feet
N


Soils Map
Gary Dotson Farm
Legend
Soils Map
22. Linker loam, 3 to 8 percent slopes
35. Nella-Enders stony loams, 8 to 20 percent slopes
36. Nella-Enders stony loams, 20 to 40 percent slopes
0
160
320
640
960
1,280
Feet
N


Soils Map
Ed Mills Farm
Legend
Soils Map EM
35, Nella-Enders stony loams, 8 to 20 percent slopes
36, Nella-Enders stony loams, 20 to 40 percent slopes
37, Nella-Steprock complex, 8 to 20 percent slopes
39, Nella-Steprock-Mountainburg very stony loams, 40 to 60 percent slopes
N
0
375
750
1,500
2,250
3,000
Feet


Soils Map
Ricky Campbell Farm
Legend
Soils Map
13, Enders stony loam, 3 to 20 percent slopes
14, Enders stony loam, 20 to 40 percent slopes
25, Linker-Mountainburg complex, 8 to 20 percent slopes
36, Nella-Enders stony loams, 20 to 40 percent slopes
0
180
360
720
1,080
1,440
Feet
N

Map Unit Description (Brief)

Newton County, Arkansas

[Only those map units that have entries for the selected non-technical description categories are included in this report]

Map Unit: 3 - Arkana-Moko complex, 20 to 40 percent slopes

Description Category: WQL

Moko 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 movement of soluble nutrients below the root zone should be planned on these soils. Soluble forms of nutrients should be applied with extreme caution or avoided if other forms of nutrients are available.

Description Category: WQL

Arkana soils have a severe surface runoff potential and a moderate leaching index. Nutrient movement to surface waters is a hazard on these soils. Nutrient movement to ground waters could be a hazard on these soils. A system of conservation practices or management techniques that reduces runoff, erosion and nutrient availability should be planned on these soils. Soluble forms of nutrients should be applied with caution or avoided if other forms of nutrients are available.

Map Unit: 5 - Ceda cobbly loam, frequently flooded

Description Category: WQL

These soils have a severe surface runoff potential, due to frequent flooding, and a high leaching index. Nutrient movement to surface and ground waters is a hazard on these soils. Nutrient management practices that minimize the movement of soluble nutrients below the root zone and exclude the application of nutrients during periods when flood risk is high should be planned on these soils. Soluble forms of nutrients should be avoided if other forms of nutrients are available.

Map Unit: 7 - Clarksville very cherty silt loam, 20 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 movement of soluble nutrients below the root zone should be planned on these soils. Soluble forms of nutrients should be applied with extreme caution or avoided if other forms of nutrients are available.

Map Unit: 8 - Eden-Newnata complex, 8 to 20 percent slopes

Description Category: WQL

These soils have an moderate surface runoff potential and a moderate leaching index. Nutrient movement to surface and ground waters could be a hazard on these soils. In addition to management practices such as soil tests, proper application rates and split applications of soluble forms of nutrients, a system of practices that reduces runoff and erosion and minimizes the movement of soluble nutrients below the root zone should be planned on these soils.

Map Unit: 13 - Enders stony loam, 3 to 20 percent slopes

Description Category: WQL

These soils have an moderate surface runoff potential and a moderate leaching index. Nutrient movement to surface and ground waters could be a hazard on these soils. In addition to management practices such as soil tests, proper application rates and split applications of soluble forms of nutrients, a system of practices that reduces runoff and erosion and minimizes the movement of soluble nutrients below the root zone should be planned on these soils.

Map Unit Description (Brief)

Newton County, Arkansas

Map Unit: 14 - Enders stony loam, 20 to 40 percent slopes

Description Category: WQL

These soils have a severe surface runoff potential and a moderate leaching index. Nutrient movement to surface waters is a hazard on these soils. Nutrient movement to ground waters could be a hazard on these soils. A system of conservation practices or management techniques that reduces runoff, erosion and nutrient availability should be planned on these soils. Soluble forms of nutrients should be applied with caution or avoided if other forms of nutrients are available.

Map Unit: 15 - Enders-Leesburg stony loams, 8 to 20 percent slopes

Description Category: WQL

Leesburg soils have an moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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.

Description Category: WQL

Enders soils have an moderate surface runoff potential and a moderate leaching index. Nutrient movement to surface and ground waters could be a hazard on these soils. In addition to management practices such as soil tests, proper application rates and split applications of soluble forms of nutrients, a system of practices that reduces runoff and erosion and minimizes the movement of soluble nutrients below the root zone should be planned on these soils.

Map Unit: 16 - Enders-Leesburg stony loams, 20 to 40 percent slopes

Description Category: WQL

Enders soils have a severe surface runoff potential and a moderate leaching index. Nutrient movement to surface waters is a hazard on these soils. Nutrient movement to ground waters could be a hazard on these soils. A system of conservation practices or management techniques that reduces runoff, erosion and nutrient availability should be planned on these soils. Soluble forms of nutrients should be applied with caution or avoided if other forms of nutrients are available.

Description Category: WQL

Leesburg 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 movement of soluble nutrients below the root zone should be planned on these soils. Soluble forms of nutrients should be applied with extreme caution or avoided if other forms of nutrients are available.

Map Unit: 19 - Leadvale silt loam, 3 to 8 percent slopes

Description Category: WQL

These soils have an moderate surface runoff potential and a moderate leaching index. Nutrient movement to surface and ground waters could be a hazard on these soils. In addition to management practices such as soil tests, proper application rates and split applications of soluble forms of nutrients, a system of practices that reduces runoff and erosion and minimizes the movement of soluble nutrients below the root zone should be planned on these soils.

Map Unit: 22 - Linker loam, 3 to 8 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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 Description (Brief)

Newton County, Arkansas

Map Unit: 24 - Linker-Mountainburg complex, 3 to 8 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 25 - Linker-Mountainburg complex, 8 to 20 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 31 - Nella gravelly loam, 3 to 12 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 35 - Nella-Enders stony loams, 8 to 20 percent slopes

Description Category: WQL

Enders soils have an moderate surface runoff potential and a moderate leaching index. Nutrient movement to surface and ground waters could be a hazard on these soils. In addition to management practices such as soil tests, proper application rates and split applications of soluble forms of nutrients, a system of practices that reduces runoff and erosion and minimizes the movement of soluble nutrients below the root zone should be planned on these soils.

Description Category: WQL

Nella soils have an moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 36 - Nella-Enders stony loams, 20 to 40 percent slopes

Description Category: WQL

Enders soils have a severe surface runoff potential and a moderate leaching index. Nutrient movement to surface waters is a hazard on these soils. Nutrient movement to ground waters could be a hazard on these soils. A system of conservation practices or management techniques that reduces runoff, erosion and nutrient availability should be planned on these soils. Soluble forms of nutrients should be applied with caution or avoided if other forms of nutrients are available.

Description Category: WQL

Nella 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 movement of soluble nutrients below the root zone should be planned on these soils. Soluble forms of nutrients should be applied with extreme caution or avoided if other forms of nutrients are available.

Map Unit Description (Brief)

Newton County, Arkansas

Map Unit: 37 - Nella-Steprock complex, 8 to 20 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 39 - Nella-Steprock-Mountainburg very stony loams, 40 to 60 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 movement of soluble nutrients below the root zone should be planned on these soils. Soluble forms of nutrients should be applied with extreme caution or avoided if other forms of nutrients are available.

Map Unit: 42 - Noark very cherty silt loam, 3 to 8 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 43 - Noark very cherty silt loam, 8 to 20 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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: 44 - Noark very cherty silt loam, 20 to 40 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 movement of soluble nutrients below the root zone should be planned on these soils. Soluble forms of nutrients should be applied with extreme caution or avoided if other forms of nutrients are available.

Map Unit: 45 - Peridge silt loam, 3 to 8 percent slopes

Description Category: WQL

These soils have a moderate surface runoff potential and a high leaching index. Nutrient movement to ground waters is a hazard on these soils. Nutrient movement to surface waters could be a hazard on these soils. A system of intense nutrient management practices 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 Description (Brief)

Newton County, Arkansas

Map Unit: 48 - Razort loam, occasionally flooded

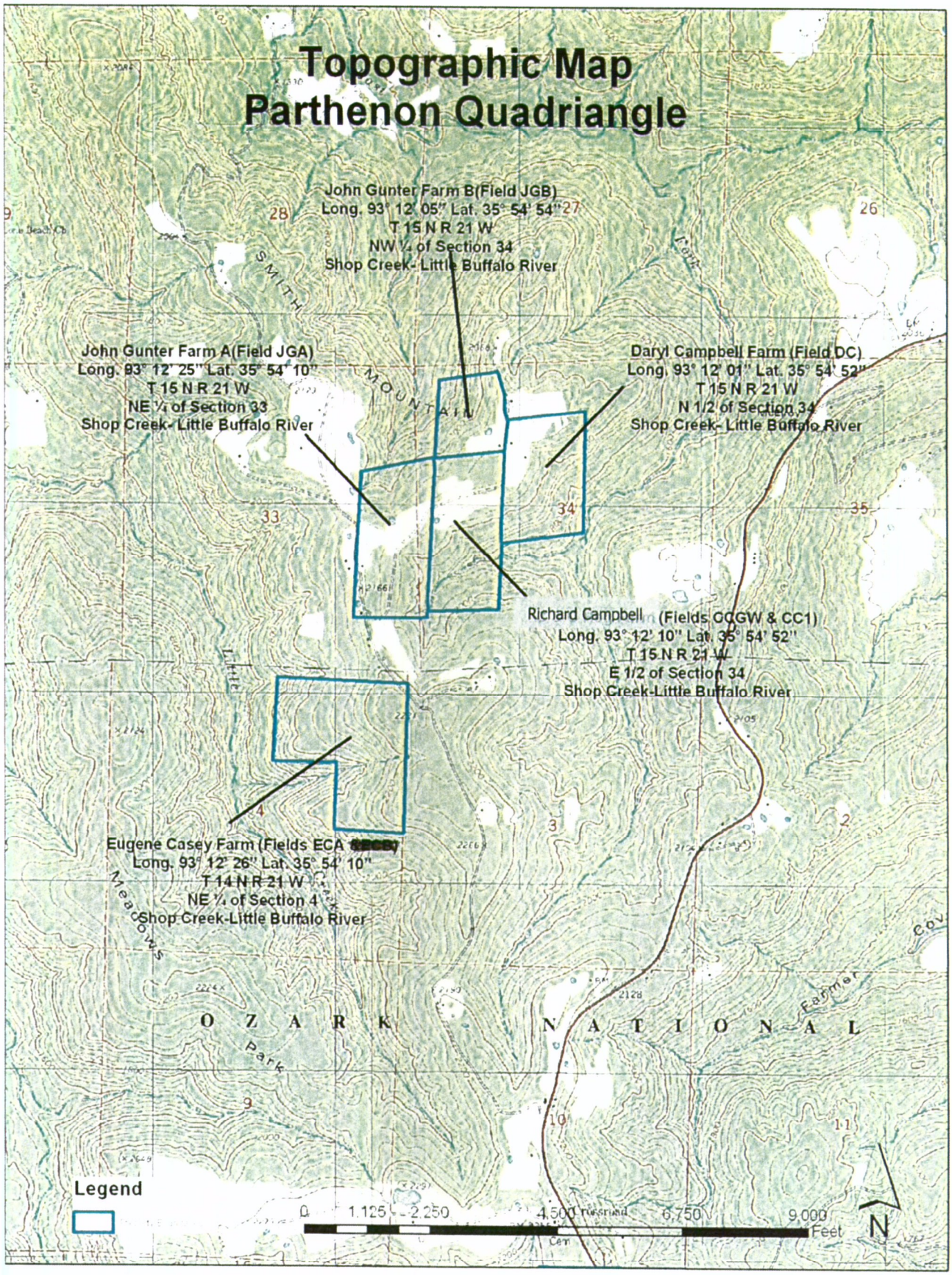
Description Category: WQL

These soils have a moderate surface runoff potential, due to occasional flooding, and a high leaching index. Nutrient movement to surface and ground waters is a hazard on these soils. Nutrient management practices that minimize the movement of soluble nutrients below the root zone and exclude the application of nutrients during periods when flood risk is high should be planned on these soils. Soluble forms of nutrients should be avoided if other forms of nutrients are available.

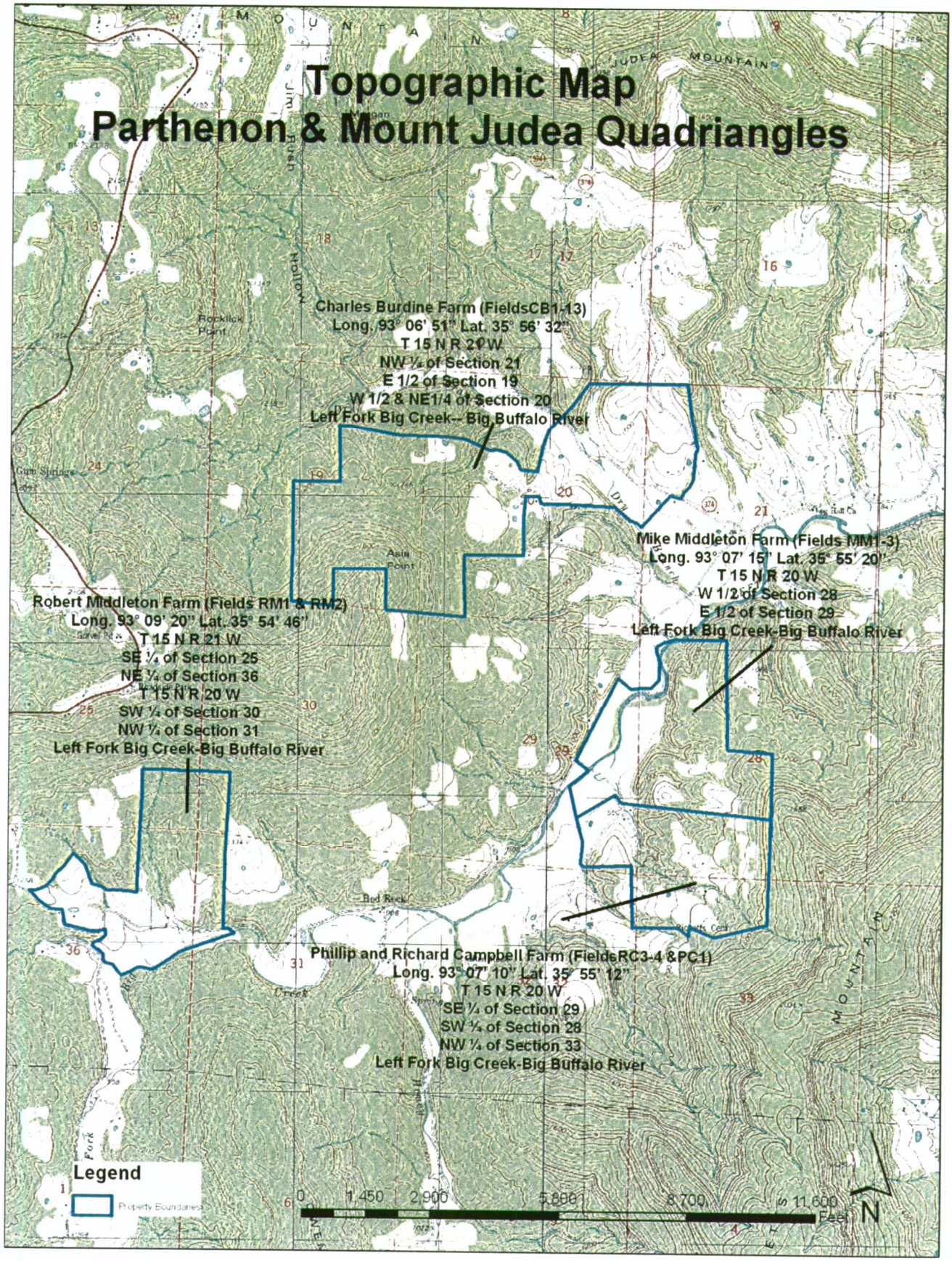
Map Unit: 50 - Spadra loam, occasionally flooded

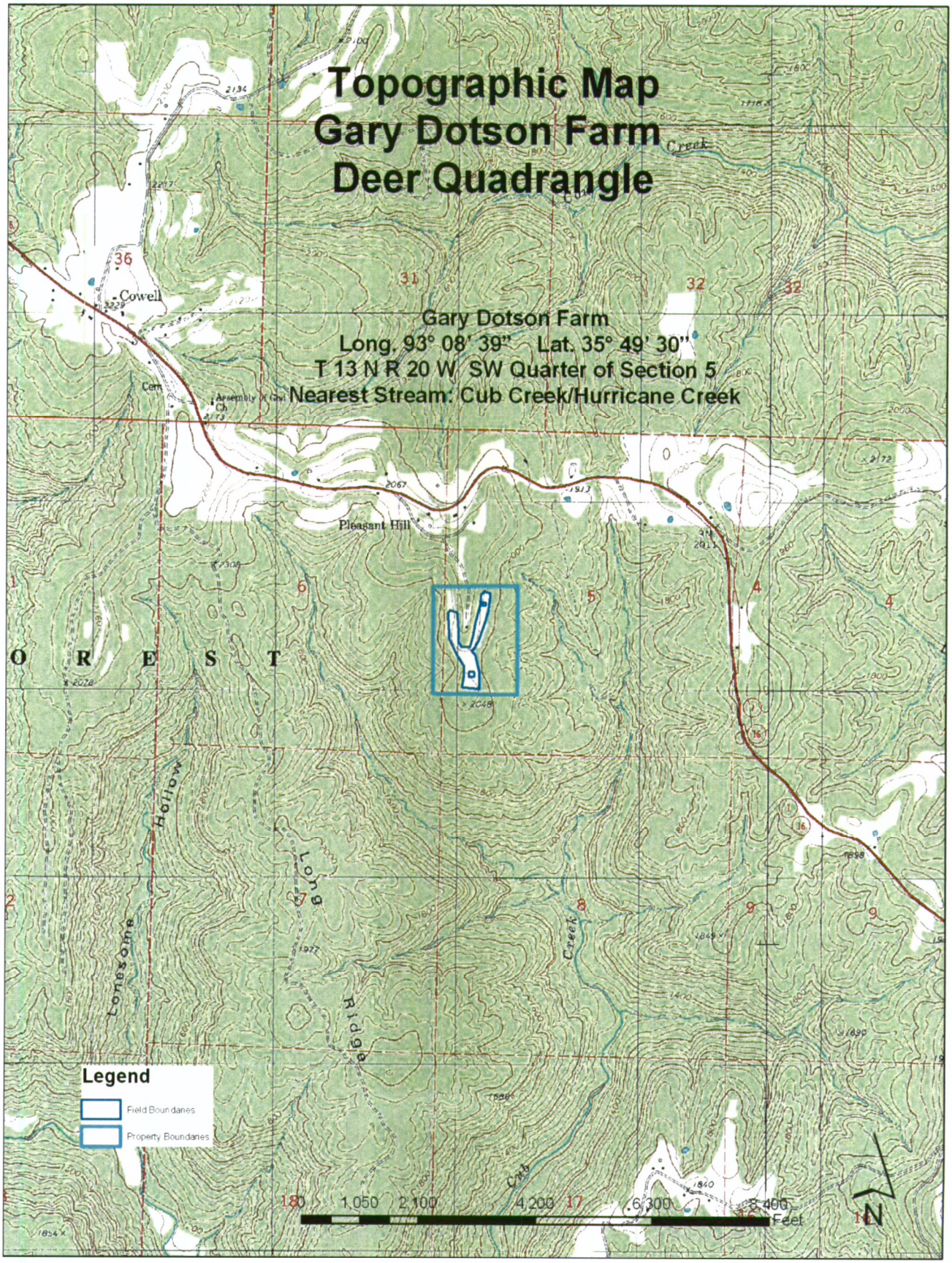
Description Category: WQL

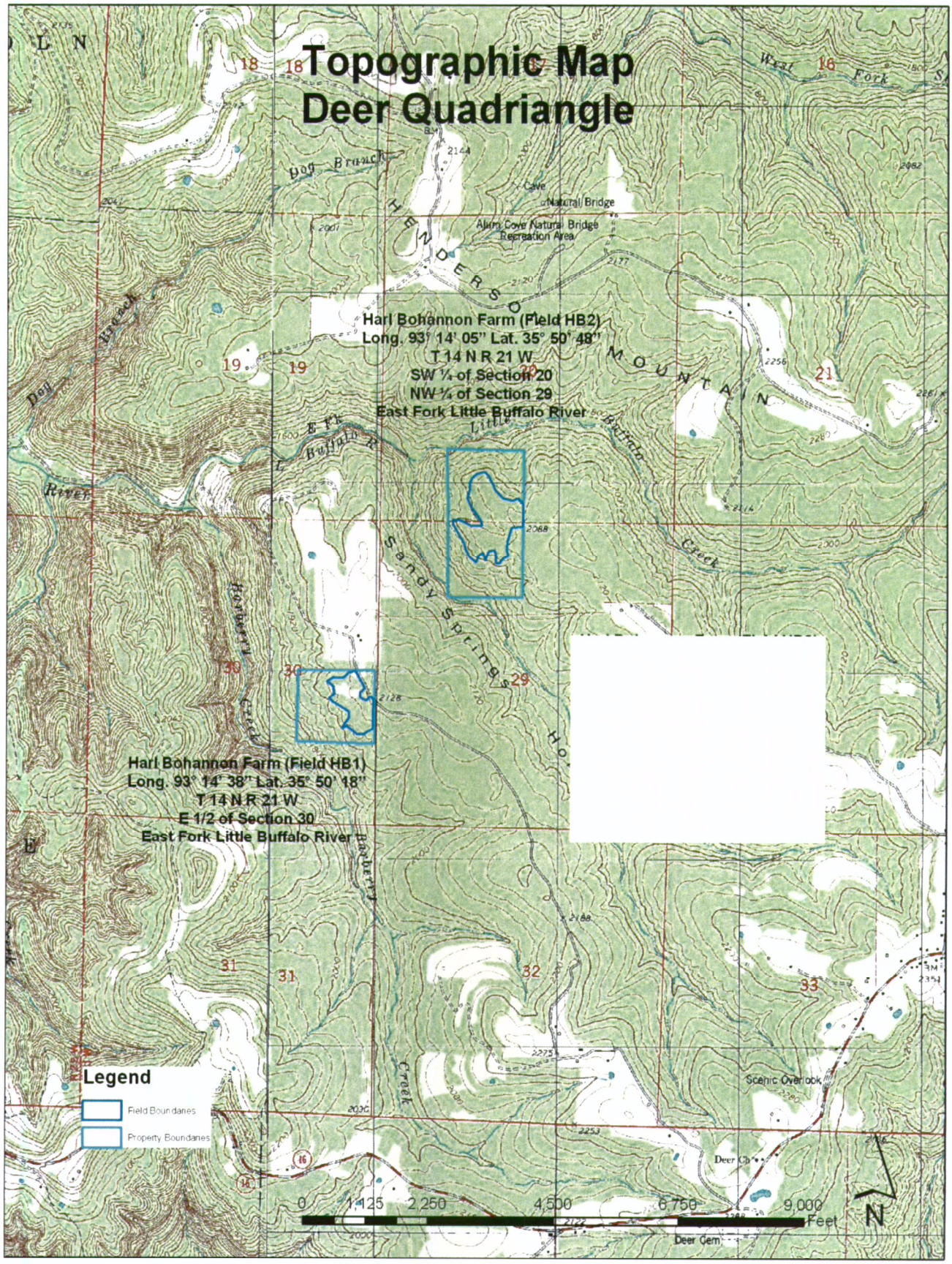
These soils have a moderate surface runoff potential, due to occasional flooding, and a high leaching index. Nutrient movement to surface and ground waters is a hazard on these soils. Nutrient management practices that minimize the movement of soluble nutrients below the root zone and exclude the application of nutrients during periods when flood risk is high should be planned on these soils. Soluble forms of nutrients should be avoided if other forms of nutrients are available.

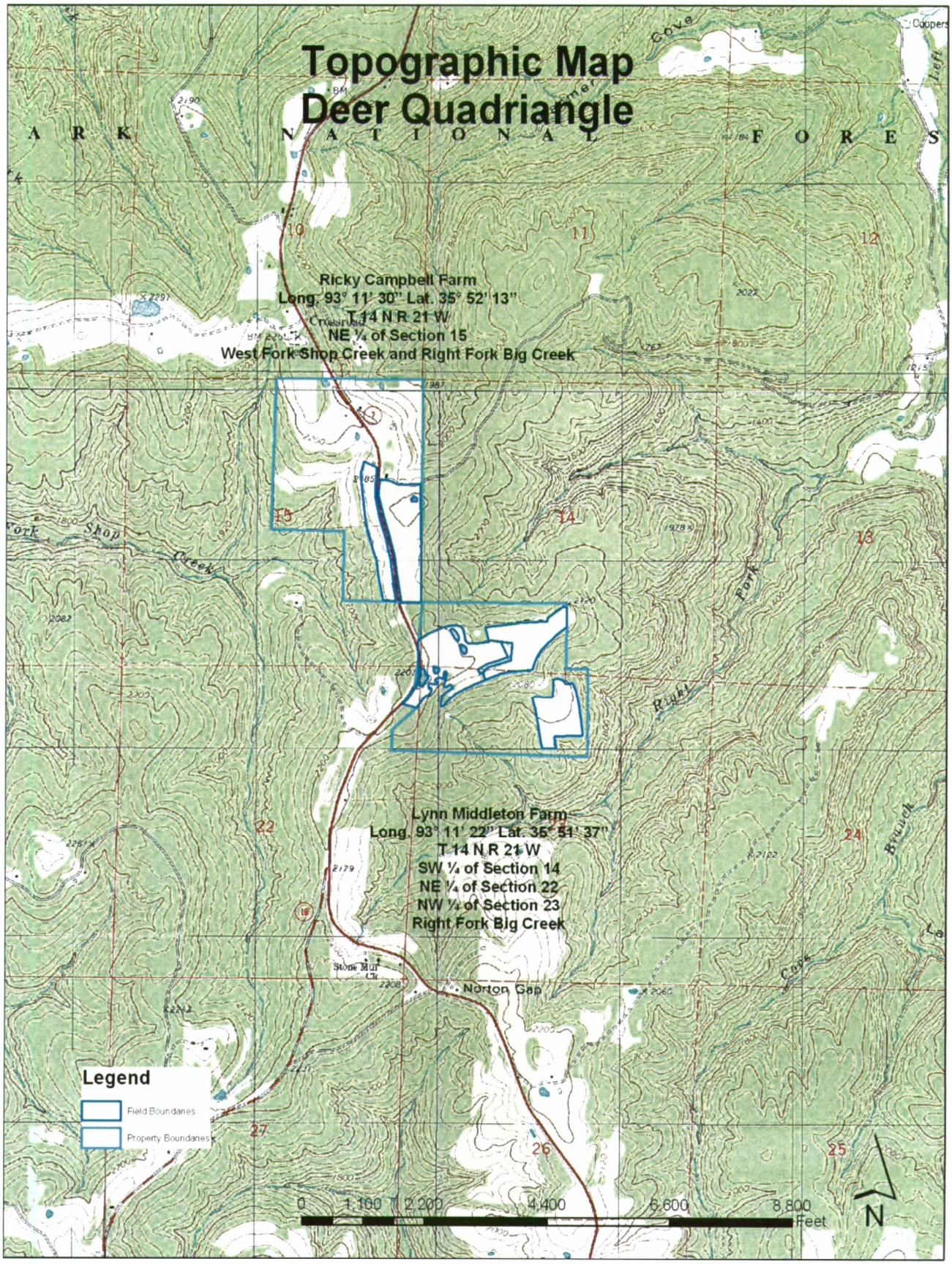

Topographic Map
Parthenon Quadriangle
John Gunter Farm B(Field JGB)
Long. 93° 12' 05" Lat. 35° 54' 54"
T 15 N R 21 W
NW ¼ of Section 34
Shop Creek- Little Buffalo River
John Gunter Farm A(Field JGA)
Long. 93° 12' 25" Lat. 35° 54' 10"
T 15 N R 21 W
NE ¼ of Section 33
Shop Creek- Little Buffalo River
Daryl Campbell Farm (Field DC)
Long. 93° 12' 01" Lat. 35° 54' 52"
T 15 N R 21 W
N 1/2 of Section 34
Shop Creek- Little Buffalo River
Richard Campbell (Fields CCGW & CC1)
Long. 93° 12' 10" Lat. 35° 54' 52"
T 15 N R 21 W
E 1/2 of Section 34
Shop Creek-Little Buffalo River
Eugene Casey Farm (Fields ECA [redacted])
Long. 93° 12' 26" Lat. 35° 54' 10"
T 14 N R 21 W
NE ¼ of Section 4
Shop Creek-Little Buffalo River
SMITH
MOUNTAIN
Little
Meadows
Park
OZARK NATIONAL
Farmer
Legend
0 1,125 2,250 4,500 6,750 9,000
Feet
N

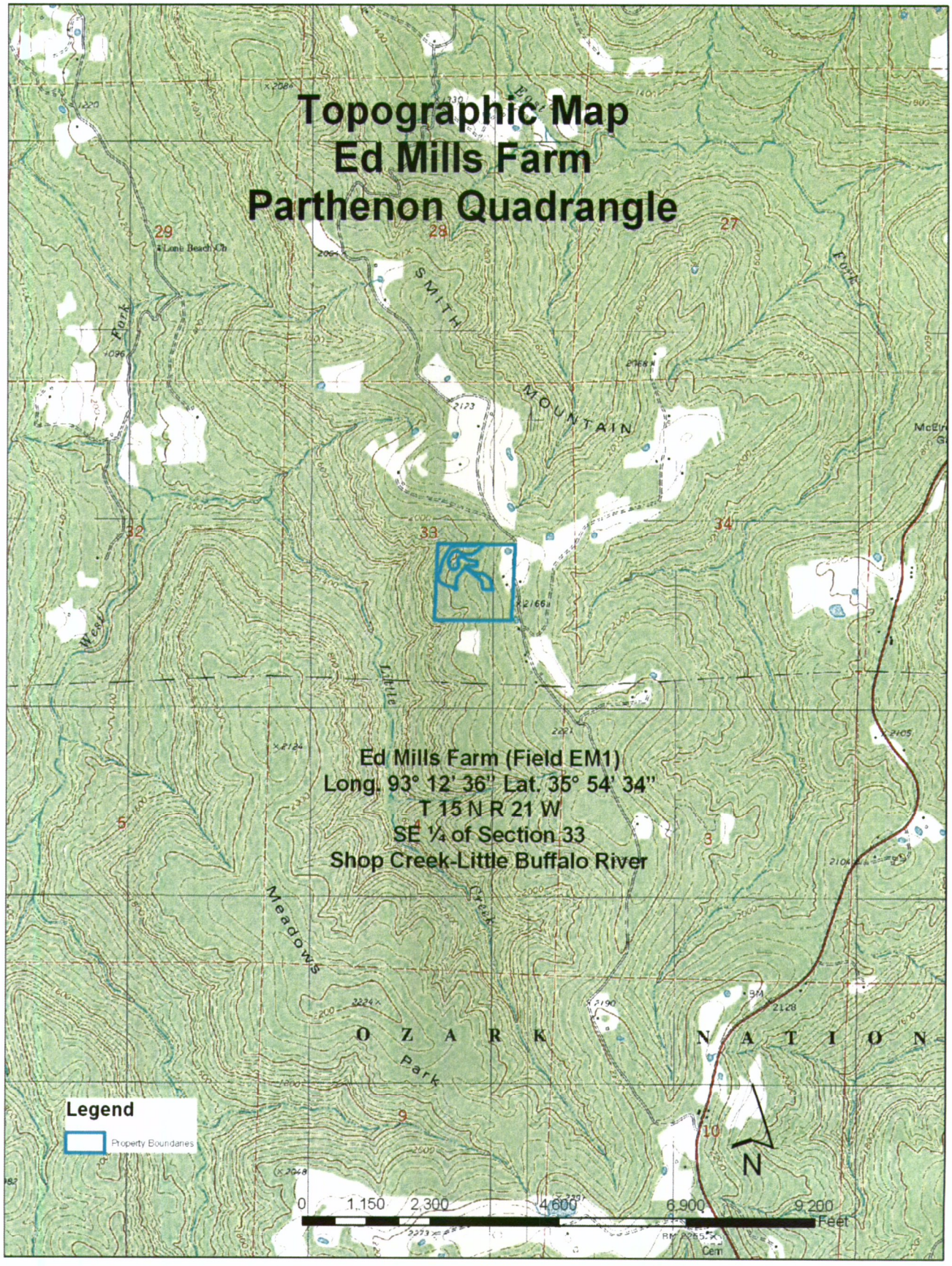
Topographic Map
Parthenon & Mount Judea Quadriangles




Topographic Map
Gary Dotson Farm
Deer Quadrangle
Gary Dotson Farm
Long. 93° 08' 39" Lat. 35° 49' 30"
T 13 N R 20 W, SW Quarter of Section 5
Nearest Stream: Cub Creek/Hurricane Creek
Cowell
Pleasant Hill
Lonesome Hollow
Long Ridge
Cub Creek
Legend
Field Boundaries
Property Boundaries
0 1,050 2,100 4,200 6,300 8,400
Feet
N


Topographic Map
Deer Quadriangle
Harl Bohannon Farm (Field HB2)
Long. 93° 14' 05" Lat. 35° 50' 48"
T 14 N R 21 W
SW ¼ of Section 20
NW ¼ of Section 29
East Fork Little Buffalo River
Harl Bohannon Farm (Field HB1)
Long. 93° 14' 38" Lat. 35° 50' 18"
T 14 N R 21 W
E 1/2 of Section 30
East Fork Little Buffalo River
Legend
Field Boundaries
Property Boundaries
Dog Branch
Natural Bridge
Alum Cove Natural Bridge Recreation Area
HENDERSON MOUNTAIN
Sandy Springs
Scenic Overlook
Deer Gem
0 1,125 2,250 4,500 6,750 9,000 Feet
N


Topographic Map
Deer Quadriangle
Ricky Campbell Farm
Long. 93° 11' 30" Lat. 35° 52' 13"
T 14 N R 21 W
NE ¼ of Section 15
West Fork Shop Creek and Right Fork Big Creek
Lynn Middleton Farm
Long. 93° 11' 22" Lat. 35° 51' 37"
T 14 N R 21 W
SW ¼ of Section 14
NE ¼ of Section 22
NW ¼ of Section 23
Right Fork Big Creek
Norton Gap
Legend
Field Boundaries
Property Boundaries
0 1,100 2,200 4,400 6,600 8,800 Feet
N


Topographic Map
Ed Mills Farm
Parthenon Quadrangle
Ed Mills Farm (Field EM1)
Long. 93° 12' 36" Lat. 35° 54' 34"
T 15 N R 21 W
SE ¼ of Section 33
Shop Creek-Little Buffalo River
SMITH
MOUNTAIN
Little
Meadows
Creek
O Z A R K
N A T I O N
Park
Legend
Property Boundaries
N
0 1,150 2,300 4,600 6,900 9,200
Feet

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EC FARMS PO BOX 52 VENDOR	Client ID: 8706888992 AR 72683
Date Processed:	3/30/2015
Field ID:	CC GW
Acres:	20
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49146
Sample Number:	3250713

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	275	550	Above Optimum
K	167	334	Optimum
Ca	1033	2066	--
Mg	171	342	--
SO4-S	15	30	--
Zn	14.8	29.6	--
Fe	166	332	--
Mn	244	488	--
Cu	5.7	11.4	--
B	0	0	--
NO3-N	53	106	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.2	--
Soil EC (1:2 soil-water)	55	umhos/cm
Soil Estimated CEC	9.59	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
73.93	53.87	14.86	4.47	0.73

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS PO BOX 52 VENDOR	Client ID: 8706888992 AR 72683
Date Processed:	3/30/2015
Field ID:	CC 1
Acres:	5
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49145
Sample Number:	3250711

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	374	748	Above Optimum
K	94	188	Medium
Ca	901	1802	--
Mg	200	400	--
SO4-S	16	32	--
Zn	19.2	38.4	--
Fe	188	376	--
Mn	224	448	--
Cu	6.8	13.6	--
B	0	0	--
NO3-N	16	32	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6	--
Soil EC (1:2 soil-water)	28	umhos/cm
Soil Estimated CEC	9.47	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
68.32	47.58	17.60	2.55	0.60

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

	Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Hay (142)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	220	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 3 ton (143)	120	0	150	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	JG A
Acres:	14
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49161
Sample Number:	3250726

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	351	702	Above Optimum
K	79	158	Low
Ca	813	1626	--
Mg	178	356	--
SO4-S	18	36	--
Zn	19.6	39.2	--
Fe	182	364	--
Mn	220	440	--
Cu	8.2	16.4	--
B	0	0	--
NO3-N	30	60	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.7	--
Soil EC (1:2 soil-water)	42	umhos/cm
Soil Estimated CEC	9.82	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
59.27	41.39	15.10	2.06	0.71

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	0	0	0	4000
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	260	0	0	0	4000
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	JG B
Acres:	3
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49154
Sample Number:	3250719

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	501	1002	Above Optimum
K	261	522	Above Optimum
Ca	1204	2408	--
Mg	236	472	--
SO4-S	23	46	--
Zn	22.7	45.4	--
Fe	184	368	--
Mn	270	540	--
Cu	6.1	12.2	--
B	0	0	--
NO3-N	46	92	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.1	--
Soil EC (1:2 soil-water)	51	umhos/cm
Soil Estimated CEC	12.24	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
71.41	49.17	16.06	5.47	0.71

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS PO BOX 52 VENDOR	Client ID: 8706888992 AR 72683
Date Processed:	3/30/2015
Field ID:	EC A
Acres:	5
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49143
Sample Number:	3250709

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	93	186	Above Optimum
K	75	150	Low
Ca	459	918	--
Mg	72	144	--
SO4-S	17	34	--
Zn	3.5	7	--
Fe	151	302	--
Mn	144	288	--
Cu	1.9	3.8	--
B	0	0	--
NO3-N	7	14	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.2	--
Soil EC (1:2 soil-water)	18	umhos/cm
Soil Estimated CEC	8.65	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Sandy Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
36.40	26.54	6.94	2.22	0.70

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	0	0	0	4000
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	DC
Acres:	16
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49158
Sample Number:	3250723

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	303	606	Above Optimum
K	135	270	Optimum
Ca	957	1914	--
Mg	195	390	--
SO4-S	19	38	--
Zn	16.7	33.4	--
Fe	176	352	--
Mn	212	424	--
Cu	5.9	11.8	--
B	0	0	--
NO3-N	43	86	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6	--
Soil EC (1:2 soil-water)	42	umhos/cm
Soil Estimated CEC	9.82	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
69.45	48.72	16.55	3.52	0.66

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	180	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	150	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	HB 1
Acres:	11
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49163
Sample Number:	3250728

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	13	26	Very Low
K	119	238	Medium
Ca	943	1886	--
Mg	73	146	--
SO4-S	20	40	--
Zn	3.4	6.8	--
Fe	108	216	--
Mn	292	584	--
Cu	0.8	1.6	--
B	0	0	--
NO3-N	16	32	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)	28	umhos/cm
Soil Estimated CEC	8.72	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
65.61	54.05	6.97	3.50	1.10

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	---------- lb/acre ----------						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	120	60	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	HB 2
Acres:	20
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49156
Sample Number:	3250721

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	16	32	Low
K	147	294	Optimum
Ca	571	1142	--
Mg	73	146	--
SO4-S	14	28	--
Zn	1.6	3.2	--
Fe	105	210	--
Mn	186	372	--
Cu	0.8	1.6	--
B	0	0	--
NO3-N	13	26	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)	21	umhos/cm
Soil Estimated CEC	6.90	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
56.50	41.40	8.82	5.47	0.82

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	80	40	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	LCM 1
Acres:	19
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49162
Sample Number:	3250727

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	29	58	Medium
K	63	126	Low
Ca	1389	2778	--
Mg	35	70	--
SO4-S	11	22	--
Zn	1.2	2.4	--
Fe	81	162	--
Mn	51	102	--
Cu	0.8	1.6	--
B	0	0	--
NO3-N	13	26	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.5	--
Soil EC (1:2 soil-water)	29	umhos/cm
Soil Estimated CEC	10.01	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
75.03	69.37	2.91	1.61	1.13

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

	Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	40	100	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	90	260	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	80	220	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS		Client ID:	8706888992
PO BOX 52			
VENDOR		AR	72683

Date Processed:	3/30/2015
Field ID:	LCM2
Acres:	16
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49148
Sample Number:	3250715

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	12	24	Very Low
K	59	118	Very Low
Ca	943	1886	--
Mg	71	142	--
SO4-S	15	30	--
Zn	2.1	4.2	--
Fe	114	228	--
Mn	380	760	--
Cu	1	2	--
B	0	0	--
NO3-N	18	36	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)	27	umhos/cm
Soil Estimated CEC	8.53	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
64.84	55.26	6.93	1.77	0.87

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

	Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 5 ton (145)	200	135	310	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 4 ton (144)	160	120	270	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 3 ton (143)	120	105	230	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	LCM3
Acres:	19
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49151
Sample Number:	3250718

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	34	68	Medium
K	66	132	Low
Ca	1072	2144	--
Mg	69	138	--
SO4-S	13	26	--
Zn	2.4	4.8	--
Fe	105	210	--
Mn	115	230	--
Cu	1.4	2.8	--
B	0	0	--
NO3-N			--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)		umhos/cm
Soil Estimated CEC	9.20	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
67.38	58.29	6.25	1.84	0.99

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Hay (142)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 5 ton (145)	200	90	260	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 4 ton (144)	160	80	220	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 3 ton (143)	120	60	180	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	RM 1
Acres:	82
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49138
Sample Number:	3250705

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	9	18	Very Low
K	48	96	Very Low
Ca	375	750	--
Mg	49	98	--
SO4-S	8	16	--
Zn	1.6	3.2	--
Fe	130	260	--
Mn	116	232	--
Cu	0.6	1.2	--
B	0	0	--
NO3-N	2	4	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)	8	umhos/cm
Soil Estimated CEC	5.46	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Sandy Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
45.04	34.35	7.48	2.25	0.96

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	120	160	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
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VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	RM 2
Acres:	21
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49139
Sample Number:	3250706

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	87	174	Above Optimum
K	69	138	Low
Ca	522	1044	--
Mg	61	122	--
SO4-S	10	20	--
Zn	4	8	--
Fe	193	386	--
Mn	227	454	--
Cu	1.5	3	--
B	0	0	--
NO3-N	4	8	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.6	--
Soil EC (1:2 soil-water)	9	umhos/cm
Soil Estimated CEC	7.34	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
45.49	35.56	6.93	2.41	0.59

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	0	0	0	4000
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	260	0	0	0	4000
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	MM1
Acres:	3
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49130
Sample Number:	3250697

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	60	120	Above Optimum
K	90	180	Low
Ca	2091	4182	--
Mg	98	196	--
SO4-S	13	26	--
Zn	4.7	9.4	--
Fe	199	398	--
Mn	225	450	--
Cu	3.1	6.2	--
B	0	0	--
NO3-N	8	16	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.3	--
Soil EC (1:2 soil-water)	19	umhos/cm
Soil Estimated CEC	15.11	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
76.84	69.19	5.40	1.53	0.72

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	260	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	MM2
Acres:	30
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49133
Sample Number:	3250700

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	102	204	Above Optimum
K	118	236	Medium
Ca	1440	2880	--
Mg	105	210	--
SO4-S	13	26	--
Zn	5.8	11.6	--
Fe	197	394	--
Mn	190	380	--
Cu	2.8	5.6	--
B	0	0	--
NO3-N	7	14	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)	17	umhos/cm
Soil Estimated CEC	11.94	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
70.68	60.31	7.33	2.53	0.51

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	220	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS		Client ID:	8706888992
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VENDOR		AR	72683

Date Processed:	3/30/2015
Field ID:	MM3
Acres:	11
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49132
Sample Number:	3250699

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	65	130	Above Optimum
K	144	288	Optimum
Ca	1846	3692	--
Mg	93	186	--
SO4-S	11	22	--
Zn	4.7	9.4	--
Fe	194	388	--
Mn	145	290	--
Cu	2.5	5	--
B	0	0	--
NO3-N	10	20	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.7	--
Soil EC (1:2 soil-water)	22	umhos/cm
Soil Estimated CEC	13.43	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
77.66	68.72	5.77	2.75	0.42

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	180	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	150	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID:	8706888992
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VENDOR	AR	72683

Date Processed:	3/30/2015
Field ID:	RC3
Acres:	12
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49131
Sample Number:	3250698

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	86	172	Above Optimum
K	47	94	Very Low
Ca	592	1184	--
Mg	57	114	--
SO4-S	13	26	--
Zn	2.9	5.8	--
Fe	174	348	--
Mn	190	380	--
Cu	1.5	3	--
B	0	0	--
NO3-N	2	4	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.5	--
Soil EC (1:2 soil-water)	15	umhos/cm
Soil Estimated CEC	8.12	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
44.56	36.47	5.85	1.48	0.75

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Hay (142)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	310	0	0	0	4000
Crop 2	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	270	0	0	0	4000
Crop 3	Mixed Cool and Warm Season Grasses 3 ton (143)	120	0	230	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	RC 4
Acres:	18
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49142
Sample Number:	3250708

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	20	40	Low
K	220	440	Above Optimum
Ca	594	1188	--
Mg	106	212	--
SO4-S	15	30	--
Zn	2.8	5.6	--
Fe	124	248	--
Mn	365	730	--
Cu	1.2	2.4	--
B	0	0	--
NO3-N	5	10	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6	--
Soil EC (1:2 soil-water)	19	umhos/cm
Soil Estimated CEC	7.50	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
59.98	39.62	11.78	7.53	1.04

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	80	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	PC1
Acres:	18
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49140
Sample Number:	3250707

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	30	60	Medium
K	206	412	Above Optimum
Ca	973	1946	--
Mg	154	308	--
SO4-S	22	44	--
Zn	3.3	6.6	--
Fe	140	280	--
Mn	178	356	--
Cu	1.2	2.4	--
B	0	0	--
NO3-N	6	12	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.4	--
Soil EC (1:2 soil-water)	15	umhos/cm
Soil Estimated CEC	11.26	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
60.03	43.21	11.40	4.69	0.73

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	40	0	0	0	0	5000
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	CB1
Acres:	7
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49135
Sample Number:	3250702

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	129	258	Above Optimum
K	103	206	Medium
Ca	1286	2572	--
Mg	226	452	--
SO4-S	17	34	--
Zn	7.8	15.6	--
Fe	140	280	--
Mn	266	532	--
Cu	1.5	3	--
B	0	0	--
NO3-N	14	28	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.6	--
Soil EC (1:2 soil-water)	21	umhos/cm
Soil Estimated CEC	11.16	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
77.61	57.59	16.87	2.37	0.78

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	220	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	CB 2
Acres:	34
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49137
Sample Number:	3250704

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	191	382	Above Optimum
K	326	652	Above Optimum
Ca	1465	2930	--
Mg	261	522	--
SO4-S	17	34	--
Zn	13.8	27.6	--
Fe	152	304	--
Mn	173	346	--
Cu	1.5	3	--
B	0	0	--
NO3-N	35	70	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.5	--
Soil EC (1:2 soil-water)	37	umhos/cm
Soil Estimated CEC	12.94	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
80.69	56.59	16.80	6.46	0.84

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	CB 3
Acres:	2
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49149
Sample Number:	3250716

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	140	280	Above Optimum
K	195	390	Above Optimum
Ca	1112	2224	--
Mg	194	388	--
SO4-S	18	36	--
Zn	7.5	15	--
Fe	117	234	--
Mn	346	692	--
Cu	1.6	3.2	--
B	0	0	--
NO3-N	40	80	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.7	--
Soil EC (1:2 soil-water)	46	umhos/cm
Soil Estimated CEC	10.24	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
75.58	54.31	15.79	4.88	0.59

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

	Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID:	8706888992
PO BOX 52		
VENDOR	AR	72683

Date Processed:	3/30/2015
Field ID:	CB 4
Acres:	16
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49136
Sample Number:	3250703

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	123	246	Above Optimum
K	49	98	Very Low
Ca	1024	2048	--
Mg	121	242	--
SO4-S	11	22	--
Zn	4.6	9.2	--
Fe	171	342	--
Mn	145	290	--
Cu	1.6	3.2	--
B	0	0	--
NO3-N	4	8	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.1	--
Soil EC (1:2 soil-water)	12	umhos/cm
Soil Estimated CEC	9.35	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
67.90	54.79	10.79	1.34	0.98

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	160	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	310	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	270	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	CB 5
Acres:	2
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49160
Sample Number:	3250725

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	109	218	Above Optimum
K	170	340	Optimum
Ca	1806	3612	--
Mg	182	364	--
SO4-S	14	28	--
Zn	6.7	13.4	--
Fe	166	332	--
Mn	173	346	--
Cu	2.1	4.2	--
B	0	0	--
NO3-N	19	38	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.1	--
Soil EC (1:2 soil-water)	28	umhos/cm
Soil Estimated CEC	14.57	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
75.98	61.98	10.41	2.99	0.60

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	---------- lb/acre ----------						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	CB 6
Acres:	13
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49134
Sample Number:	3250701

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	204	408	Above Optimum
K	46	92	Very Low
Ca	1305	2610	--
Mg	108	216	--
SO4-S	13	26	--
Zn	6.3	12.6	--
Fe	173	346	--
Mn	142	284	--
Cu	2.1	4.2	--
B	0	0	--
NO3-N	7	14	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.3	--
Soil EC (1:2 soil-water)	12	umhos/cm
Soil Estimated CEC	10.63	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
71.77	61.41	8.47	1.11	0.78

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	160	0	0	0	0
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	0	310	0	0	0	0
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	270	0	0	0	0

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	CB 7
Acres:	44
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49113
Sample Number:	3250731

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	135	270	Above Optimum
K	235	470	Above Optimum
Ca	1188	2376	--
Mg	202	404	--
SO4-S	20	40	--
Zn	7.8	15.6	--
Fe	139	278	--
Mn	199	398	--
Cu	1.2	2.4	--
B	0	0	--
NO3-N	49	98	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.5	--
Soil EC (1:2 soil-water)	75	umhos/cm
Soil Estimated CEC	10.88	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
77.02	54.61	15.47	5.54	1.40

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	CB 8
Acres:	7
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49164
Sample Number:	3250729

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	133	266	Above Optimum
K	243	486	Above Optimum
Ca	2376	4752	--
Mg	264	528	--
SO4-S	22	44	--
Zn	27.9	55.8	--
Fe	194	388	--
Mn	64	128	--
Cu	2.2	4.4	--
B	0	0	--
NO3-N	46	92	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.2	--
Soil EC (1:2 soil-water)	54	umhos/cm
Soil Estimated CEC	18.39	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
80.97	64.60	11.96	3.39	1.02

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
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VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	CB 9
Acres:	20
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49159
Sample Number:	3250724

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	64	128	Above Optimum
K	139	278	Optimum
Ca	2095	4190	--
Mg	188	376	--
SO4-S	15	30	--
Zn	3.9	7.8	--
Fe	165	330	--
Mn	83	166	--
Cu	1.2	2.4	--
B	0	0	--
NO3-N	16	32	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.8	--
Soil EC (1:2 soil-water)	40	umhos/cm
Soil Estimated CEC	17.52	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
71.45	59.80	8.94	2.03	0.67

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683

Date Processed:	3/30/2015
Field ID:	CB 10
Acres:	30
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49157
Sample Number:	3250722

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	75	150	Above Optimum
K	102	204	Medium
Ca	1095	2190	--
Mg	152	304	--
SO4-S	13	26	--
Zn	3.1	6.2	--
Fe	150	300	--
Mn	49	98	--
Cu	1.6	3.2	--
B	0	0	--
NO3-N	18	36	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.8	--
Soil EC (1:2 soil-water)	28	umhos/cm
Soil Estimated CEC	11.11	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
64.00	49.27	11.40	2.35	0.98

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS		Client ID:	8706888992
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VENDOR		AR	72683

Date Processed:	3/30/2015
Field ID:	CB 11
Acres:	10
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49114
Sample Number:	3250732

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	167	334	Above Optimum
K	258	516	Above Optimum
Ca	6420	12840	--
Mg	221	442	--
SO4-S	19	38	--
Zn	15	30	--
Fe	127	254	--
Mn	66	132	--
Cu	2	4	--
B	0.2	0.4	--
NO3-N	46	92	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	6.9	--
Soil EC (1:2 soil-water)	96	umhos/cm
Soil Estimated CEC	37.25	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Clay	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
93.29	86.17	4.94	1.78	0.40

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	CB12
Acres:	4
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49115
Sample Number:	3250733

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	28	56	Medium
K	244	488	Above Optimum
Ca	3426	6852	--
Mg	518	1036	--
SO4-S	10	20	--
Zn	3.4	6.8	--
Fe	171	342	--
Mn	42	84	--
Cu	1.4	2.8	--
B	0	0	--
NO3-N	11	22	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.8	--
Soil EC (1:2 soil-water)	50	umhos/cm
Soil Estimated CEC	28.27	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Clay	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
78.77	60.60	15.27	2.21	0.69

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	40	0	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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Marianna, AR 72360
http://soiltest.uaex.edu

EC FARMS PO BOX 52 VENDOR	Client ID: 8706888992 AR 72683
Date Processed:	3/30/2015
Field ID:	CB13
Acres:	10
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49112
Sample Number:	3250730

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	63	126	Above Optimum
K	107	214	Medium
Ca	1346	2692	--
Mg	156	312	--
SO4-S	14	28	--
Zn	4	8	--
Fe	134	268	--
Mn	54	108	--
Cu	1	2	--
B	0	0	--
NO3-N	14	28	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.5	--
Soil EC (1:2 soil-water)	34	umhos/cm
Soil Estimated CEC	13.91	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - Silty Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
60.47	48.37	9.34	1.97	0.78

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
		lb/acre						
Last Crop	Pasture (212)							
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	0	0	0	4000
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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RESEARCH & EXTENSION
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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	EM 1
Acres:	7
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49144
Sample Number:	3250710

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	17	34	Low
K	59	118	Very Low
Ca	585	1170	--
Mg	50	100	--
SO4-S	11	22	--
Zn	1.6	3.2	--
Fe	115	230	--
Mn	214	428	--
Cu	0.9	1.8	--
B	0	0	--
NO3-N	10	20	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	--
Soil EC (1:2 soil-water)	18	umhos/cm
Soil Estimated CEC	6.55	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
54.19	44.66	6.36	2.31	0.86

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

	Crop	N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	80	160	0	0	0	0
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

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EC FARMS	Client ID: 8706888992
PO BOX 52	
VENDOR	AR 72683
Date Processed:	3/30/2015
Field ID:	GD 1
Acres:	10
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49155
Sample Number:	3250720

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	13	26	Very Low
K	117	234	Medium
Ca	409	818	--
Mg	77	154	--
SO4-S	22	44	--
Zn	2.9	5.8	--
Fe	105	210	--
Mn	404	808	--
Cu	1.3	2.6	--
B	0	0	--
NO3-N	8	16	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.2	--
Soil EC (1:2 soil-water)	21	umhos/cm
Soil Estimated CEC	8.56	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Sandy Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
35.75	23.89	7.50	3.50	0.86

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	120	60	0	0	0	4000
Crop 2	Mixed Cool and Warm Season Grasses 5 ton (145)	200	135	220	0	0	0	4000
Crop 3	Mixed Cool and Warm Season Grasses 4 ton (144)	160	120	180	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS		Client ID:	8706888992
PO BOX 52			
VENDOR		AR	72683

Date Processed:	3/30/2015
Field ID:	VI V1
Acres:	23
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49147
Sample Number:	3250714

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	25	50	Low
K	57	114	Very Low
Ca	522	1044	--
Mg	41	82	--
SO4-S	15	30	--
Zn	1.5	3	--
Fe	111	222	--
Mn	119	238	--
Cu	0.8	1.6	--
B	0	0	--
NO3-N	7	14	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.3	--
Soil EC (1:2 soil-water)	19	umhos/cm
Soil Estimated CEC	7.65	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
41.14	34.14	4.47	1.91	0.63

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Hay (142)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 5 ton (145)	200	110	310	0	0	0	5000
Crop 2	Mixed Cool and Warm Season Grasses 4 ton (144)	160	100	270	0	0	0	5000
Crop 3	Mixed Cool and Warm Season Grasses 3 ton (143)	120	80	230	0	0	0	5000

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

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EC FARMS PO BOX 52 VENDOR	Client ID: 8706888992 AR 72683
Date Processed:	3/30/2015
Field ID:	VIV1A
Acres:	13
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Newton
Lab Number:	49150
Sample Number:	3250717

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	24	48	Low
K	60	120	Very Low
Ca	455	910	--
Mg	60	120	--
SO4-S	19	38	--
Zn	2.6	5.2	--
Fe	115	230	--
Mn	246	492	--
Cu	1.1	2.2	--
B	0	0	--
NO3-N	8	16	--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.4	--
Soil EC (1:2 soil-water)	23	umhos/cm
Soil Estimated CEC	7.54	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Sandy Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
40.30	30.18	6.63	2.04	1.44

3. Recommendations

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4-S	Zn	B	Lime
Last Crop	Hay (142)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 5 ton (145)	200	110	310	0	0	0	4000
Crop 2	Mixed Cool and Warm Season Grasses 4 ton (144)	160	100	270	0	0	0	4000
Crop 3	Mixed Cool and Warm Season Grasses 3 ton (143)	120	80	230	0	0	0	4000

4. Crop 1 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

5. Crop 2 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

6. Crop 3 Notes:

To favor cool-season grasses, apply fertilizer in split applications in late winter and after spring hay harvest. To favor warm-season grasses, do not apply N until May 1. Split apply the recommended fertilizer rates after each subsequent hay harvest.

AGRICULTURAL DIAGNOSTIC SERVICE LABORATORY
1366 W. Altheimer Dr., Fayetteville, AR 72704
(479)575-3908 agrilab@uark.edu
University of Arkansas, Dept. of Crops, Soils, and Environmental Science

2015 Certified Manure Testing Program — MINNESOTA DEPARTMENT OF AGRICULTURE

LIQUID MANURE FOR FERTILIZER ANALYSIS (report for AGRI-429)

Name:	KARL VanDEVENDER / ANDREW SHARPLE	*Received in lab:*	*4/17/2015*
Address:		*Mailed:*	*4/24/2015*
City:		State,Zip:	AR
County:		Phone #:	
E-Mail:	kvan@uaex.edu, sharpley@uark.edu	Check #:	Big Creek Research Project

Lab. No.	M50518	M50519				
Sample I.D.	C&HP1P	C&HP2P				
Animal type	swine	swine				
age / lbs	no info	no info				
Bedding type	none	none				
Manure type	pond liquid	pond liquid				
Sample date	4/16/2015	4/16/2015				
Age of manure	no info	no info				
pH	7.6	8.0				
EC(µmhos/cm)	13580	8710				
% Solids	3.37	2.42				
		-mg/l on as-is basis-				
Total N	2410	1820				
Total P	253	417				
Total K	1358	1044				
Total Ca	102	378				
NH4-N	1291	636				
Water Extractable P	169	89				
		-lbs/1000 gal on as-is basis-				
Total N	20.1	15.2				
TOTAL P AS "P2O5"	4.8	7.9				
TOTAL K AS "K20"	13.6	10.4				
Total Ca	0.9	3.1				
NH4-N	10.8	5.3				
Water Extractable P	1.4	0.7				

*lbs/1000gal P2O5 = mg/l Total P on "as-is" basis multiplied by 2.29*0.00833
*lbs/1000gal K2O = mg/l Total K on "as-is" basis multiplied by 1.2*0.00833
*Water Extractable P: **1:100 solids to H2O ratio**, I hr shake, centrifuged, filtered, acidified, analysis by ICP

Section 4 PHOSPHORUS RISK

Phosphorus Index Computations

Interpreting P Index Values:

Range Class	Interpretation
Low (<33)	Low potential for P movement from site. Apply nutrients based on crop needs, normally nitrogen. However, if P is applied above crop needs, P build up will take place over time.
Medium (33-66)	Medium potential for P movement from site. Evaluate the index and determine any areas that could cause long-term concerns. Consider adding conservation practices or reduced P application to maintain the risk at 66 or less. Apply nutrients based on crop needs, normally nitrogen. If P is applied above crop requirements, soil P levels will accumulate over time.
High (67-100)	High potential for P movement from site. Evaluate the index and determine elevation cause. Add appropriate conservation practices and/or reduce soluble P application. The immediate planning target is a PI value of 66 or less. If this cannot be achieved with realistic conservation practices and/or reduced P rates in the short term, then a progressive plan needs to be developed with a long term goal of a PI less than 66.
Very High (>100)	Very high potential for P movement from site. Add conservation practices to decrease this value below 100 in the short term and develop a progressive conservation plan that would reduce the PI to a lower risk category, with a long term goal of a PI of less than 66.

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1		

This worksheet is intended to assist in the writing of Nutrient Management Plans for the application of manure to pasture and hay land. To do this, the worksheet estimates the litter production for the farm, estimates the P Index risk value for the defined conditions of each field, assists with the allocation of nutrients to the various receiving fields, and estimates the amount of litter available for off farm use. This worksheet is the result of an effort to develop a reliable training/planning tool faithful to the 2009 Arkansas P Index developed by a multi-agency effort. However, no guarantees are made, and any observed problems or suggestions for improvement should be directed to Karl VanDevender at kvan@uaex.edu.

County Information

Farm county	Newton
R	270
10-Yr EI	110
Kf adjusted for frost?	Yes

Amount Available was deliberately omitted from this P Index spreadsheet. It will be the responsibility of the permitee to keep good records on the amount of nutrients transferred to their permit for any given year. The following calculations are the maximum application rate for each field on an annual bases. Nutrients can be applied up to the maximum recommendation but not exceed it, for any given year.

Nutrient Source and Description Information

Manure Source	Source Type	Amount Available		N Concentration		P2O5 Concentration		K2O Concentration		Water Extractable P		Alum Used?
HP 1	Liquid Manure		1000 gal	20.1	lb/1000 gal	4.8	lb/1000 gal	13.6	lb/1000 gal	1.4	lb/1000 gal	No

Nutrient Loss and Mineralization Factors

Nutrient Source Description	N		P2O5		K2O	
	Storage Losses (%)	Appl. Losses (%)	Storage Losses (%)	Appl. Losses (%)	Storage Losses (%)	Appl. Losses (%)
HP 1		25%				

Estimated Plant Available Nutrients

Nutrient Source Description	N			P2O5			K2O			Water Extractable P		
	Concentration		Total (lb)	Concentration		Total (lb)	Concentration		Total (lb)	Concentration		Total (lb)
HP 1	15.08	lb/1000 gal		4.80	lb/1000 gal		13.60	lb/1000 gal		1.40	lb/1000 gal	
Totals												

Field P Index Calculations

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1		

Fields Shown	Soil Test P		Soil Map Unit	Slope Gradient (%)				Slope Length (ft)				Flooding Frequency
38	ppm	lb/ac		Min	Max	Rep	Used	Min	Max	Rep	Used	
CCGW	275	366	25	8	20	14	14	15	30	20	20	None
CC1	374	497	37	8	20	14	14	15	30	20	20	None
JG-A	351	467	24	3	8	5	5	15	75	45	45	None
JG-B	501	666	25	8	20	14	14	15	30	20	20	None
EC-A	93	124	22	3	8	5	5	15	75	45	45	None
DC	303	403	25	8	20	14	14	15	30	20	20	None
HB1	13	17	15	8	20	14	14	15	30	20	20	None
HB2	16	21	15	8	20	14	14	15	30	20	20	None
LCM1	29	39	13	3	20	12	12	15	30	20	20	None
LCM2	12	16	35	8	20	14	14	15	30	20	20	None
LCM3	34	45	24	3	8	5	5	15	75	45	45	None
RM1	9	12	43	8	20	14	14	15	30	20	20	None
RM2	87	116	50	0	3	2	2	15	75	45	45	Occasional
MM1	60	80	48	0	3	2	2	15	75	45	45	Occasional
MM2	102	136	48	0	3	2	2	15	75	45	45	Occasional
MM3	65	86	48	0	3	2	2	15	75	45	45	Occasional
RC3	86	114	48	0	3	2	2	15	75	45	45	Occasional
RC4	20	27	43	8	20	14	14	15	30	20	20	None
PC1	30	40	35	8	20	14	14	15	30	20	20	None
CB1	129	172	43	8	20	14	14	15	30	20	20	None
CB2	191	254	43	8	20	14	14	15	30	20	20	None
CB3	140	186	43	8	20	14	14	15	30	20	20	None
CB4	123	164	48	0	3	2	2	15	75	45	45	Occasional
CB5	109	145	48	0	3	2	2	15	75	45	45	Occasional
CB6	204	271	48	0	3	2	2	15	75	45	45	Occasional
CB7	135	180	43	8	20	14	14	15	30	20	20	None
CB8	133	177	13	3	20	12	12	15	30	20	20	None
CB9	64	85	35	8	20	14	14	15	30	20	20	None
CB10	75	100	43	8	20	14	14	15	30	20	20	None
CB11	167	222	8	8	20	14	14	15	30	20	20	None
CB12	28	37	8	8	20	14	14	15	30	20	20	None
CB13	63	84	35	8	20	14	14	15	30	20	20	None
EM1	17	23	35	8	20	14	14	15	30	20	20	None
GD1	13	17	35	8	20	14	14	15	30	20	20	None
VIV1	25	33	25	8	20	14	14	15	30	20	20	None
VIV1A	24	32	25	8	20	14	14	15	30	20	20	None

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock						Date: 5/7/2015		
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1								
Field	Field Area (ac)	Buffer Length (ft)	Buffer Width (ft)	Appl Area (ac)	Predominate Vegetation	Percent Ground Cover	Conservation Support Practices (P)	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)
CCGW	20.00			20.00	Grass	95-100	None in place	0.17	0.17
CC1	5.20			5.20	Grass	95-100	None in place	0.21	0.21
JG-A	14.00			14.00	Grass	95-100	None in place	0.08	0.08
JG-B	3.00			3.00	Grass	95-100	None in place	0.17	0.17
EC-A	4.80			4.80	Grass	95-100	None in place	0.09	0.09
DC	15.70			15.70	Grass	95-100	None in place	0.17	0.17
HB1	11.10			11.10	Grass	95-100	None in place	0.21	0.21
HB2	13.10			13.10	Grass	95-100	None in place	0.21	0.21
LCM1	18.50			18.50	Grass	95-100	None in place	0.17	0.17
LCM2	16.20			16.20	Grass	95-100	None in place	0.21	0.21
LCM3	19.10			19.10	Grass	95-100	None in place	0.08	0.08
RM1	82.20			82.20	Grass	95-100	None in place	0.28	0.28
RM2	21.40			21.40	Grass	95-100	None in place	0.05	0.05
MM1	13.80			13.80	Grass	95-100	None in place	0.05	0.05
MM2	29.80			29.80	Grass	95-100	None in place	0.05	0.05
MM3	10.90			10.90	Grass	95-100	None in place	0.05	0.05
RC3	12.00			12.00	Grass	95-100	None in place	0.05	0.05
RC4	18.40			18.40	Grass	95-100	None in place	0.28	0.28
PC1	18.30			18.30	Grass	95-100	None in place	0.21	0.21
CB1	12.50			12.50	Grass	95-100	None in place	0.28	0.28
CB2	37.50			37.50	Grass	95-100	None in place	0.28	0.28
CB3	3.80			3.80	Grass	95-100	None in place	0.28	0.28
CB4	16.10			16.10	Grass	95-100	None in place	0.05	0.05
CB5	1.80			1.80	Grass	95-100	None in place	0.05	0.05
CB6	13.30			13.30	Grass	95-100	None in place	0.05	0.05
CB7	44.00			44.00	Grass	95-100	None in place	0.28	0.28
CB8	6.50			6.50	Grass	95-100	None in place	0.17	0.17
CB9	19.70			19.70	Grass	95-100	None in place	0.21	0.21
CB10	22.50			22.50	Grass	95-100	None in place	0.28	0.28
CB11	8.50			8.50	Grass	95-100	None in place	0.28	0.28
CB12	4.40			4.40	Grass	95-100	None in place	0.28	0.28
CB13	8.50			8.50	Grass	95-100	None in place	0.21	0.21
EM1	6.60			6.60	Grass	95-100	None in place	0.21	0.21
GD1	10.20			10.20	Grass	95-100	None in place	0.21	0.21
VIV1	22.90			22.90	Grass	95-100	None in place	0.17	0.17
VIV1A	10.20			10.20	Grass	95-100	None in place	0.17	0.17
	596.50			596.50					

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1		

Field	Pasture Use	Application Method	Application Timing	Nutrient Source	Application Rate		Pre BMP PI Value	P Index Range	Target Post BMPs PI Values
CCGW	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	0.00	1000 gal/ac	66	Medium	66
CC1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	6.00	1000 gal/ac	65	Medium	66
JG-A	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	1.00	1000 gal/ac	64	Medium	66
JG-B	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	0.00	1000 gal/ac	120	Very High	120
EC-A	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	29	Low	66
DC	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	0.00	1000 gal/ac	73	High	73
HB1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	36	Medium	66
HB2	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	37	Medium	66
LCM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	39	Medium	66
LCM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	28	Low	66
LCM3	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	40	Medium	66
RM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	20	Low	66
RM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	54	Medium	66
MM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	49	Medium	66
MM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	57	Medium	66
MM3	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	50	Medium	66
RC3	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	54	Medium	66
RC4	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	21	Low	66
PC1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	23	Low	66
CB1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	43	Medium	66
CB2	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	44	Medium	66
CB3	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	37	Medium	66
CB4	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	61	Medium	66
CB5	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	48	Medium	66
CB6	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	66	Medium	66
CB7	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	37	Medium	66
CB8	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	47	Medium	66
CB9	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	27	Low	66
CB10	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	29	Low	66
CB11	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	5.50	1000 gal/ac	65	Medium	66
CB12	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	40	Medium	66
CB13	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	27	Low	66
EM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	7.50	1000 gal/ac	21	Low	66
GD1	Rotational Grazing	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	28	Low	66
VIV1	Hayland	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	53	Medium	66
VIV1A	Hayland	Surface Applied	Nov-Feb	HP 1	10.50	1000 gal/ac	52	Medium	66

Best Management Practices

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock								Date:	5/7/2015	
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1										
Field	Diversion	Terrace	Pond	Filter Strip	Grassed Waterway	Fencing	Riparian Forest Buffer	Riparian Herbaceous Cover	Field Borders	Post BMP PI Value	P Index Range
CCGW										66	Medium
CC1										65	Medium
JG-A										64	Medium
JG-B										120	Very High
EC-A										29	Low
DC										73	High
HB1										36	Medium
HB2										37	Medium
LCM1										39	Medium
LCM2										28	Low
LCM3										40	Medium
RM1										20	Low
RM2										54	Medium
MM1										49	Medium
MM2										57	Medium
MM3										50	Medium
RC3										54	Medium
RC4										21	Low
PC1										23	Low
CB1										43	Medium
CB2										44	Medium
CB3										37	Medium
CB4										61	Medium
CB5										48	Medium
CB6										66	Medium
CB7										37	Medium
CB8										47	Medium
CB9										27	Low
CB10										29	Low
CB11										65	Medium
CB12										40	Medium
CB13										27	Low
EM1										21	Low
GD1										28	Low
VIV1										53	Medium
VIV1A										52	Medium

Field Nutrient Application Planning

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1		

Per Acre Basis

Field	Nutrient Source	Application			Nutrient Recommendation (lb/ac)			Nutrients Applied (lb/ac)			Surpluses / Deficits (lb/ac)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 1	0.00	0.00	1000 gal/ac	120	0	40	0	0	0	-120	0	-40
CC1	HP 1	6.00	6.00	1000 gal/ac	160	0	180	90	29	82	-70	29	-98
JG-A	HP 1	1.00	1.00	1000 gal/ac	160	0	220	15	5	14	-145	5	-206
JG-B	HP 1	0.00	0.00	1000 gal/ac	120	0	0	0	0	0	-120	0	0
EC-A	HP 1	7.50	7.50	1000 gal/ac	120	0	100	113	36	102	-7	36	2
DC	HP 1	0.00	0.00	1000 gal/ac	160	0	150	0	0	0	-160	0	-150
HB1	HP 1	7.50	7.50	1000 gal/ac	120	120	60	113	36	102	-7	-84	42
HB2	HP 1	7.50	7.50	1000 gal/ac	120	80	40	113	36	102	-7	-44	62
LCM1	HP 1	10.50	10.50	1000 gal/ac	160	80	220	158	50	143	-2	-30	-77
LCM2	HP 1	10.50	10.50	1000 gal/ac	160	120	270	158	50	143	-2	-70	-127
LCM3	HP 1	10.50	10.50	1000 gal/ac	160	80	220	158	50	143	-2	-30	-77
RM1	HP 1	7.50	7.50	1000 gal/ac	120	120	160	113	36	102	-7	-84	-58
RM2	HP 1	10.50	10.50	1000 gal/ac	160	0	220	158	50	143	-2	50	-77
MM1	HP 1	10.50	10.50	1000 gal/ac	160	0	220	158	50	143	-2	50	-77
MM2	HP 1	10.50	10.50	1000 gal/ac	160	0	180	158	50	143	-2	50	-37
MM3	HP 1	10.50	10.50	1000 gal/ac	160	0	150	158	50	143	-2	50	-7
RC3	HP 1	10.50	10.50	1000 gal/ac	160	0	270	158	50	143	-2	50	-127
RC4	HP 1	7.50	7.50	1000 gal/ac	120	80	0	113	36	102	-7	-44	102
PC1	HP 1	7.50	7.50	1000 gal/ac	120	40	0	113	36	102	-7	-4	102
CB1	HP 1	10.50	10.50	1000 gal/ac	160	0	180	158	50	143	-2	50	-37
CB2	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB3	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB4	HP 1	10.50	10.50	1000 gal/ac	160	0	270	158	50	143	-2	50	-127
CB5	HP 1	7.50	7.50	1000 gal/ac	120	0	40	113	36	102	-7	36	62
CB6	HP 1	7.50	7.50	1000 gal/ac	160	0	270	113	36	102	-47	36	-168
CB7	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB8	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB9	HP 1	7.50	7.50	1000 gal/ac	120	0	40	113	36	102	-7	36	62
CB10	HP 1	7.50	7.50	1000 gal/ac	120	0	60	113	36	102	-7	36	42
CB11	HP 1	5.50	5.50	1000 gal/ac	120	0	0	83	26	75	-37	26	75
CB12	HP 1	7.50	7.50	1000 gal/ac	120	40	0	113	36	102	-7	-4	102
CB13	HP 1	7.50	7.50	1000 gal/ac	120	0	60	113	36	102	-7	36	42
EM1	HP 1	7.50	7.50	1000 gal/ac	120	80	160	113	36	102	-7	-44	-58
GD1	HP 1	10.50	10.50	1000 gal/ac	160	120	180	158	50	143	-2	-70	-37
VIV1	HP 1	10.50	10.50	1000 gal/ac	160	100	270	158	50	143	-2	-50	-127
VIV1A	HP 1	10.50	10.50	1000 gal/ac	160	100	270	158	50	143	-2	-50	-127

Per Field Basis

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1		

Field	Nutrient Source	Application			Nutrient Recommendation (lbs)			Nutrients Applied (lbs)			Surpluses / Deficits (lb)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 1	0.00	0.00	1000 gal	2,400	0	800	0	0	0	-2,400	0	-800
CC1	HP 1	31.20	31.20	1000 gal	832	0	936	470	150	424	-362	150	-512
JG-A	HP 1	14.00	14.00	1000 gal	2,240	0	3,080	211	67	190	-2,029	67	-2,890
JG-B	HP 1	0.00	0.00	1000 gal	360	0	0	0	0	0	-360	0	0
EC-A	HP 1	36.00	36.00	1000 gal	576	0	480	543	173	490	-33	173	10
DC	HP 1	0.00	0.00	1000 gal	2,512	0	2,355	0	0	0	-2,512	0	-2,355
HB1	HP 1	83.25	83.25	1000 gal	1,332	1,332	666	1,255	400	1,132	-77	-932	466
HB2	HP 1	98.25	98.25	1000 gal	1,572	1,048	524	1,481	472	1,336	-91	-576	812
LCM1	HP 1	194.25	194.25	1000 gal	2,960	1,480	4,070	2,928	932	2,642	-32	-548	-1,428
LCM2	HP 1	170.10	170.10	1000 gal	2,592	1,944	4,374	2,564	816	2,313	-28	-1,128	-2,061
LCM3	HP 1	200.55	200.55	1000 gal	3,056	1,528	4,202	3,023	963	2,727	-33	-565	-1,475
RM1	HP 1	616.50	616.50	1000 gal	9,864	9,864	13,152	9,294	2,959	8,384	-570	-6,905	-4,768
RM2	HP 1	224.70	224.70	1000 gal	3,424	0	4,708	3,387	1,079	3,056	-37	1,079	-1,652
MM1	HP 1	144.90	144.90	1000 gal	2,208	0	3,036	2,184	696	1,971	-24	696	-1,065
MM2	HP 1	312.90	312.90	1000 gal	4,768	0	5,364	4,717	1,502	4,255	-51	1,502	-1,109
MM3	HP 1	114.45	114.45	1000 gal	1,744	0	1,635	1,725	549	1,557	-19	549	-78
RC3	HP 1	126.00	126.00	1000 gal	1,920	0	3,240	1,899	605	1,714	-21	605	-1,526
RC4	HP 1	138.00	138.00	1000 gal	2,208	1,472	0	2,080	662	1,877	-128	-810	1,877
PC1	HP 1	137.25	137.25	1000 gal	2,196	732	0	2,069	659	1,867	-127	-73	1,867
CB1	HP 1	131.25	131.25	1000 gal	2,000	0	2,250	1,979	630	1,785	-21	630	-465
CB2	HP 1	281.25	281.25	1000 gal	4,500	0	0	4,240	1,350	3,825	-260	1,350	3,825
CB3	HP 1	28.50	28.50	1000 gal	456	0	0	430	137	388	-26	137	388
CB4	HP 1	169.05	169.05	1000 gal	2,576	0	4,347	2,548	811	2,299	-28	811	-2,048
CB5	HP 1	13.50	13.50	1000 gal	216	0	72	204	65	184	-12	65	112
CB6	HP 1	99.75	99.75	1000 gal	2,128	0	3,591	1,504	479	1,357	-624	479	-2,234
CB7	HP 1	330.00	330.00	1000 gal	5,280	0	0	4,975	1,584	4,488	-305	1,584	4,488
CB8	HP 1	48.75	48.75	1000 gal	780	0	0	735	234	663	-45	234	663
CB9	HP 1	147.75	147.75	1000 gal	2,364	0	788	2,227	709	2,009	-137	709	1,221
CB10	HP 1	168.75	168.75	1000 gal	2,700	0	1,350	2,544	810	2,295	-156	810	945
CB11	HP 1	46.75	46.75	1000 gal	1,020	0	0	705	224	636	-315	224	636
CB12	HP 1	33.00	33.00	1000 gal	528	176	0	497	158	449	-31	-18	449
CB13	HP 1	63.75	63.75	1000 gal	1,020	0	510	961	306	867	-59	306	357
EM1	HP 1	49.50	49.50	1000 gal	792	528	1,056	746	238	673	-46	-290	-383
GD1	HP 1	107.10	107.10	1000 gal	1,632	1,224	1,836	1,615	514	1,457	-17	-710	-379
VIV1	HP 1	240.45	240.45	1000 gal	3,664	2,290	6,183	3,625	1,154	3,270	-39	-1,136	-2,913
VIV1A	HP 1	107.10	107.10	1000 gal	1,632	1,020	2,754	1,615	514	1,457	-17	-506	-1,297
				Totals	82,052	24,638	77,359	70,981	22,601	64,036	-11,071	-2,037	-13,323

Manure Distribution Summary

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1		

Units Applied by Field and Source

Field	Source				
	HP 1 (1000 gal)				
CCGW	0.00				
CC1	31.20				
JG-A	14.00				
JG-B	0.00				
EC-A	36.00				
DC	0.00				
HB1	83.25				
HB2	98.25				
LCM1	194.25				
LCM2	170.10				
LCM3	200.55				
RM1	616.50				
RM2	224.70				
MM1	144.90				
MM2	312.90				
MM3	114.45				
RC3	126.00				
RC4	138.00				
PC1	137.25				
CB1	131.25				
CB2	281.25				
CB3	28.50				
CB4	169.05				
CB5	13.50				
CB6	99.75				
CB7	330.00				
CB8	48.75				
CB9	147.75				
CB10	168.75				
CB11	46.75				
CB12	33.00				
CB13	63.75				
EM1	49.50				
GD1	107.10				
VIV1	240.45				
VIV1A	107.10				
Total Applied	4,709				

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock				Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1					
Available						
Deficit/Surplus						

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

This worksheet is intended to assist in the writing of Nutrient Management Plans for the application of manure to pasture and hay land. To do this, the worksheet estimates the litter production for the farm, estimates the P Index risk value for the defined conditions of each field, assists with the allocation of nutrients to the various receiving fields, and estimates the amount of litter available for off farm use. This worksheet is the result of an effort to develop a reliable training/planning tool faithful to the 2009 Arkansas P Index developed by a multi-agency effort. However, no guarantees are made, and any observed problems or suggestions for improvement should be directed to Karl VanDevender at kvan@uaex.edu.

County Information

Farm county	Newton
R	270
10-Yr EI	110
Kf adjusted for frost?	Yes

Amount Available was deliberately omitted from this P Index spreadsheet. It will be the responsibility of the permitee to keep good records on the amount of nutrients transferred to their permit for any given year. The following calculations are the maximum application rate for each field on an annual bases. Nutrients can be applied up to the maximum recommendation but not exceed it, for any given year.

Nutrient Source and Description Information

Manure Source	Source Type	Amount Available		N Concentration		P2O5 Concentration		K2O Concentration		Water Extractable P		Alum Used?
HP 2	Liquid Manure		1000 gal	15.2	lb/1000 gal	7.9	lb/1000 gal	10.4	lb/1000 gal	0.7	lb/1000 gal	No

Nutrient Loss and Mineralization Factors

Nutrient Source Description	N		P2O5		K2O	
	Storage Losses (%)	Appl. Losses (%)	Storage Losses (%)	Appl. Losses (%)	Storage Losses (%)	Appl. Losses (%)
HP 2		25%				

Estimated Plant Available Nutrients

Nutrient Source Description	N			P2O5			K2O			Water Extractable P		
	Concentration		Total (lb)	Concentration		Total (lb)	Concentration		Total (lb)	Concentration		Total (lb)
HP 2	11.40	lb/1000 gal		7.90	lb/1000 gal		10.40	lb/1000 gal		0.70	lb/1000 gal	
Totals												

Field P Index Calculations

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

Fields Shown	Soil Test P		Soil Map Unit	Slope Gradient (%)				Slope Length (ft)				Flooding Frequency
38	ppm	lb/ac		Min	Max	Rep	Used	Min	Max	Rep	Used	
CCGW	275	366	25	8	20	14	14	15	30	20	20	None
CC1	374	497	37	8	20	14	14	15	30	20	20	None
JG-A	351	467	24	3	8	5	5	15	75	45	45	None
JG-B	501	666	25	8	20	14	14	15	30	20	20	None
EC-A	93	124	22	3	8	5	5	15	75	45	45	None
DC	303	403	25	8	20	14	14	15	30	20	20	None
HB1	13	17	15	8	20	14	14	15	30	20	20	None
HB2	16	21	15	8	20	14	14	15	30	20	20	None
LCM1	29	39	13	3	20	12	12	15	30	20	20	None
LCM2	12	16	35	8	20	14	14	15	30	20	20	None
LCM3	34	45	24	3	8	5	5	15	75	45	45	None
RM1	9	12	43	8	20	14	14	15	30	20	20	None
RM2	87	116	50	0	3	2	2	15	75	45	45	Occasional
MM1	60	80	48	0	3	2	2	15	75	45	45	Occasional
MM2	102	136	48	0	3	2	2	15	75	45	45	Occasional
MM3	65	86	48	0	3	2	2	15	75	45	45	Occasional
RC3	86	114	48	0	3	2	2	15	75	45	45	Occasional
RC4	20	27	43	8	20	14	14	15	30	20	20	None
PC1	30	40	35	8	20	14	14	15	30	20	20	None
CB1	129	172	43	8	20	14	14	15	30	20	20	None
CB2	191	254	43	8	20	14	14	15	30	20	20	None
CB3	140	186	43	8	20	14	14	15	30	20	20	None
CB4	123	164	48	0	3	2	2	15	75	45	45	Occasional
CB5	109	145	48	0	3	2	2	15	75	45	45	Occasional
CB6	204	271	48	0	3	2	2	15	75	45	45	Occasional
CB7	135	180	43	8	20	14	14	15	30	20	20	None
CB8	133	177	13	3	20	12	12	15	30	20	20	None
CB9	64	85	35	8	20	14	14	15	30	20	20	None
CB10	75	100	43	8	20	14	14	15	30	20	20	None
CB11	167	222	8	8	20	14	14	15	30	20	20	None
CB12	28	37	8	8	20	14	14	15	30	20	20	None
CB13	63	84	35	8	20	14	14	15	30	20	20	None
EM1	17	23	35	8	20	14	14	15	30	20	20	None
GD1	13	17	35	8	20	14	14	15	30	20	20	None
VIV1	25	33	25	8	20	14	14	15	30	20	20	None
VIV1A	24	32	25	8	20	14	14	15	30	20	20	None

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

Field	Field Area (ac)	Buffer Length (ft)	Buffer Width (ft)	Appl Area (ac)	Predominate Vegetation	Percent Ground Cover	Conservation Support Practices (P)	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)
CCGW	20.00			20.00	Grass	95-100	None in place	0.17	0.17
CC1	5.20			5.20	Grass	95-100	None in place	0.21	0.21
JG-A	14.00			14.00	Grass	95-100	None in place	0.08	0.08
JG-B	3.00			3.00	Grass	95-100	None in place	0.17	0.17
EC-A	4.80			4.80	Grass	95-100	None in place	0.09	0.09
DC	15.70			15.70	Grass	95-100	None in place	0.17	0.17
HB1	11.10			11.10	Grass	95-100	None in place	0.21	0.21
HB2	13.10			13.10	Grass	95-100	None in place	0.21	0.42
LCM1	18.50			18.50	Grass	95-100	None in place	0.17	0.17
LCM2	16.20			16.20	Grass	95-100	None in place	0.21	0.21
LCM3	19.10			19.10	Grass	95-100	None in place	0.08	0.08
RM1	82.20			82.20	Grass	95-100	None in place	0.28	0.28
RM2	21.40			21.40	Grass	95-100	None in place	0.05	0.05
MM1	13.80			13.80	Grass	95-100	None in place	0.05	0.05
MM2	29.80			29.80	Grass	95-100	None in place	0.05	0.05
MM3	10.90			10.90	Grass	95-100	None in place	0.05	0.05
RC3	12.00			12.00	Grass	95-100	None in place	0.05	0.05
RC4	18.40			18.40	Grass	95-100	None in place	0.28	0.28
PC1	18.30			18.30	Grass	95-100	None in place	0.21	0.21
CB1	12.50			12.50	Grass	95-100	None in place	0.28	0.28
CB2	37.50			37.50	Grass	95-100	None in place	0.28	0.28
CB3	3.80			3.80	Grass	95-100	None in place	0.28	0.28
CB4	16.10			16.10	Grass	95-100	None in place	0.05	0.05
CB5	1.80			1.80	Grass	95-100	None in place	0.05	0.05
CB6	13.30			13.30	Grass	95-100	None in place	0.05	0.05
CB7	44.00			44.00	Grass	95-100	None in place	0.28	0.28
CB8	6.50			6.50	Grass	95-100	None in place	0.17	0.17
CB9	19.70			19.70	Grass	95-100	None in place	0.21	0.21
CB10	22.50			22.50	Grass	95-100	None in place	0.28	0.28
CB11	8.50			8.50	Grass	95-100	None in place	0.28	0.28
CB12	4.40			4.40	Grass	95-100	None in place	0.28	0.28
CB13	8.50			8.50	Grass	95-100	None in place	0.21	0.21
EM1	6.60			6.60	Grass	95-100	None in place	0.21	0.21
GD1	10.20			10.20	Grass	95-100	None in place	0.21	0.21
VIV1	22.90			22.90	Grass	95-100	None in place	0.17	0.17
VIV1A	10.20			10.20	Grass	95-100	None in place	0.17	0.17
	596.50			596.50					

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

Field	Pasture Use	Application Method	Application Timing	Nutrient Source	Application Rate		Pre BMP PI Value	P Index Range	Target Post BMPs PI Values
CCGW	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	0.00	1000 gal/ac	66	Medium	66
CC1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	11.00	1000 gal/ac	66	Medium	66
JG-A	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	2.00	1000 gal/ac	65	Medium	66
JG-B	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	0.00	1000 gal/ac	120	Very High	120
EC-A	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	26	Low	66
DC	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	0.00	1000 gal/ac	73	High	73
HB1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	30	Low	66
HB2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	31	Low	66
LCM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	31	Low	66
LCM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	22	Low	66
LCM3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	32	Low	66
RM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	16	Low	66
RM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	46	Medium	66
MM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	41	Medium	66
MM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	49	Medium	66
MM3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	42	Medium	66
RC3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	46	Medium	66
RC4	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	18	Low	66
PC1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	19	Low	66
CB1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	37	Medium	66
CB2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	41	Medium	66
CB3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	34	Medium	66
CB4	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	53	Medium	66
CB5	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	43	Medium	66
CB6	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	12.00	1000 gal/ac	65	Medium	66
CB7	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	33	Medium	66
CB8	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	43	Medium	66
CB9	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	24	Low	66
CB10	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	25	Low	66
CB11	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	9.50	1000 gal/ac	65	Medium	66
CB12	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	34	Medium	66
CB13	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	24	Low	66
EM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	17	Low	66
GD1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	22	Low	66
VIV1	Hayland	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	42	Medium	66
VIV1A	Hayland	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	42	Medium	66

Best Management Practices

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock								Date:	5/7/2015	
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2										
Field	Diversion	Terrace	Pond	Filter Strip	Grassed Waterway	Fencing	Riparian Forest Buffer	Riparian Herbaceous Cover	Field Borders	Post BMP PI Value	P Index Range
CCGW										66	Medium
CC1										66	Medium
JG-A										65	Medium
JG-B										120	Very High
EC-A										26	Low
DC										73	High
HB1										30	Low
HB2										31	Low
LCM1										31	Low
LCM2										22	Low
LCM3										32	Low
RM1										16	Low
RM2										46	Medium
MM1										41	Medium
MM2										49	Medium
MM3										42	Medium
RC3										46	Medium
RC4										18	Low
PC1										19	Low
CB1										37	Medium
CB2										41	Medium
CB3										34	Medium
CB4										53	Medium
CB5										43	Medium
CB6										65	Medium
CB7										33	Medium
CB8										43	Medium
CB9										24	Low
CB10										25	Low
CB11										65	Medium
CB12										34	Medium
CB13										24	Low
EM1										17	Low
GD1										22	Low
VIV1										42	Medium
VIV1A										42	Medium

Field Nutrient Application Planning

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

Per Acre Basis

Field	Nutrient Source	Application			Nutrient Recommendation (lb/ac)			Nutrients Applied (lb/ac)			Surpluses / Deficits (lb/ac)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 2	0.00	0.00	1000 gal/ac	120	0	40	0	0	0	-120	0	-40
CC1	HP 2	11.00	11.00	1000 gal/ac	160	0	180	125	87	114	-35	87	-66
JG-A	HP 2	2.00	2.00	1000 gal/ac	160	0	220	23	16	21	-137	16	-199
JG-B	HP 2	0.00	0.00	1000 gal/ac	120	0	0	0	0	0	-120	0	0
EC-A	HP 2	10.50	10.50	1000 gal/ac	120	0	100	120	83	109	0	83	9
DC	HP 2	0.00	0.00	1000 gal/ac	160	0	150	0	0	0	-160	0	-150
HB1	HP 2	10.50	10.50	1000 gal/ac	120	120	60	120	83	109	0	-37	49
HB2	HP 2	10.50	10.50	1000 gal/ac	120	80	40	120	83	109	0	3	69
LCM1	HP 2	14.00	14.00	1000 gal/ac	160	80	220	160	111	146	0	31	-74
LCM2	HP 2	14.00	14.00	1000 gal/ac	160	120	270	160	111	146	0	-9	-124
LCM3	HP 2	14.00	14.00	1000 gal/ac	160	80	220	160	111	146	0	31	-74
RM1	HP 2	10.50	10.50	1000 gal/ac	120	120	160	120	83	109	0	-37	-51
RM2	HP 2	14.00	14.00	1000 gal/ac	160	0	220	160	111	146	0	111	-74
MM1	HP 2	14.00	14.00	1000 gal/ac	160	0	220	160	111	146	0	111	-74
MM2	HP 2	14.00	14.00	1000 gal/ac	160	0	180	160	111	146	0	111	-34
MM3	HP 2	14.00	14.00	1000 gal/ac	160	0	150	160	111	146	0	111	-4
RC3	HP 2	14.00	14.00	1000 gal/ac	160	0	270	160	111	146	0	111	-124
RC4	HP 2	10.50	10.50	1000 gal/ac	120	80	0	120	83	109	0	3	109
PC1	HP 2	10.50	10.50	1000 gal/ac	120	40	0	120	83	109	0	43	109
CB1	HP 2	14.00	14.00	1000 gal/ac	160	0	180	160	111	146	0	111	-34
CB2	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB3	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB4	HP 2	14.00	14.00	1000 gal/ac	160	0	270	160	111	146	0	111	-124
CB5	HP 2	10.50	10.50	1000 gal/ac	120	0	40	120	83	109	0	83	69
CB6	HP 2	12.00	12.00	1000 gal/ac	160	0	270	137	95	125	-23	95	-145
CB7	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB8	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB9	HP 2	10.50	10.50	1000 gal/ac	120	0	40	120	83	109	0	83	69
CB10	HP 2	10.50	10.50	1000 gal/ac	120	0	60	120	83	109	0	83	49
CB11	HP 2	9.50	9.50	1000 gal/ac	120	0	0	108	75	99	-12	75	99
CB12	HP 2	10.50	10.50	1000 gal/ac	120	40	0	120	83	109	0	43	109
CB13	HP 2	10.50	10.50	1000 gal/ac	120	0	60	120	83	109	0	83	49
EM1	HP 2	10.50	10.50	1000 gal/ac	120	80	160	120	83	109	0	3	-51
GD1	HP 2	14.00	14.00	1000 gal/ac	160	120	180	160	111	146	0	-9	-34
VIV1	HP 2	14.00	14.00	1000 gal/ac	160	100	270	160	111	146	0	11	-124
VIV1A	HP 2	14.00	14.00	1000 gal/ac	160	100	270	160	111	146	0	11	-124

Per Field Basis

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

Field	Nutrient Source	Application			Nutrient Recommendation (lbs)			Nutrients Applied (lbs)			Surpluses / Deficits (lb)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 2	0.00	0.00	1000 gal	2,400	0	800	0	0	0	-2,400	0	-800
CC1	HP 2	57.20	57.20	1000 gal	832	0	936	652	452	595	-180	452	-341
JG-A	HP 2	28.00	28.00	1000 gal	2,240	0	3,080	319	221	291	-1,921	221	-2,789
JG-B	HP 2	0.00	0.00	1000 gal	360	0	0	0	0	0	-360	0	0
EC-A	HP 2	50.40	50.40	1000 gal	576	0	480	575	398	524	-1	398	44
DC	HP 2	0.00	0.00	1000 gal	2,512	0	2,355	0	0	0	-2,512	0	-2,355
HB1	HP 2	116.55	116.55	1000 gal	1,332	1,332	666	1,329	921	1,212	-3	-411	546
HB2	HP 2	137.55	137.55	1000 gal	1,572	1,048	524	1,568	1,087	1,431	-4	39	907
LCM1	HP 2	259.00	259.00	1000 gal	2,960	1,480	4,070	2,953	2,046	2,694	-7	566	-1,376
LCM2	HP 2	226.80	226.80	1000 gal	2,592	1,944	4,374	2,586	1,792	2,359	-6	-152	-2,015
LCM3	HP 2	267.40	267.40	1000 gal	3,056	1,528	4,202	3,048	2,112	2,781	-8	584	-1,421
RM1	HP 2	863.10	863.10	1000 gal	9,864	9,864	13,152	9,839	6,818	8,976	-25	-3,046	-4,176
RM2	HP 2	299.60	299.60	1000 gal	3,424	0	4,708	3,415	2,367	3,116	-9	2,367	-1,592
MM1	HP 2	193.20	193.20	1000 gal	2,208	0	3,036	2,202	1,526	2,009	-6	1,526	-1,027
MM2	HP 2	417.20	417.20	1000 gal	4,768	0	5,364	4,756	3,296	4,339	-12	3,296	-1,025
MM3	HP 2	152.60	152.60	1000 gal	1,744	0	1,635	1,740	1,206	1,587	-4	1,206	-48
RC3	HP 2	168.00	168.00	1000 gal	1,920	0	3,240	1,915	1,327	1,747	-5	1,327	-1,493
RC4	HP 2	193.20	193.20	1000 gal	2,208	1,472	0	2,202	1,526	2,009	-6	54	2,009
PC1	HP 2	192.15	192.15	1000 gal	2,196	732	0	2,191	1,518	1,998	-5	786	1,998
CB1	HP 2	175.00	175.00	1000 gal	2,000	0	2,250	1,995	1,383	1,820	-5	1,383	-430
CB2	HP 2	393.75	393.75	1000 gal	4,500	0	0	4,489	3,111	4,095	-11	3,111	4,095
CB3	HP 2	39.90	39.90	1000 gal	456	0	0	455	315	415	-1	315	415
CB4	HP 2	225.40	225.40	1000 gal	2,576	0	4,347	2,570	1,781	2,344	-6	1,781	-2,003
CB5	HP 2	18.90	18.90	1000 gal	216	0	72	215	149	197	-1	149	125
CB6	HP 2	159.60	159.60	1000 gal	2,128	0	3,591	1,819	1,261	1,660	-309	1,261	-1,931
CB7	HP 2	462.00	462.00	1000 gal	5,280	0	0	5,267	3,650	4,805	-13	3,650	4,805
CB8	HP 2	68.25	68.25	1000 gal	780	0	0	778	539	710	-2	539	710
CB9	HP 2	206.85	206.85	1000 gal	2,364	0	788	2,358	1,634	2,151	-6	1,634	1,363
CB10	HP 2	236.25	236.25	1000 gal	2,700	0	1,350	2,693	1,866	2,457	-7	1,866	1,107
CB11	HP 2	80.75	80.75	1000 gal	1,020	0	0	921	638	840	-99	638	840
CB12	HP 2	46.20	46.20	1000 gal	528	176	0	527	365	480	-1	189	480
CB13	HP 2	89.25	89.25	1000 gal	1,020	0	510	1,017	705	928	-3	705	418
EM1	HP 2	69.30	69.30	1000 gal	792	528	1,056	790	547	721	-2	19	-335
GD1	HP 2	142.80	142.80	1000 gal	1,632	1,224	1,836	1,628	1,128	1,485	-4	-96	-351
VIV1	HP 2	320.60	320.60	1000 gal	3,664	2,290	6,183	3,655	2,533	3,334	-9	243	-2,849
VIV1A	HP 2	142.80	142.80	1000 gal	1,632	1,020	2,754	1,628	1,128	1,485	-4	108	-1,269
				Totals	82,052	24,638	77,359	74,095	51,346	67,595	-7,957	26,708	-9,764

Manure Distribution Summary

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2		

Units Applied by Field and Source

Field	Source				
	HP 2 (1000 gal)				
CCGW	0.00				
CC1	57.20				
JG-A	28.00				
JG-B	0.00				
EC-A	50.40				
DC	0.00				
HB1	116.55				
HB2	137.55				
LCM1	259.00				
LCM2	226.80				
LCM3	267.40				
RM1	863.10				
RM2	299.60				
MM1	193.20				
MM2	417.20				
MM3	152.60				
RC3	168.00				
RC4	193.20				
PC1	192.15				
CB1	175.00				
CB2	393.75				
CB3	39.90				
CB4	225.40				
CB5	18.90				
CB6	159.60				
CB7	462.00				
CB8	68.25				
CB9	206.85				
CB10	236.25				
CB11	80.75				
CB12	46.20				
CB13	89.25				
EM1	69.30				
GD1	142.80				
VIV1	320.60				
VIV1A	142.80				
Total Applied	6,500				

Comments:

Arkansas Nutrient Managemnt Planner with 2009 PI (ver 6/25/2013)

Planner:	Monica Hancock				Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2					
Available						
Deficit/Surplus						

Section 5 NUTRIENT MANAGEMENT

Maximum nutrient application recommendations

The following two pages are planned maximum application rates for each field from two different sources; C & H Holding Pond 1 and C & H Holding Pond 2. All application rates are in the "Low" to "Medium" range of the ARNMP Phosphorous Index. The maximum yearly application rate is calculated for the nutrient needs of each field and repeatable once a year, for the next five years. For any given year, each field can be applied to from Pond 1 or Pond 2, but not both. Since applications may vary from field to field and year to year but not exceed the maximum rate, good records will need to be kept.

Maximum Application Rates Allowed Per Year from C & H Pond 1

Field	Acres	Source	Time	Application Rate (1,000 gal/ac.)	Total Application (gallons)	P Index Value
CCGW	20.0	HP 1	Jan.-Dec.	0.0	0.00	66
CC1	5.2	HP 1	Jan.-Dec.	6.0	31,200	65
JG-A	14.0	HP 1	Jan.-Dec.	1.0	14.000	64
JG-B	3.0	HP 1	Jan.-Dec.	0.0	0.00	120
EC-A	4.8	HP 1	Jan.-Dec.	7.5	36,000	29
DC	15.7	HP 1	Jan.-Dec.	0.0	0.00	73
HB1	11.1	HP 1	Jan.-Dec.	7.5	83,250	36
HB2	13.1	HP 1	Jan.-Dec.	7.5	98,250	37
LCM1	18.5	HP 1	Jan.-Dec.	10.5	194,250	39
LCM2	16.2	HP 1	Jan.-Dec.	10.5	170,100	28
LCM3	19.1	HP 1	Jan.-Dec.	10.5	200,550	40
RM1	82.2	HP 1	Jan.-Dec.	7.5	616,500	20
RM2	21.4	HP 1	Jan.-Dec.	10.5	224,700	54
MM1	13.8	HP 1	Jan.-Dec.	10.5	144,900	49
MM2	29.8	HP 1	Jan.-Dec.	10.5	312,900	57
MM3	10.9	HP 1	Jan.-Dec.	10.5	114,450	50
RC3	12.0	HP 1	Jan.-Dec.	10.5	126,000	54
RC4	18.4	HP 1	Jan.-Dec.	7.5	138,000	21
PC1	18.3	HP 1	Jan.-Dec.	7.5	137,250	23
CB1	12.5	HP 1	Jan.-Dec.	10.5	131,250	43
CB2	37.5	HP 1	Jan.-Dec.	7.5	281,250	44
CB3	3.8	HP 1	Jan.-Dec.	7.5	28,500	37
CB4	16.1	HP 1	Jan.-Dec.	10.5	169,050	61
CB5	1.8	HP 1	Jan.-Dec.	7.5	13,500	48
CB6	13.3	HP 1	Jan.-Dec.	7.5	99,750	66
CB7	44.0	HP 1	Jan.-Dec.	7.5	330,000	37
CB8	6.5	HP 1	Jan.-Dec.	7.5	48,750	47
CB9	19.7	HP 1	Jan.-Dec.	7.5	147,750	27
CB10	22.5	HP 1	Jan.-Dec.	7.5	168,750	29
CB11	8.5	HP 1	Jan.-Dec.	5.5	46,750	65
CB12	4.4	HP 1	Jan.-Dec.	7.5	33,000	40
CB13	8.5	HP 1	Jan.-Dec.	7.5	63,750	27
EM1	6.6	HP 1	Jan.-Dec.	7.5	49,500	21
GD1	10.2	HP 1	Jan.-Dec.	10.5	107,100	28
VIV1	22.9	HP 1	Jan.-Dec.	10.5	240,450	53
VIV1A	10.2	HP 1	Jan.-Dec.	10.5	107,10	52

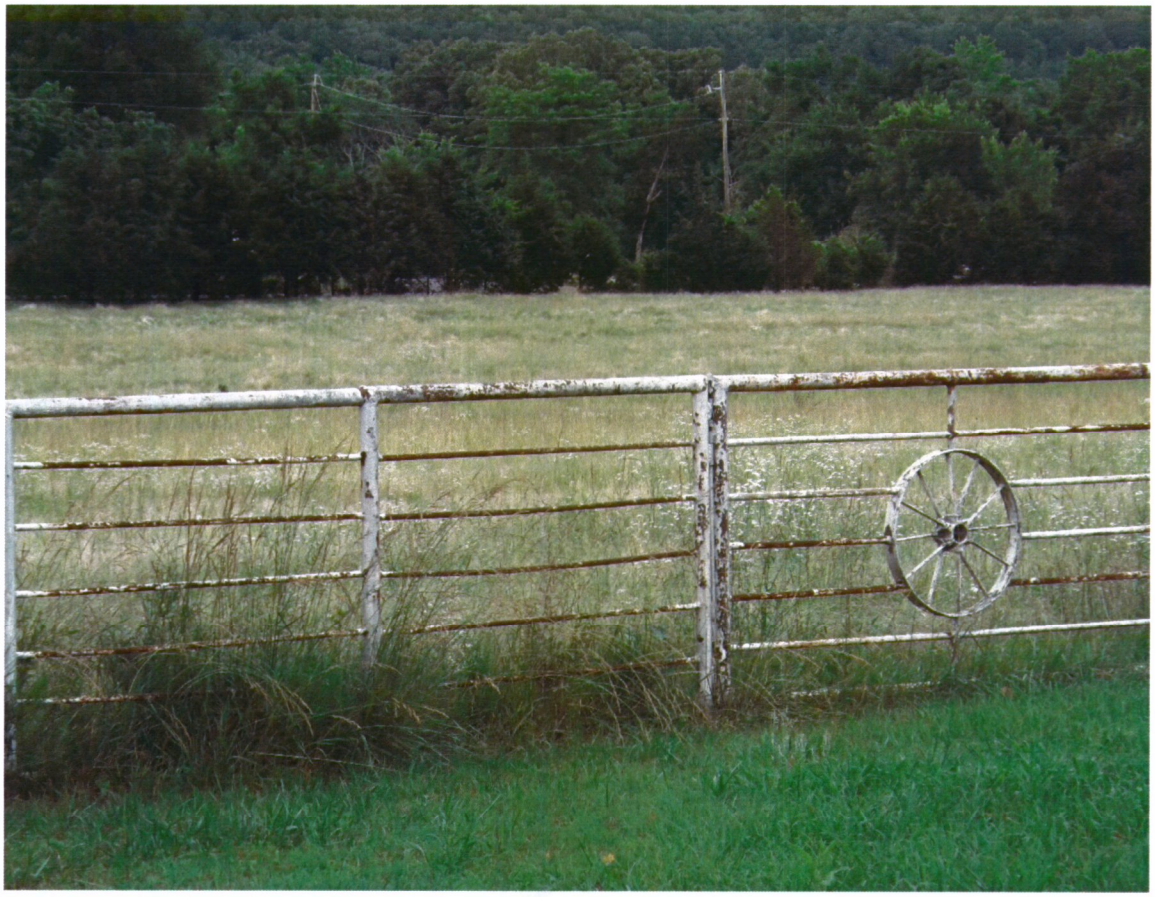
OR

Maximum Application Rates Allowed Per Year from C & H Pond 2

Field	Acres	Source	Time	Application Rate (1,000 gal/ac.)	Total Application (gallons)	P Index Value
CCGW	20.0	HP 2	Jan.-Dec.	0.00	0.00	66
CC1	5.2	HP 2	Jan.-Dec.	11.0	57,200	66
JG-A	14.0	HP 2	Jan.-Dec.	2.0	28,000	65
JG-B	3.0	HP 2	Jan.-Dec.	0.0	0.00	120
EC-A	4.8	HP 2	Jan.-Dec.	10.5	50,400	26
DC	15.7	HP 2	Jan.-Dec.	0.0	0.00	73
HB1	11.1	HP 2	Jan.-Dec.	10.5	116,550	30
HB2	13.1	HP 2	Jan.-Dec.	10.5	137,550	31
LCM1	18.5	HP 2	Jan.-Dec.	14.0	259,000	31
LCM2	16.2	HP 2	Jan.-Dec.	14.0	226,800	22
LCM3	19.1	HP 2	Jan.-Dec.	14.0	267,400	32
RM1	82.2	HP 2	Jan.-Dec.	10.5	863,100	16
RM2	21.4	HP 2	Jan.-Dec.	14.0	299,600	46
MM1	13.8	HP 2	Jan.-Dec.	14.0	193,200	41
MM2	29.8	HP 2	Jan.-Dec.	14.0	417,200	49
MM3	10.9	HP 2	Jan.-Dec.	14.0	152,600	42
RC3	12.0	HP 2	Jan.-Dec.	14.0	168,000	46
RC4	18.4	HP 2	Jan.-Dec.	10.5	193,200	18
PC1	18.3	HP 2	Jan.-Dec.	10.5	192,150	19
CB1	12.5	HP 2	Jan.-Dec.	14.0	175,000	37
CB2	37.5	HP 2	Jan.-Dec.	10.5	393,750	41
CB3	3.8	HP 2	Jan.-Dec.	10.5	39,900	34
CB4	16.1	HP 2	Jan.-Dec.	14.0	225,400	53
CB5	1.8	HP 2	Jan.-Dec.	10.5	18,900	43
CB6	13.3	HP 2	Jan.-Dec.	12.0	159,600	65
CB7	44.0	HP 2	Jan.-Dec.	10.5	462,000	33
CB8	6.5	HP 2	Jan.-Dec.	10.5	68,250	43
CB9	19.7	HP 2	Jan.-Dec.	10.5	206,850	24
CB10	22.5	HP 2	Jan.-Dec.	10.5	236,250	25
CB11	8.5	HP 2	Jan.-Dec.	9.5	80,750	65
CB12	4.4	HP 2	Jan.-Dec.	10.5	46,200	34
CB13	8.5	HP 2	Jan.-Dec.	10.5	89,250	24
EM1	6.6	HP 2	Jan.-Dec.	10.5	69,300	17
GD1	10.2	HP 2	Jan.-Dec.	14.0	142,800	22
VIV1	22.9	HP 2	Jan.-Dec.	14.0	320,600	42
VIV1A	10.2	HP 2	Jan.-Dec.	14.0	142,80	42

Section 6 RECORDKEEPING

Example Table for Recordkeeping
Copy of ADEQ's Annual Report Form



SECTION 6 – RECORD KEEPING

It is important to document and demonstrate implementation activities associated with this Site Management Plan and it is the responsibility of the owner/operator to maintain these records.

ARKANSAS RECORD KEEPING REQUIREMENTS

Annual reports for the previous calendar year should be submitted to ADEQ prior to May 30 of each year and must include the following: waste/wastewater analyses; locations, volumes, and nitrogen application rates for the previous year; methods of application; and type of crops grown on each land application site. Reports must be submitted on forms provided by ADEQ and a blank copy of the form is included in this section.

1. Records shall be kept on all waste/wastewater applications. A log shall be kept showing dates, volumes or weights, destinations and acreage over which the wastes are applied.
2. A manure analysis report shall be collected from the owner of the manure source once per year showing analysis for the following parameters: pH, total nitrogen, ammonia nitrogen, potassium, phosphorous, water extractable phosphorous (WEP), and percent solids. The results shall be included in the final yearly report.

The soils of each field where liquid animal waste has been land applied shall be sampled and analyzed once every five (5) years for the following parameters: pH, Potassium, Phosphorous and Nitrates.

The following table is provided as a convenience and may be used for record keeping. If the owner/ operator has a reliable record keeping system in place that meets the Arkansas Record Keeping requirements, then that method shall be used.

ANIMAL WASTE LAND APPLICATION RECORD
FOR PERMITTED CONFINED ANIMAL FACILITIES

PERMITTEE:_____ PERMIT NUMBER:_____

APPLICATION METHOD:_____

Field Name or/and Number	Date Applied	Crop Type	Area Applied (acres)	Volume Applied (gallons)

NOTE: Facility record; **DO NOT MAIL THIS**; Keep this record at the facility.
Make additional copies of this table as needed.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

ANNUAL REPORT FORM FOR PERMITTED CONFINED ANIMAL FACILITIES

REPORTING PERIOD: _____

PERMITTEE NAME: _____ **PERMIT NUMBER:** _____

PHONE NUMBER: _____ **AFIN NUMBER:** _____

FACILITY TYPE AND SIZE: _____
(ie., 200 Cow Dairy, 2,500 Swine Finishing, 80,000 Bird Layer Operation, etc.)

WASTE DISPOSAL SYSTEM CONSISTS OF:

_____
(ie., Holding Pond, Holding Pond & Settling Basin, Concrete Holding Tank, etc.)

WASTE APPLICATION METHOD: _____
(ie., Tank Spreader, Irrigation System, etc.)

NO. OF APPLICATION FIELDS: _____

TOTAL AVAILABLE ACREAGE: _____

WASTEWATER SAMPLE LOCATION: _____
(Lagoon During Pumping or Field During Application)

YOU MUST SUBMIT A COPY OF THE **WASTEWATER ANALYSIS** FOR EACH SAMPLE PROVIDED TO THE COOPERATIVE EXTENSION SERVICE OR A PRIVATE LAB. THE WASTEWATER ANALYSIS MUST INCLUDE: pH (su), TOTAL NITROGEN, AMMONIA NITROGEN, TOTAL POTASSIUM, TOTAL PHOSPHORUS, AND PERCENT SOLIDS.

IN ADDITION, YOU MUST SUBMIT A COPY OF THE **SOIL ANALYSIS** FOR EACH FIELD WITH THIS FORM. THE SOIL ANALYSIS MUST INCLUDE: pH (su), POTASSIUM (lbs/ac), PHOSPHORUS (lbs/ac), AND NITRATES (lbs/ac). AT LEAST ONE SOIL ANALYSIS SHOULD BE DONE FOR EACH 30 ACRE TRACT.

PLEASE COMPLETE THE TABLE ON THE BACK FOR THE LAND APPLICATION REPORT. YOU MUST SIGN AND DATE THIS REPORT AND SUBMIT IT TO THE DEPARTMENT PRIOR TO MAY 30th OF EACH YEAR. PLEASE KEEP A COPY OF THIS REPORT, THE SOIL ANALYSIS, AND THE WASTEWATER ANALYSIS FOR YOUR RECORD AT THE FACILITY.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION.

_____ _____

OWNER OR OPERATOR (Please Print) **SIGNATURE** **DATE**

Mail complete annual report form and annual application report to:

ANNUAL ANIMAL WASTE LAND APPLICATION REPORT

PERMITTEE NAME: _____ **PERMIT NUMBER:** _____

Field Name or/and Number	Crop Type	Total* Area Applied (acres)	Total** Volume Applied (gallons)	Total*** Nitrogen (lbs/1000 gal.)	Calculated Nitrogen Applied (lbs/ac)
(1)	(2)	(3)	(4)	(5)	(6)

*** Total available area is the area where manure was applied during the reporting period (this data can be obtained from the management plan).**
**** Total volume applied is the total volume applied to the field during the whole reporting period (this data can be obtained from record sheet).**
***** Total Nitrogen concentration (lbs/1000 gallons) can be obtained from the wastewater analysis sheet.**

Column (6) = Nitrogen Applied (lbs/ac) = Column(4) X Column(5) ÷ Column (3) ÷ 1,334

NOTE: You may make additional copies of this table as needed.

Mail complete annual report form and annual application report to:
Arkansas Department of Environmental Quality
Permits Branch, Water Division
5301 Northshore Drive
North Little Rock, AR 72118

Section 7 SITE MANAGEMENT PLAN REFERENCES

Documentation of compliance

ADEQ

ARKANSAS
Department of Environmental Quality

FEB 27 2015

Ellis Campbell
EC Farms
P.O. Box 52
Vendor, AR 72683

RE: AFIN No. 51-00020, Permit Tracking No. 3540-WR-6

Dear Mr. Campbell:

The Department has received your request that the name and owner of the referenced facility be transferred from Richard E. Campbell / C&C Hog Barn to Ellis Campbell / EC Farms. This permit transfer shall become effective on the date stated on the new cover page.

Enclosed you will find a new cover page documenting the facility name and ownership change. You should carefully review the requirements of your no-discharge permit and conditions. Please note that you may not change the waste system or the operation of the waste disposal system without prior approval from the Department.

Please write the above referenced AFIN and permit tracking number on all documents you submit to the Department. If you have any questions, contact Amy Deardoff at (501) 682-0650 or deardoff@adeq.state.ar.us.

Sincerely,

John Bailey, P.E.
Permits Branch Manager, Water Division

JB:ad

Enclosure

cc: File
Amy Deardoff, Administrative Specialist, Permits Branch
Richard Healey, Enforcement Branch Manager
Jason Bolenbaugh, Inspection Branch Manager

Permit No.: 3540-WR-6
AFIN: 51-00020

AUTHORIZATION FOR A NO-DISCHARGE WATER PERMIT UNDER THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et. seq.*)

Ellis Campbell

is authorized to store and land apply liquid waste for a Swine facility located in Newton County, Arkansas at the following coordinates:

Latitude: 35° 54′ 43″ N Longitude: 93° 12′ 9″ W

The facility is located 2,035 feet from Shop Creek-East Fork in Stream Segment 4J of the White River basin.

Operation shall be in accordance with all conditions set forth in the permit.

Effective Date: April 1, 2012

Modification Effective Date: March 1, 2015

Expiration Date: N/A

Ellen Carpenter
Chief, Water Division
Arkansas Department of Environmental Quality

February 23, 2015
Modification Issuance Date

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Water Division, Permits Branch
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North Little Rock, AR 72118-5317

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