<u>NPDES Notice of Intent (NOI)</u> <u>Concentrated Animal Feeding Operations(CAFO)</u> <u>ARG590000</u>

I. GENERAL INFORM	MATION			
A. TYPE OF BUSINESS		B. CONTACT INFOR	RMATION	C. FACILITY OPERATION STATUS
Concentrated Animal Feeding Operation	Owner/or Operator Na	ame <u>Jason Henson</u>		■1. Existing Facility
	Address (No-POBOX)) <u>HC 72 Box 2</u>		2. Proposed Facility
	Telephone: <u>870-434-5004</u>			
	Email			
	City Vendor State: A	AR Zip Code <u>72683</u>		
D. FACILITY INFORMAT	ION			
Name: <u>C & H Hog Farms, I</u>	nc. Telephone: 870-	-434-5004		
Address: HC 72 Box 2				
City: Vendor State: AR	Zip Code: <u>7268</u>	<u>3</u>		
County: <u>Newton</u> L	atitude: 35° 55' 30.47" N	Longitude: <u>93</u> °	4' 18.42" W	
If contract operation: Name	of Integrator: JBS Pork			
Addre	ss of Integrator: 1770 Pro	omontory Circle, Green	nley, CO 80634	
II CONCENTRATED AN	NIMAL FEEDING OPI	ERATION CHARAC	TERISTICS	
A. TYPE AND NUMBER (OF ANIMALS		B. Manure, Litter, and/or Waste	ewater Production and Use
	2. AN	IIMALS		2,623,740 gallons cres of land under the control of the for applying the CAFOs
1. TYPE	NO. IN OPEN CONFINEMENT	NO. HOUSED UNDER ROOF	 How many tons of manure of water produced by the CA 	or litter, or gallons of waste- AFO will be transferred annually
Mature Dairy Cows			to other persons? <u>0 to 2</u> . one)	623,740 ton gallon (circle
Dairy Heifers				
Ueal Calves				
Cattle (not dairy or veal calves)				
Swine (55 lbs. or over)		2,678		
Swine (under 55 lbs.)		1,500		
Horses				

Sheep or Lambs			
Turkeys			
Chickens (Broilers)		_	
Chickens (Layers)			
Ducks			
Other Specify			
3. TOTAL ANIMALS	4,178		
C. 🗵 TOPOGRAPHIC MAP			
D. TYPE OF CONTAINMENT, STORAGE AN	ID CAPACITY		
1. Type of Containment	Total Capa	acity (in gallons)	
Lagoon			
Holding Pond	2,722,095		
Evaporation Pond			
Other: Specify <u>In-Barn Pull Plug</u> <u>Pits</u>	768,145		
2. Report the total number of acres contribut	ting drainage: <u>0</u> acres		
3. Type of Storage	Total Number of Days	Total Capacity (gallons/tons)	
Anaerobic Lagoon			
Storage Lagoon			
Evaporation Pond			
Aboveground Storage Tanks			
Belowground Storage Tanks			
Roofed Storage Shed			
Concrete Pad			
Impervious Soil Pad			
Other: Specify			

E. NUTRIENT MANAGEMENT PLAN		
Note: A permit application is not complete until a nutrient management plan (NMP	P) is submitted with NOI.	
1. Please indicate whether a nutrient management plan has been included with this permit application. Z Yes 🗆 No (STOP)		
2. Is a nutrient management plan being implemented for the facility? I Yes I No		
3. The date of the last review or revision of the nutrient management plan. Date: $\frac{4}{3}$		
4. If not land applying, describe alternative use(s) of manure, litter, and or wastewater:		
F. LAND APPLICATION BEST MANAGEMENT PRACTICES Please check any of the following best management practices that are being implement	nented at the facility to control runoff and protect	
water quality:		
🗷 Buffers 🗷 Setbacks 🗆 Conservation tillage 🗆 Constructed wetlands 🗆 Infiltration field 🗷 Grass filter 🗆 Terrace		
III. CERTIFICATION		
I certify under penalty of law that I have personally examined and am familiar with the a attachments and that, based on my inquiry of those individuals immediately responsible information is true accurate and complete. I am aware that there are significant penaltic possibility of fine and imprisonment.	for obtaining the information, I believe that the	
A. Name and Official Title (<i>print or type</i>)	B. Phone No. (870) 434-5004	
Jason Henson, President		
C. Signature	D. Date Signed 4/20/16	
Jason Henson		

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY DISCLOSURE STATEMENT

Instructions	for the	Completion	of this	Document:
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- A. Individuals, firms or other legal entities with no changes to an ADEQ Disclosure Statement, complete items 1 through 5 and 18.
- B. Individuals who never submitted an ADEQ Disclosure Statement, complete items 1 through 4, 6, 7, and 16 through 18.
- C. Firms or other legal entities who never submitted an ADEQ Disclosure Statement, complete 1 through 4, and 6 through 18.

If Not Submitting by ePortal, Mail Original to: ADEQ DISCLOSURE STATEMENT [*List Proper Division(s)*] 5301 Northshore Drive North Little Rock, AR 72118-5317

1. APPLICANT: (Full Name) C+ H Hog Farms, Inc.
2. MAILING ADDRESS (Number and Street, P.O.Box Or Rural Route) :
HC 72 Box 2
3. CITY, STATE, AND ZIPCODE:
Vendor, AR 72683
4a. Applicant Type:
Individual Corporate or Other Entity
4b. Reason for Submission:
Permit License Certification Operational Authority
New Application Modification Renewal Application (If no changes from previous disclosure statement, complete number 5 and 18.
4c. Division:
Air Image: Water Image: Hazardous Waste Image: Regulated Storage Tank Image: Mining Solid Waste
5. Declaration of No Changes:

5. Declaration of No Changes.	
The violation history, experience and credentials, involvem	ent in current or pending environmental lawsuits, civil and criminal, have not changed since the
The violation mistory, experience and creating, income	I EIN
last Disclosure Statement that was filed with ADEQ on	6-5-12

6. Describe the experience and credentials of the Applicant, including the receipt of any past or present permits, licenses, certifications or operational authorization relating to environmental regulation. (Attach additional pages, if necessary.)

7. List and explain all civil or criminal legal actions by government agencies involving environmental protection laws or regulations against the Applicant * in the last ten (10) years including:

1. Administrative enforcement actions resulting in the imposition of sanctions;

2. Permit or license revocations or denials issued by any state or federal authority;

3. Actions that have resulted in a finding or a settlement of a violation; and

4. Pending actions.

(Attach additional pages, if necessary.)

* Firms or other legal entities shall also include this information for all persons and legal entities identified in sections 8-16 of this Disclosure Statement.

8. List all officers of the Applicant. (Add additional	al pages, if necessary.)
NAME:	TITLE:
CITY, STATE, ZIP:	
	TITLE:
CITY, STATE, ZIP:	
	TITLE:
CITY, STATE, ZIP:	
9. List all directors of the Applicant. (Add additio	onal pages, if necessary.)
	TITLE:
	111LE:
,~,	
NAME:	TITLE:
STREET:	
CITY, STATE, ZIP:	
NAME:	TITLE:
STREET:	
CITY, STATE, ZIP:	
10. List all partners of the Applicant. (Add additi	
	_ TITLE:
CITY, STATE, ZIP:	
NAME:	TITLE:
CITY, STATE, ZIP:	
NAME	TITLE:
11. List all persons employed by the Applicant in	a supervisory capacity or with authority over operations of the facility subject to this application.
NAME:	TITLE:
CITY, STATE, ZIP:	
NAME	TITLE.
	TITLE:
CITI, STATE, 201	
C 1, OTALD, 211	

12. List all persons or legal entities, who ow	n or control more than five percent (5%) of the Applicant's debt or equity.
NAME:	TITLE:
STREET:	
CITY, STATE, ZIP:	
	TITLE:
STREET:	
CITY, STATE, ZIP:	
	이는 동안에 대해 귀엽에 가장한 것이 없는 것이 같은 것이 없는 것을 하셨다.
NAME:	TITLE:
STREET:	
CITY, STATE, ZIP:	
13. List all legal entities, in which the Applic	ant holds a debt or equity interest of more than five percent (5%).
NAME:	TITLE:
STREET:	
CITY, STATE, ZIP:	
	TITLE:
CITY, STATE, ZIP:	
NAME:	TITLE:
STREET:	
CITY, STATE, ZIP:	
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	it. Describe the parent company's ongoing organizational relationship with the Applicant.
14. List any parent company of the Applican	at. Describe the parent company's ongoing organizational relationship with the Applicant.
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	TITLE:	
TREET:		
TY, STATE, ZIP:		
AME:	TITLE:	
REET:		
TY, STATE, ZIP:		

17. List all federal environmental agencies and any other environmental agencies outside this state that have or have had regulatory responsibility over the Applicant.

18. VERIFICATION AND ACKNOWLEDGEMENT

The Applicant agrees to provide any other information the director of the Arkansas Department of Environmental Quality may require at any time to comply with the provisions of the Disclosure Law and any regulations promulgated thereto. The Applicant further agrees to provide the Arkansas Department of Environmental Quality with any changes, modifications, deletions, additions or amendments to any part of this Disclosure Statement as they occur by filing an amended Disclosure Statement.

DELIBERATE FALSIFICATION OR OMISSION OF RELEVANT INFORMATION FROM DISCLOSURE STATEMENTS SHALL BE GROUNDS FOR CIVIL OR CRIMINAL ENFORCEMENT ACTION OR ADMINISTRATIVE DENIAL OF A PERMIT, LICENSE, CERTIFICATION OR OPERATIONAL AUTHORIZATION.

COMPLETE THIS SECTION ONLY IF SUBMITTING OTHER THAN BY EPORTAL:

I, <u>Jason Henson</u>, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violation.

APPLIC SIGNAT	CANT FURE: Jąson	Henson		
TITLE:	President			
DATE:	4-20-16			



ARG590000 CAFO General Permit – Public Notification Certification Document

Arkansas Pollution Control and Ecology Commission (APC&EC) Regulation 6.207 requires the permittee proposing an operation that will apply for coverage under ARG590000 to follow certain public notification requirements prior to submitting a Notice of Intent (NOI) to ADEQ. A certification that these requirements have been followed is required to be submitted to ADEQ with the NOI in accordance with APC&EC Reg. 6.207(G).

A copy of APC&EC Reg. 6.207 is attached to this certification document. Please read over the public notification requirements. If you have followed the requirements, sign the certification statement below and submit this certification with your ARG590000 NOI.

			Yes	No
1.	Written Notifi	ication by certified mail with return receipt to the following:		
		Adjacent Property Owners	V	
		County Judge		
		Mayor	V	
		Superintendent of School District		
2.	Public Notice			
3.	Posted Sign			

Certification Statement:

"In accordance with APC&EC Reg. 6.207(G), I certify compliance with the public notification requirements in subsections (A) – (F) of APC&EC Reg. 6.207."

Jason Henson Responsible Official Name

Jason Henson 4-20-16 Signature and Date

Nutrient Management Plan

for

C & H Hog Farms, Inc.

Owners/Operators: Jason Henson Richard Campbell Philip Campbell

Address: HC 72 Box 2

City: Vendor, AR Zip: 72683

Telephone: (870) 434-5004

Location(s): Section 26, Township 15 North, Range 20 West

Latitude: <u>35° 55' 30.47"N</u> Longitude: <u>93° 4' 18.42"W</u>

Newton County, Arkansas



Regulation 6

Nutrient Management Plan C & H HOG FARMS, INC. Newton County, Arkansas

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Title Page Signature Page Location and Contact Information Operation and Maintenance

SECTION 2 ENGINEERING PLANS AND REVIEW

PREPARED BY T. P. BASS, PE; REVIEWED BY DENNIS CARMEN, PE

Background and Location Permitting History Existing Facility Field Review Existing Facility Design Review Sizing of Facilities and Manure Volume Calculations Existing Facility Storage Availability Volume of Storage Requirements for 180 day Wet Period Operation System Evaluation of Ponds 1 and 2 Engineering Appendix for Section 2

SECTION 3 LAND APPLICATION SITE INFORMATION

Land Application Site Table including Latitude and Longitude for each field Setback Distance Table (BMP Buffers) Land Use Contracts Letters of Consent with Neighboring Landowners

SECTION 4 COLLECTED INFORMATION

County Road Map Overview Aerial Maps with BMP Buffers Soils Maps Topographical Maps Section, Township and Range Overview Map Watershed Overview Map (12 digit HUC) Soil Test Results Manure Analysis

SECTION 5 NUTRIENT MANAGEMENT

Determining Acceptable Manure Application Rates Example Phosphorous Index Calculations SECTION 6 RECORD KEEPING FORMS

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

Farm Overview

Title Page

Signature Page

Location and Contact Information

Operation and Maintenance

Nutrient Management Plan

For:

C & H Hog Farms, Inc. HC 72 Box 2 Vendor, AR 72683 Phone: (870) 434-5004

Purpose of Plan – The goal of nutrient management is to effectively and efficiently use the nutrient resources to adequately supply soils and plants with the proper amount of nutrients to produce food, forage, fiber, and cover while minimizing the transport of nutrients to ground and surface water and environmental degradation. This plan will comply with Arkansas ADEQ Regulation 6.

The owners of C&H Hog Farms, Inc. are respectfully making an application for a narrative rate approach Regulation 6 permit.

NMP Signature Page

The following individuals have assisted in the development of this Nutrient 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

Date: 3-2-16

Title: Water Quality Technician- Land Resource Specialist

Signature: - Monica HAncock

Engineering Plans and Review:	Cartification Nov 4185
Name: Pat Bass	Certification No:
Title: IP Darce	ARKANSAS
Signature: JBaur	REGISTERED PROFESSIONATE: 4-3-2016 ENGINEER
Name: Dennis Carman	Gestification No: 7670
Title: Allence	_ PEPRASEES ON ENGINEER
Signature:	<u>BiE</u> Date: <u>4-3-2016</u>

Decision Maker:

As the decision maker for the operation associated with this Nutrient 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 this Nutrient Management Plan.

Signature:	Jason Henson	Dat
	Jason Henson	

te: 4-6-16

Farm Location and Contact Information

For:

	C & H Hog Farms, Inc.
	Owners/Managers: Jason Henson Richard Campbell
	Philip Campbell
	HC 72 Box 2
	Vendor, AR 72683
	Phone: (870) 434-5004
Directions to Farm:	Facility is located approximately 1.6 miles west of Mt. Judea,
	Arkansas on County Road 41.
Entrance into the Farm:	Entrance is located at: Latitude 35° 55' 30.47" N;
	Longitude 93° 4' 18.42" W; in the center of Section 26,
	Township 15 North, Range 20 West, in the Mt. Judea Quad.
Field Locations:	Fields contained within this plan are located in:
Ticlu Locations.	Sections 22, 23, 25, 26, 34, 35 and 36, Township 15 North, Range
	20 West and Sections 2 and 3, Township 14 North, Range 20 West.
Watershed:	All fields are contained within the Headwaters Big Creek – Buffalo
	River Watershed (110100050302) and the Left Fork Creek
	Watershed (110100050301). These watersheds are not in a designated nutrient surplus area.

Operation and Maintenance

Animal Mortality

Normal animal mortality is managed daily by collection of the dead animals and disposal of the carcasses in an incinerator. Other acceptable options for disposal of mortality include composting, freezing, and hauling to a rendering plant.

In case of catastrophic loss, the Arkansas Livestock and Poultry Commission may authorize hauling the carcasses to a rendering plant unless the mortality was caused by disease. When hauling is not feasible, or if disease caused the loss, the Livestock and Poultry Commission may require burial in designated locations with specific guidelines. In such situations, C & H Hog Farms, Inc will contact the Livestock and Poultry Commission by phone (**501-907-2400**) to determine the proper disposal plan.

Land Application

C & H Hog Farms, Inc. is requesting that manure and wastewater from either storage pond (Pond 1 or Pond 2) be transported via liquid tanker trucks or an irrigation system and applied to all fields included in this plan. Regardless of conveyance method, all application rates will be the same. Recognizing that Pond 1 will have a higher fertilizer content than Pond 2, field application recommendations are given from both sources for each field.

Spreader Calibration

Proper calibration of spreader equipment is essential to ensure the amount of swine fertilizer applied is within the required guidelines to protect water quality. The two methods of calibration that are generally used are 1) calibration based on equipment settings and operational conditions and 2) calibration based on gallons per load and number of loads applied.

Soil and Swine Fertilizer Sampling

Several soil cores have been taken from each field and composited into one sub-sample for each individual field. The fields were delineated by land management and natural or manmade borders, regardless of acreage. As the acreage increased, more soil cores were taken.

Soils samples are to be taken once every five years or when the nutrient management plan is revised. It is required that a manure sample be analyzed each year and the results sent to ADEQ with the farm's annual report.

Operation and Maintenance

Nutrient Utilization

- Swine fertilizer/wash water shall be evenly distributed over application sites at the rates specified in this nutrient management plan by means of liquid tanker trucks and/or irrigation system. Application rates will be the same, regardless of conveyance method.
- Land application of swine fertilizer/wash water shall not be undertaken when soil is saturated, frozen, covered with ice or snow, or when significant precipitation is reasonably anticipated in the next twenty-four hours (greater than 50% chance).
- Swine fertilizer/wash water shall not be applied on slopes with a grade of more than fifteen percent (15%) or in any manner that will allow nutrients to enter the waters of the state. These non-application buffer areas are marked on the field maps.
- Application of swine fertilizer/wash water shall not be made within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; or 300 feet of extraordinary resource waters as defined by the Arkansas Pollution Control and Ecology Commission Regulation No. 2. Buffer distances from streams, ponds and lakes shall be measured from the ordinary high water mark. These non-application buffer areas are marked on the field maps.
- Application of swine fertilizer/wash water shall not be made within 50 feet of property lines or 500 feet of neighboring occupied buildings existing as of the date of the permit. The restrictions regarding property lines or neighboring occupied buildings shall not apply if the adjoining property is also approved as a land application site under a permit issued by the department or if the adjoining property owner consents in writing (see setback waivers in Section 3). These non-application buffer areas are marked on the field maps.
- Application of swine fertilizer/wash water shall not be made in areas where the land application of swine fertilizer/wash water is prohibited by Arkansas Department of Health regulations for the protection of public water supplies.
- ADEQ has developed a standard form entitled "Animal Waste Application Records" for use in logging nutrient applications. This form is located in Section 6 under "Recordkeeping".

Odor Management

Although it may not be practical or feasible to eliminate all odor emissions from the operation, it is possible to manage or mitigate the odor. The odor reduction practices listed below may be utilized by the operation in an effort to reduce odor emissions:

- Animal Cleanliness Clean, dry, and healthy animals are less odorous.
- Minimize Dust Dust particles may absorb and concentrate odorous compounds. Proper cleaning techniques within the facility can minimize dust and, therefore, reduce odor.
- Waste Storage Facility Maintenance Proper maintenance of pits and waste storage ponds can reduce odor. Frequently flushing manure is an effective method to reduce odor emissions from the pits.

- Proper Disposal of Mortality Normal mortality for the animal feeding operation must be properly handled for both odor control and biological security purposes. Composting, freezing, incineration, and rendering are acceptable methods for mortality disposal.
- Natural Barriers Trees and shrubs existing or planted around the facility can act as biofilters for odorous compounds.
- Land Application Practices To the extent possible, consider weather conditions when making land applications. Sunny, low humidity days reduce odors; turbulent breezes will dilute and dissipate odors.

C & H Hog Farms, Inc. Application

for Regulation 6 Permit

Engineering Plans and Review

September 1, 2015

Prepared by: T. P. Bass, P.E.

Reviewed by: Dennis K. Carman, P.E.

Manure Storage Volume Availability and Minimal Requirements

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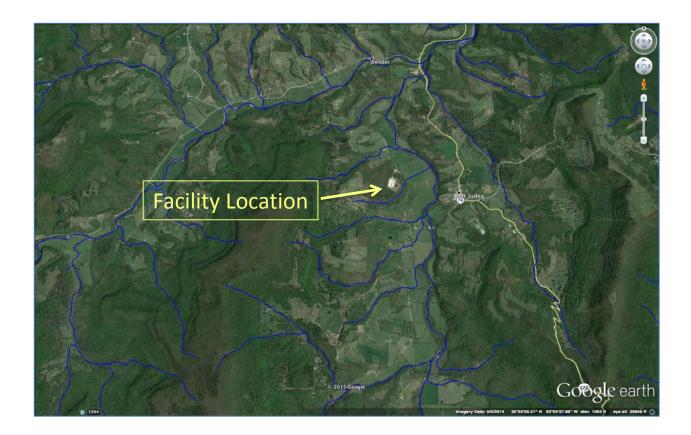
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BACKGROUND

The C & H HOG Farm is located near Mount Judea in Newton County, Arkansas. This facility has an existing Permit for operation issued by the Arkansas Department of Environmental Quality and Ecology and approved August 03, 2012. Details of this permit can be viewed at adeq.state.ar.us for Permit Number ARG590001.

Facility Location: Near Mount Judea, Newton County, Arkansas

Latitude Deg/Min/Sec:	35° 55' 30.47"
Longitude Deg/Min/Sec:	-93° 4' 18.42"



Permitting History

Original Permitting - ADEQ Letter dated August 03, 2012. Re: Concentrated Animal Feeding Operations General Permit (Tracking Number ARG590001 - AFIN 51-00164)

"The Notice of Intent (NOI) package for coverage under the General Permit No. ARG590000, for a concentrated animal feeding operation, was received on 6/25/2012. In accordance with Department policy, the NOI has been reviewed and has been determined to be complete. Coverage under this

general permit will be effective the date of this letter. A copy of the General Permit ARG590000 is available from the Department".

Permit Modification to allow Tanker Methods for field application. ADEQ Letter dated June 5, 2014. Re: Concentrated Animal Feeding Operations General Permit (Tracking Number ARG590001- AFIN 51-00164)

"The Notice of Intent (NOI) package for a substantial change of coverage under the General Permit No. ARG590000, for a concentrated animal feeding operation, was received on 2/11/2014. In accordance with Department policy, the NOI has been reviewed and has been determined to be complete. The substantial change will be effective the date of this letter. A copy of the General Permit ARG590000 is available from the Department".

Engineering Plans and Reports: Engineering plans and reports dated June 1, 2012 have been prepared, submitted and approved by ADEQ. Engineering plans were prepared by DeHaan, Grabs & Associates LLC, consulting engineers in accordance with ADEQ rules and regulations and can be viewed at the website listed below.

Engineering Plan Sheets http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/ARG 590001_Maps_20120613.pdf

As Built Engineering Plan Sheets

http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/ARG 590001 As%20Built%20Engineering%20Plan%20Sheets 20130412.pdf

Existing Facility Field Review

Field Applications Areas: Areas viewed were pasture and hayland that were either not subject to flooding or only subject to occasional flooding. Slopes, after buffering, are within specified limits of 15% or less. The Owner clearly understood buffers and was following those buffer limitations to the letter. Vegetative cover was excellent with superior vegetative cover in those areas receiving nutrients from manure application.

Permit Application – Liner Addition: A permit change application is currently being processed with the intent to permit the owner to add a liner to the bottom of ponds 1 and 2 and a cover on pond 1 to flame the methane generated. Although this addition is not required, the owner continues to demonstrate willingness to add features above and beyond the regulatory requirements for operating this facility in an environmentally safe and acceptable manner.

Existing Facility Design Review

This facility has been previously reviewed by and approved by ADEQ and a permit for operation has been issued. The facility has been in operation since 2012. Several follow-up visits have been made, by

ADEQ, EPA, Big Creek Research & Extension Team (BCRET) and others, as the facility operations and permit application changes have been challenged by groups and individuals with environmental concerns. The Design and As-Built plans, prepared by DeHaan, Grabs & Associates LLC, were reviewed as a part of this permit application.

Key components of this review are as follows:

The facility was constructed as planned and designed. No exceptions, issues or concerns were identified. This facility was clearly well designed and constructed and continues to be operated and maintained in a safe manner. Specific key details are noted as follows:

Side slopes: All side slopes for pond 1 and 2 meet or exceed the Regulation 6 referenced requirements as shown on the Engineering Plans.

Top width: Top widths of pond 1 and 2 meet or exceed the Regulation 6 referenced requirements as shown on the Engineering Plans. The levees have a gravelly top for stability and accessibility during wet periods as required by the reference standards and normal operation procedures. The referenced standard requires that the facility be accessible under all climatic conditions for inspections and normal operations.

Liner: This facility has an 18" constructed clay liner that exceeds the Regulation 6 referenced requirements and shown in the Engineering Plans, checked during construction and certified for operation by the department. As previously noted, the owner is proposing to add a synthetic liner to the ponds 1 and 2, that while not technically required, will further reduce potential seepage. In my professional opinion, this liner is not necessary but will provide added security that concerns others. (*Dennis K. Carman, P.E. AR, P.E. 7670*)

Vegetative cover: The vegetative cover on the back slopes of pond 1 and 2 were in excellent condition and has been well maintained. No signs of erosion or other embankment issues were observed. A specific review of the back slopes of the embankment was made during the field visit to identify any signs of seepage that could be coming from the facility. None were present as would be expected from a facility designed with this level of environmental protection by the embankment construction methods and liner requirements.

Manure transfer appurtenances: Adequate and operating properly

Staff Gage: In place and functioning

Sizing of the Facility and Manure Volume Calculations

Animal Population Description

The farm is a farrowing farm. Currently pigs are weaned each day with the weaned pigs being placed and maintained in nursery pens. On a weekly basis the weaned pigs are shipped off farm. While the

number and size of the shipped pigs vary, the weekly shipment should average 1500 pigs or less with an average weight of about 14 lbs. As the population of the nursery pens will vary from zero after shipment to 1500 or less prior to shipment the average nursery pig population is estimated as 750 animals.

Due to pen space and herd movement constrains the maximum number adult breeding and replacement animals are classified into the following groups: 6, 450 lb. Boars; 2252, 425 lb. Gestating Sows; and 420, 400 lb. Lactating Sows and 750, 14 lb. nursery pigs. In practice the normal operation populations will vary below these maximums resulting in actual manure production and volume requirements likely to be less than calculated.

Barn and Water Information

The animals are maintained in pens within the barns. The pen's slatted floors allow manure to be deposited in the pull plug pits located below the pens. The pits are pre-charged with water from an exterior manure storage pond. Periodically the pits are drained to transfer the pre-charged water with additional accumulated manure to the external manure storage ponds.

The farm uses "wet/dry" feeders extensively so that any animal drinking water spillage will fall into the feed troughs and be consumed with the feed. As a result, there will be effectively little spilled drinking water adding to the manure volume in the pits.

In addition to the manure deposited directly into the pits, the pressure washer system used to clean the pens, add approximately 929 gallons of wash water to the pits on a daily basis. See the Appendix Section *Barn Wash-Water Volume Determination* for details.

Precipitation Additions to Manure

The Barn pits drain into Pond 1, the first (southernmost) holding pond. There is an open concrete spillway that allows manure to flow from the first holding pond 1 into the second holding pond. Normally the barn pits are recharged from the second pond. However, at times water management needs may necessitate recharging the barn pits from the first pond.

As the ponds are exposed to the weather, precipitation will be added to the manure in the ponds. The amount of precipitation is determined by the area that drains into the ponds and the amount of precipitation minus evaporation. A topographic survey confirms that the top inside of the ponds and spillway embankments serve as the boundary for precipitation drainage into the ponds. Precipitation outside this boundary drains away from the ponds and does not become added to the manure. To simplify calculations, it is assumed that all the precipitation that falls within this 59,457 ft² area is added to the manure. This likely provides a slight over estimate of added volume since a portion of the precipitation will fall on soil and be absorbed and or evaporated without being added to the manure volume in the ponds.

Figure 1. Yellow outer boundary denotes the drainage area (59,457 ft²) into the holding ponds. The red inner boundary denotes area of the top of the free board for holding Pond 1 (16,999 ft²) and Pond 2 (34,618 ft²).



Storage Volume

Availability

In-Barn Pull Plug Pit Volumes

The pits provide a maximum of 768,145 gallons of in barn manure storage. Of this total, the Gestation Barn Pits have a maximum capacity of 563,710 gallons. The remaining capacity of 204,436 gallons is in the Farrowing Barn Pits. Refer to the Appendix Section *Barn Pull Plug Pit Volume Calculation* for determination of these volumes. Normally this maximum capacity is not fully utilized as the pits function primarily for manure collection and short term storage.

Topographic Elevation Survey of Existing Holding Ponds

To quantify potential precipitation additions to the manure volume, a topographic elevation survey of the catchments for the holding ponds was conducted utilizing total station survey equipment. This survey measured the elevation at various locations around the holding ponds, as well as points on the interior slopes and bottoms of the ponds. The survey was followed by a second survey utilizing a traditional transit and "Philadelphia Rod," which measured elevation at various points on the outside of the ponds to document drainage patterns away from the ponds. In addition, visual inspections and photographs were made to provide additional inputs. All this information was provided by BCRET and utilized to build a Graphical Information System (GIS) surface model that provides both precipitation

capture area of the holding ponds and storage volumes of holding ponds (Table 1 and Figures 1&2). This pond information and historical rainfall information are being used to estimate potential precipitation additions to manure slurry volume.

Pond	Area	Total volume ³	Available storage ⁴
	ft²	gallon	gallon
Pond 1	16,999 ¹	743,352	615,946
Pond 2	34,618 ¹	1,978,743	1,721,128
Sum of Pond 1 & 2	51,617 ¹	2,722,095	2,337,074
Drainage area into ponds ⁴	59,457 ²	Not applicable	Not applicable

Table 1. Summary information for the topographic survey surface modeling area and volume.

¹ Area of the top of the pond's 1 ft. deep freeboard zone.

² Area in which water would drain into the ponds during a precipitation event.

 $^{\rm 3}\,$ Total volume from the bottom of the pond to the top of the freeboard.

⁴ Available storage is the total volume minus a 6 inch bottom layer, assumed as unpumpable, and the top 1 ft. freeboard layer.



Figure 2. Holding Pond Contours (Survey by Big Creek Research & Extension Team)

Storage Volume Required

Design Requirements for 180 days of storage during wettest consecutive months which for Arkansas tend to be October to March. (Average precipitation less evaporation)

Manure Production

NRCS AWFH Production Estimates

Animal type		Boar	Gestating Sow	Lactating Sow	Nursery Pig	Grow-Finish (Replacement Gilts)
Weight range	lb				10 to 50	50 to 265
Design Weight	lb	440	440	423	27.5	154
Cycle Length	d	365	365	365	36	120
Weight	lb/d/au	19	25	59	88	65
Volume	ft^3/d/au	0.30	0.41	0.97	1.40	1.10
Moisture	%	90%	90%	90%	90%	90%
N	lb/d/au	0.14	0.16	0.45	0.92	0.54
Р	lb/d/au	0.05	0.05	0.13	0.15	0.09
P205	lb/d/au	0.11	0.11	0.30	0.34	0.21
K	lb/d/au	0.09	0.11	0.28	0.35	0.24
K2O	lb/d/au	0.11	0.13	0.34	0.42	0.29

Farm Animal Population Information

Animal type		Boar	Gestating Sow	Lactating Sow	Nursery Pig	Grow-Finish (Replacement Gilts)	Totals
Number Animals		6	2252	420	750		3,428
Animal weight	lb	450	425	400	14		1,289
AU	1000 lb	2.70	957.10	168.00	10.50		1,138
Time Period	days	180	180	180	180		180

As Excreted Farm Totals Prior to Losses and Water Additions

Weight	lb	9,234	4,306,950	1,784,160	166,320	6,266,664
	ft^3	146	70,634	29,333	2,646	102,759
Volume	gal	1,091	528,342	219,409	19,792	768,634
Moisture	%	0.90	0.90	0.90	0.90	0.90
N	lb	68	27,564	13,608	1,739	42,979
Р	lb	24	8,614	3,931	284	12,853
P2O5	lb	56	19,726	9,002	649	29,433
K	lb	44	18,951	8,467	662	28,123
K2O	lb	52	22,741	10,161	794	33,748

Wash Water

Additional Non-Precipitation Water to Manure

	Daily	Total for time	Per Animal	% of Manure Vol
Type of Addition	(gal)	(gal)	gal/hd/day	%
Add'l Flush Water	0	0	0.00	0.0%
Wash Water	929	167,220	0.27	21.8%
Total from barn	929	167,220	0.27	21.8%

Climatic Data for Newton County Arkansas

Month	Precipitation	Evaporation	P-E	P-E >=0	P-E used	
Jan	2.06	0.72	1.34	1.34	1.34	
Feb	2.75	1.08	1.67	1.67	1.67	
Mar	4.58	2.52	2.06	2.06	2.06	
Apr	3.97	3.60	0.37	0.37		
May	5.06	4.68	0.38	0.38		
Jun	3.27	4.68	-1.41	0.00		
Jul	2.94	5.40	-2.46	0.00		
Aug	2.74	5.04	-2.30	0.00		
Sep	4.15	3.24	0.91	0.91		
Oct	3.47	2.88	0.59	0.59	0.59	
Nov	3.88	1.44	2.44	2.44	2.44	
Dec	3.55	0.72	2.83	2.83	2.83	
Totals	42.42	36.00	6.42	12.59	10.93	i
					0.91	f
25-yr, 24-Hr Storm	7	in				
	0.58	ft				
Rain Catch Area	59,457	ft^2				
	1.36	ac				
Precipitation Accur	nulation for Tim	e Period				
Accumulation (in/12	2) X Rain Catch	Area (ft^2)				
•	ft^3	gal				
Precipitation	54,155	405,083				
•	,	,				
25-yr, 24-Hr Storm	34,683	259,431				

Precipitation Information (in)

Summary of Required Storage for 180 day cycle (wet months)

Storm Storage = 259,431 gals. (To remain empty and available at all times for Storm Events) Manure Production = 768,634 gals. (4,270 gals/day) Wash Water = 167,220 gals. (929 gals/day) Precipitation= 405,083 gals. (2,250 gals/day) **Total Required Storage = <u>1,600,368</u> gals.**

Sum of Pond 1 and 2 available storage = <u>2,337,074</u> gals.

Conclusion: Total available storage in ponds 1 and 2 exceeds requirements by 736,706 gals.

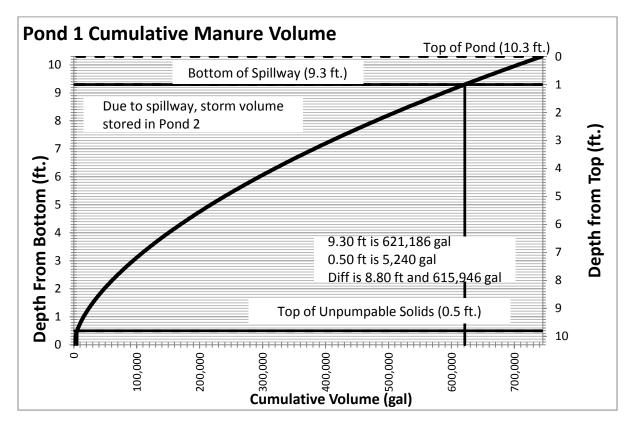
System Evaluation of Ponds 1 & 2

The manure and wash water collection operation consist of an intermittent flow through system from the housing structures to pond 1 then into pond 2. Each pond will maintain a 1.0 foot freeboard. All outside runoff from the surrounding area plus direct rainfall into the ponds along with a volume equal to a 24 hour 25 year storm event will be stored in pond 2. Staff gage located in pond 2 will be used to indicate the maximum accumulation of effluent before removal by pumping is required. The under house collection pits are periodically recharged by recycling water from pond 2. Occasionally due to pond 2 water management needs pond 1 may supply recycle water to the pits.

Water level management and nutrient application pumping may occur from either Pond 1 or Pond 2 to manage water levels and properly utilize available nutrients and maximize environmental protection provided by matching available storage with the Nutrient Management Plan. Both ponds will be pumped directly into land application equipment such as tankers, irrigation equipment, or other commonly accepted manure transfer and application equipment. As needed, to maintain available volumes, both ponds will be agitated during pumping to remove settled solids.

As built drawings and final designs of both ponds were completed in April 2013 by DeHaan; Grabs & Associates. The only change since the initial construction has been the addition of a junction box at the intersection of the discharge pipes from each of the housing facilities for cleanout purposes. An additional well has also been added to furnish potable water for the showers and is not a part of the swine production and manure management facility.

Pond 1



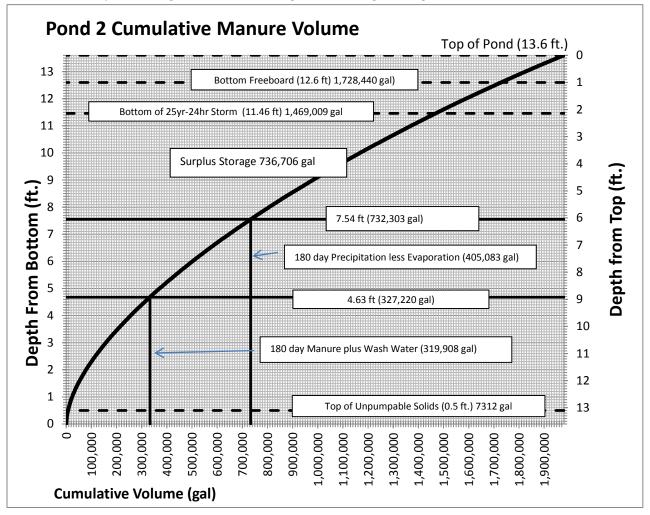
Based on the pond configuration shown in Figure 1 the stage-storage curve for Pond 1 is as follows

Pond 1 serves as the primary receiving area for all discharges of manure slurry which will allow most of the solids to settle before effluent flows into Pond 2. The concrete spillway from Pond 1 to Pond 2 ensures the 1 foot freeboard of Pond 1 will be maintained.

Pond 2

Pond 2 will store the remaining manure slurry produced plus all of the runoff volume that can be expected for the wettest 180 day period. The one foot freeboard and one half foot of unpumpable liquid will be deducted as unavailable from the pond's available storage. Calculations are as follows:

Manure = 768,634 gals (180 days) = 4,270 gal/day. Wash water = 167,220 gals (180 days) = 929 gal/day Subtotal Manure Slurry = 935,854 gals (180 days) = 5,199 gal/day Manure Slurry flow into pond 2 = Total Manure Slurry - Pond 1 Available Storage = 935,854 -615,946 = 319,908 gals (180 days) = 1,777 gal/day Total Runoff for 180 wet months precipitation less evaporation = 405,083 gals = 2,250 gal/day Storm Storage = 259,431 gals. (To maintain empty and available at all times for storm events) Total Available Volume Required for Pond 2= 319,908 + 405,083 + 259,431 = <u>984,422</u> gals Total Available in Pond 2 as modeled = 1,721,128 gals Conclusion: Available Storage Volume in ponds 2 exceeds requirements by <u>736,706</u> gals.



Based on the pond configuration shown in Figure 1 the stage-storage curve for Pond 2 is as follows:

A staff gage will be used as a management tool as well as a means to indicate the maximum liquid level permissible before pumping.

The level of liquid accumulation in pond 2 should be monitored and maintained so that the storm volume is only encroached during a 25 year 24 hour storm event. The freeboard volume should never be encroached. The additional storage capacity will facilitate proper water level management. In addition it also helps with providing flexibility in matching nutrients and nutrient application timing more easily with the nutrient management plan. It also provides house pit recycle water reserve to help manage in house and ventilation discharge odors.

Number of Days Storage

The actual maximum days of storage of manure slurry is based on pond storage capacity and normal runoff and storm water accumulations.

Total Pond Storage Available = 2,337,074 gals (Total Volume in both ponds less the volumes occupied by freeboard, 25 yr. storm runoff and an unpumpable 0.5 ft bottom layer)

Average manure production= 4,270 gals/day

Wash water = 929 gals/day

Runoff of 9 months (270 days) precipitation less evaporation (where rainfall exceeds evaporation [September through May]) = 12.59 ins. = 1.05 ft.

Drainage Area = 59,457 ft²

The 270 day daily runoff= 59,457 ft² x 1.05 ft. x7.48 gal/ft³. / 270 days = 1728 gal/day

Volume Accumulation for Sept through May = $(4270+929+1728) \times 270 = \frac{1,870,290}{270}$ gals.

Remaining Volume in Ponds 1 & 2 after 9 months accumulation (September - May) = 2,337,074 gals available storage - 1,870,290 gals accumulation - 259,431 gals storm water = 207,353 gals.

Remaining 3 months (June – August) where evaporation exceeds rainfall, the only accumulation is manure slurry = 4,270 + 929 = 5,199 gals/day.

Additional days of storage above the 270 days = 207,353 gals / 5199 gals / day = 40 days

Maximum Days of Storage = 270 + 40 = <u>310 days</u>

Appendix

Barn Wash-Water Volume Determination

Discussions with C&H management revealed that the farm used "wet/dry" feeders so that any animal drinking water spillage would fall into the feed troughs and consumed with the feed. As a result, there will be effectively no spilled drinking water adding to manure slurry volume. Estimates for pen wash down water were provided in the form of the number of pressure washers, the flow rates in gallons per minute, and the average time spent washing each day. As a more direct determination of pen wash water additions to the manure was desired, two standard water meters were purchased and installed to measure all the water used by two pressure washers used in the barns (Figure 9).

Figure 1. Standard water meter with hose adapters and mounting base installed to measure water use during pressure washing to clean animal pens.



Periodically, pictures of the meters were submitted providing readings and the date of the readings to document cumulative and daily wash-water volumes added to the manure slurry volume. From March 20, 2014 to September 9, 2014 a total of 161,722 gallons of water was used to wash the pens with the water then draining into the manure pits. The average daily water use over these 174 days was 929 gallons/day. (Table 8 and Figures 10 and 11).

			Meter 1			Meter 2		Tota	al
Date	Day s	Readin g	Cumulativ e	Daily averag e	Readin g	Cumulativ e	Daily averag e	Cumulativ e	Daily averag e
			Gallons						
3/20/201 4		126.5			80.2				
9/10/201 4	174	96,610	96,483	554	65,319	65,239	375	161,722	929

Table 1. Pen wash-water meter readings and water volumes in gallons.



Figure 2. Two water meters purchased and installed on March 20th, 2014 to measure pen wash down water additions to manure volume. Initial meters readings were 126.6 and 80.2 gallons for meter 1 and 2.



Figure 3. Two water meters purchased and installed on March 20th, 2014 to measure pen wash down water additions to manure volume. Meters readings were 96,609.6 and 65,319.3 gallons for meter 1 and 2 on September 10th, 2014.

Miscellaneous

Barn Pull Plug Pit Volume Calculations

Based on Spread Sheet File <u>Pull Pit Volumes 5_28_15.xlsx</u> (Separate Document) by: Big Creek Research & Extension Team (BCRET)

Pond Volume Calculations

Based on Spread Sheet File <u>Calc Chart Ponds Elev Model As built Volumes 5-19-2015.xlsx</u> (Separate Document) by: Big Creek Research & Extension Team (BCRET)

Section 3

Land Application Site Information

Land Application Site Table including Latitude and Longitude for each field

Setback Distance Table (BMP Buffers)

Land Use Contracts

Letters of Consent with Neighboring Landowners

Image: Charles Campbell Net Jason Henson Jason Henson Jason Henson Jason Henson Jason Henson Jason Henson Jason Henson Louetta/Glen Ricketts Jason Henson Louetta/Glen Ricketts Jason Henson Louetta/Glen Ricketts Louetta/Glen Ricketts E.G. Campbell Louetta/Glen Ricketts Charles Campbell Louetta/Clen Ricketts E.G. Campbell N E.G. Campbell Charles Campbell Charles Campbell Charles Campbell Fayma Dickey N Billy F. Cheatham Fayma Dickey Robert Flud Robert Flud Charles Campbell N Charles Campbell N Billy F. Cheatham Fayma Dickey Charles Campbell N Charles Campbell	lew/ExistingSectiExisting25Existing25Existing25/3Existing36New23New26New26New26New26New26New26New26New26New26New26New26New26	on Township Rar 0 15N 20 0 15N 20	Range 20W	Spreadable Acreage 8.4 6.0 15.2 7.2 7.2 9.7 5.6 7.9 64.3	Longitude 93°3'32.372"W 93°3'43.637"W 93°3'53.07"W 93°3'59.78"W 93°4'30.114"W 93°4'49.381"W 93°4'17, 854"W	Latitude 35°55'1.349"N 35°54'55.793"N 35°54'59.383"N 35°54'49.65"N 35°55'48.19"N 35°55'48.19"N 35°55'42.631"N 35°55'24.9"N
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Charles Campbell Charles Campbell Fayma Dickey Billy F. Cheatham Fayma Dickey Robert Flud Charles Campbell Charles Campbell Charles Campbell Charles Campbell Charles Campbell	Existing 35	15N	20W	1.4	93°4'17.42"W	35°54'45.295"N
Charles Campbell Fayma Dickey Billy F. Cheatham Billy F. Cheatham Fayma Dickey Robert Flud Robert Flud Charles Campbell Charles Campbell Charles Campbell	Existing 35	15N	20W	25.2	93°4'18.724"W	35°54'43.111"N
Fayma DickeyBilly F. CheathamFayma DickeyRobert FludRobert FludCharles CampbellCharles CampbellCharles CampbellCharles Campbell	Existing 26/35	15N	20W	10.3	93°4'2.05"W	35°54'56.223"N
Billy F. Cheatham Fayma Dickey Robert Flud Robert Flud Charles Campbell Charles Campbell Charles Campbell	Existing 35	15N	20W	14.1	93°4'18.767"W	35°54'42.431"N
Fayma Dickey Robert Flud Charles Campbell Charles Campbell Charles Campbell	Existing 35	15N	20W	16.4	93°4'10.843"W	35°54'30.331"N
Robert Flud Charles Campbell Charles Campbell Charles Campbell	Existing 35	15N	20W	14.2	93°4'22.582"W	35°54'33.004"N
Charles Campbell Charles Campbell Charles Campbell	Existing 35	15N	20W	11.4	93°4'15.143"W	35°54'13.541"N
Charles Campbell Charles Campbell	Existing 2	14N	20W	11.6	93°4'21.856"W	35°53'56.972"N
Charles Campbell	Existing 35/2	15N/14N	20W	30.7	93°4'35.599"W	35°53'59.62"N
	Existing 35	15N	20W	8.6	93°4'20.307"W	35°54'3.407"N
T4 Charles Campbell Existing	Existing 35	15N	20W	8.1	93°4'38.516"W	35°54'22.791"N
15 Clayel Criner Existing	Existing 2	14N	20W	22.5	93°5'2.342"W	35°53'43.551"N
*15A Clayel Criner New	New 2	14N	20W	10.4	93°4'54.416"W	35°53'52.182"N
15B Clayel Criner Existing	Existing 2	14N	20W	15.0	93°5'2.42"W	35°53'43.458"N
16 Barbara Hefley Existing	Existing 2	14N	20W	15.2	93°4'38.587"W	35°53'35.201"N

Section 3

			Land Appli	-and Application Sites (Continued)	Continued	(
						Spreadable		
Field	Landowner	New/Existing	Section	Township	Range	Acreage	Longitude	Latitude
			34/35	15N	20W			
17	Jason Criner	Existing	2/3	14N	20W	31.9	93°5'3.665"W	35°53'55.374"N
*18	Murl Bryant	New	25	15N	70W	22.6	M"877.72'8°89	35°55'32.715"N
*19	Murl Bryant	New	25	15N	20W	10.3	93°3'34.212"W	35°55'37.349"N
*20	Rondal Campbell	New	35	15N	20W	21.6	93°4'17.971"W	35°54'45.772"N
*21	Rondal Campbell	New	35	15N	70W	20.3	M"93°4'59.439"W	35°54'35.005"N
*21A	Rondal Campbell	New	34	15N	70W	15.6	M"28.01'2°59	35°54'44.478"N
*21B	Rondal Campbell	New	35	15N	20W	6.0	93°4'54.343"W	35°54'48.234"N
*22	Kelis Campbell	New	26	15N	M02	35.5	93°4'50.239"W	35°55'9.687"N
*23	Greg Grice	New	22	15N	M02	28.1	93°5'43.327"W	35°56'27.709"N
*24	Donald Haddock	New	23	15N	70W	8.0	93°4'35.322"W	35°55'59.004"N
*32	Howard Criner	New	22	15N	M02	10.0	M"808.22'20.60	35°56'26.454"N
*33	Howard Criner	New	22	15N	70W	4.0	03°5'16.715"W	35°56'32.636"N
*34	Rondal Campbell	New	26	15N	20W	13.5	93°4'42.775"W	35°55'2.033"N
*35	C & H Hog Farms, Inc.	New	25	15N	20W	18.4	93°3'14.369"W	35°55'10.6"N
*36	C & H Hog Farms, Inc.	New	25	15N	20W	9.3	93°3'1.819"W	35°55'19.23"N

*Indicates new land that has not been previously permitted. All other land was included in the original NPDES permit. To better reflect land management, some fields were further divided into subsets (A or A & B) due to cross fencing or natural field barriers. ArcGIS software utilized to calculate longitude, latitude, PLSS and acreage.

SS	ē	p∈	p∂	p∂	pa	pa	pa	pa	p∈	sd	p∈	p∈	p∈	p∈	p€	sd	sd	sd	sd	p∈	sd	₽	sd	sd	sd	sd	₽d	p∈	لرد
Grass	Type	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mived
Land	Use	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational	Rotational
Spreadable	Acres	8.4	6.0	15.2	7.2	9.7	5.6	7.9	64.3	28.3	7.2	1.4	25.2	10.3	14.1	16.4	14.2	11.4	11.6	30.7	8.6	8.1	22.5	10.4	15.0	15.2	31.9	22.6	10.3
Steep Slope	Buffer	2.2	0.3+1.7+0.1+0.7	0	1.5	0	1.4+0.6+1.5	8.2	0	0	0	0	0	0	0	0	1.1+2.3+0.7+0.1+0.1	0	0.8	1.7+2.4+0.6	2.0+3.2	5.3	4.7+0.2	3.1	4.1+1.6	0	0	0	c
500 ft.	Buffer	6.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.4	c
100 ft.	Buffer	0.5+0.1	0	0.6	0.6+0.3+0.6+0.7	2.3+0.7	0	0.6	0.1+0.5+0.7+3.9+0.5+0.7	3.8+0.1+0.2	1.5+0.8	0.5+0.5	1.8+0.4+2.1	0.9+0.3+0.1	0.1+0.4	0.6+0.4+0.3	0.4	0.5 + 0.2	0.3	0.5	0.2+0.2+0.4	0.4	0.3	0	0.2+0.1	2.0+0.8+2.8	0.6+1.4	0.5	0 0
50 ft.	Buffer	0	0	6.0	0	0.6	0	0.8	2.2	2.7	0.4+0.7+0.1	0.5	0.1	0	0.1	0	0.3	0.6 + 0.4	0.3	1.0	0.9	1.3	0.1 + 0.4	0.7	0	0.5	0.9+1.3	1.3 + 0.1 + 0.7	1.0
Open	Acres	17.7	8.8	16.7	10.9	13.3	9.1	17.5	72.9	35.1	10.7	2.9	29.6	11.6	14.7	17.7	19.2	13.1	13.0	36.9	15.5	15.1	28.2	14.2	21.0	21.3	36.1	29.6	13,3
Land	Owner	Jason Henson	Jason Henson	Charles Campbell	Jason Henson	Louetta/Glen Ricketts	Louetta/Glen Ricketts	Shawn Ricketts	E.G. Campbell	E.G. Campbell	Charles Campbell	Charles Campbell	Charles Campbell	Charles Campbell	Fayma Dickey	Billy F. Cheatham	Fayma Dickey	Robert Flud	Charles Campbell	Charles Campbell	Charles Campbell	Charles Campbell	Clayel Criner	Clayel Criner	Clayel Criner	Barbara Hefley	Jason Criner	Murl Bryant	Murl Brvant
	Field	1	2	3	4	ۍ*	•*9	6A*	7	7A*	8	8A	6	9A	10	10A	11	12	13	13A	13B	14	15	15A	15B	16	17	18^{*}	19*

Manure Application Setback Distance Table (BMP's)

Section 3

Field	Land	Open	50 ft.	100 ft.	500 ft.	Steep Slope	Spreadable	Land	Grass
	Owner	Acres	Buffer	Buffer	Buffer	Buffer	Acres	Use	Type
20*	Rondal Campbell	24.8	0.1	1.0+1.1+0.8	0	0.2	21.6	Rotational	Mixed
21^{*}	Rondal Campbell	49.8	0	2.9+1.7+0.5+0.5+0.3+1.8	0	10.1+11.4+0.3	20.3	Rotational	Mixed
21A*	Rondal Campbell	19.8	0	0.2	0	4.0	15.6	Rotational	Mixed
$21B^{*}$	Rondal Campbell	7.1	0	0	0	0.7+0.4	6.0	Rotational	Mixed
22*	Kelis Campbell	46.4	0	0.4		1.6+0.2+8.7	35.5	Rotational	Mixed
23*	Greg Grice	33.8	1.0+2.0	0.6+0.4+0.5+0.4+0.6+0.2	0	0	28.1	Rotational	Mixed
24*	Donald Haddock	11.6	0	3.1+0.5	0	0	8.0	Rotational	Mixed
32*	Howard Criner	11.9	0.8	1.1	0	0	10.0	Rotational	Mixed
33*	Howard Criner	5.9	0.4	1.2+0.3	0	0	4.0	Rotational	Mixed
34*	Rondal Campbell	16.5	0.5	0.4	0	1.1 + 0.1 + 0.6 + 0.3	13.5	Rotational	Mixed
35*	C & H Hog Farms Inc	26.3	1.7+0.5	0.5	0	5.2	18.4	Rotational	Mixed
36*	C & H Hog Farms Inc	12.1	0	0.5+0.3	0	0.8+0.5+0.7	9.3	Rotational	Mixed
	Total Open					Total Spreadable			
	Acres:	831.2				Acres:	630.0		

Manure Application Setback Distance Table (BMP's) continued

management, some fields were further divided into subsets (A or A & B) due to cross fencing or natural field barriers. ArcGIS software utilized to *Indicates new land that has not been previously permitted. All other land was included in the original NPDES permit. To better reflect land calculate all acreage and buffers.

Section 3

I, <u>Jason Henson</u>, agree to allow <u>C4H Hug farms</u> I Name of Landowner to land apply <u>Swine</u> waste from his/her operation located in the <u>Newton</u> Type of Waste $\frac{1}{2} \frac{1}{2} \frac{1}$ County to A description of the areas to be used as waste application sites are as follows:

No.	Section	Section	Township	Range	Available Acreage [*]
1	SW	25	15 N	200	8.4
2	Sw	25	15 N	200	6.0
4	NW	36	15 N	200	7.2

*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.



2-19-16

Permittee's Signature

Date

Jason Henson Landowner Signature 2-19-16 Date

I, <u>Lovetta Ricketts</u>, agree to allow <u>C+H Hog fann</u> Name of Landowner, to land apply <u>Swine</u> waste from his/her operation located in the Type of Waste County of Operation acres of my property located in Newton County to 5.3 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.	¹ / ₄ Section	Section	Township	Range	Available Acreage*
5	SWISE	23	15 N	200	9.7
6	nw	26	15 N	200	5.6
	1 - 1 - 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.



Jason/Janson Permittee's Signature

<u>11-18-15</u> Date

10-25-15 Date

Landowner Signature

7

I, <u>Shawn Kic</u> Name of Landowner , agree to allow <u>C+H Hog farms Inc</u> Name of Permittee waste from his/her operation located in the Swine to land apply Type of Waste County of Operation acres of my property located in Menton County. County to County of Application Site Total Acreage Available A description of the areas to be used as waste application sites are as follows:

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage*
6A	nw	26	15 N	Zow	7.9

*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.



JasonHeason Permittee's Signature

11-10-15 Date

Landowner Signature

<u>(0-25-1</u> Date

I, <u>E.G.</u> <u>Campbell</u> Name of Landowner to land apply <u>Swive</u> Name of Permittee , agree to allow waste from his/her operation located in the Type of Waste County of Operation acres of my property located in Menton County. County to .6 County of Application Site Total Acreage Available A description of the areas to be used as waste application sites are as follows:

Site1/4AvailableNo.SectionSectionTownshipRangeAvailable

No.	Section	Section	Township	Range	Acreage*
7	NE/SE	26	15 N	Jow	64.3
74	NE	26	(5N	200	28.3
			F -3 5-1		

*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.



Jason Henson Permittee's Signature

<u>11-10-15</u> Date

<u>11-10</u>-15 Date Landowner Signature

_, agree to allow ______ C+ A Hog forms Inc Name of Permittee ______ Name of Permittee _____ Newton I, <u>Charles Campbel</u> Name of Landowner to land apply Swine waste from his/her operation located in the Type of Waste County of Operation acres of my property located in <u>Newton</u> County of Application Site 59,3 Total Acreage Available County to _

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

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
3	SE	26	ISN	20W	15.2
848A	SENE	and	15N	200	8.6
9+9A	NE	2.45	15 N	20 ~	35.5

*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.



Jason Henson Permittee's Signature

11-11-15 Date

<u>Charles Compel 10-</u> Landowner Signature Da Date

Dickey, agree to allow C+H Hog farm Name of Landowner waste from his/her operation located in the to land apply Swine Type of Waste County of Operation acres of my property located in Kenton County to 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.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
10	NE	35	15 N	aow	14.1
11	NWINE	35	15 N	Jow	14.2
-	1 - 1				ir.
					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.



Jason Henson Permittee's Signature

11-10-15 Date

Dickey 10-28-15 Landowner Signature

____, agree to allow C+H Hog farms Inc Name of Permittee I, <u>Billy F. Cheatham</u> Name of Landowner. to land apply <u>Swine</u> waste from his/her operation located in the Type of Waste County of Operation acres of my property located in Menton County to 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.	¹ / ₄ Section	Section	Township	Range	Available Acreage*
(OA	ne/se	35	15 N	Jow	16.4
					14
		11			
		1.211			

*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.



Permittee's Signature

11-10-15 Date

Landowner Signature

Date

1, Robert	f Flud	, agree to allow	C1	H	Hog	farmstrc
Nan	ne of Landowner .		-	Nat	me of Permitte	e
to land apply	Swine	waste from his/her ope	eration	locate	ed in the	Newton
	Type of Waste			14		County of Operation
County to	11.4	acres of my property located	in	rie	whom	County.
Tot	al Acreage Available	엄마는 안 주관 집에서 가지요.			plication Site	
A description	of the areas to be	e used as waste application si	tes are	as fol	lows:	

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
12	5E	35	15N	200	11.4
•					
	-		·		
			÷		

*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.



Jason Henson Permittee's Signature

-101 Date

Landowner Signature

Date

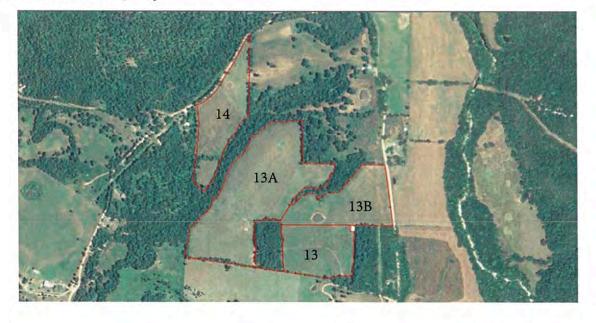
C+ H Hog farmsInc Name of Permittee I, <u>Charles</u> <u>Campbe</u> Name of Landowner , agree to allow Swine waste from his/her operation located in the to land apply Type of Waste County of Operation acres of my property located in <u>Menton</u> County of O County to Total Acreage Available

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

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
13	NE	2	14M	20W	11.6
13A	523	ret	1550	200	30.7
13B	JE	35	150	200	8.6
14	Sw	35	15 M	200	8-1

*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.



Charles Comphell Landowner Signature Jason Henson 11-10-15 Permittee's Signature Date

Date

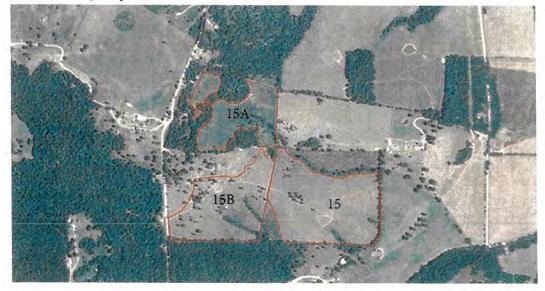
I, <u>Clayel Criner</u>, agree to allow <u>C+H Hog Farms Inc.</u> Name of Landowner to land apply <u>Swine</u> waste from his/her operation located in the <u>Newton</u> Type of Waste County to <u>H7, 9</u> acres of my property located in <u>Mewton</u> County of Operation Total Acreage Available acres of my property located in <u>Mewton</u> County.

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

Site No.	¹ /4 Section	Section	Township	Range	Available Acreage
15	nw	2	14N	20W	22.5
15A	nw	2	IUN	ZOW	10.4
15B	NW	2	NPI	200	15.0
				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.



<u>Jason Henjon</u> Permittee's Signature

<u>||-/0-15</u> Date

<u>Clayel</u> Criper 1-10-15 Landowner Signature Date

HHHOG Name of Permittee 1, Barha farms Inc , agree to allow Name of Landowner Juine to land apply waste from his/her operation located in the Type of Waste County of Operation acres of my property located in Newton County. County to 15.7 County of Application Site Total Acreage Available A description of the areas to be used as waste application sites are as follows:

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
16	5~	2	14N	Jow	15.2
			<u></u>	4 : *	
		r		· · · · · · · · · · · · · · · · · · ·	
-	· · · · · · · · · · · · · · · · · · ·				

*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.



Jason He. Permittee's Signature

-10-15 Date

Landowner Signature

Dáte

I, Jas	on Crines	, agree to allow	C+H	(tog -	farms	Inc
	e of Landowner		Nan	ne of Permittee	14	1. A.
to land apply	Swine	waste from his/her op	peration locate	ed in the	Nente	on
County to	Type of Waste	of my property locate	d in Ner	uton	County of Operation County.	on
· · · · · · · · · · · · · · · · · · ·	al Acreage Available	51 1 5	County of Ap			
A description	of the areas to be used	as waste application s	sites are as fol	lows:		

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
17	SE/SW	34/35	15N	2000	31,9
	nwine	2/3	IUN	200	
_ '1					
			1.1.1		

*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.



Jason Henson Permittee's Signature

1-10-15 Date

Landowner Signature

1-10-15 Date

I, MUN Bryan Name of Landowner C+++ Hog Name of Permittee , agree to allow Swike waste from his/her operation located in the to land apply County of Operation Type of Waste acres of my property located in <u>Kew Low</u> County. 32.9 County to Total Acreage Available A description of the areas to be used as waste application sites are as follows:

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
18	nume.	25	15 N	DOW	22.6
19	nu	25	15 N	200	(0.3
			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.



Jason Henson Permittee's Signature

Date

yant 10-23-15

Landowner Signature

Date

____, agree to allow ______ C+H Hod Name of Permittee I, Ronda Name of Landowner waste from his/her operation located in the to land apply ____ County of Operation Type of Waste _ acres of my property located in MentonCounty. County to County of Application Site Total Acreage Available A description of the areas to be used as waste application sites are as follows:

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
20	nw/ne	35	(5 N	200	21.6
21	NW	35	15-N	20 W	30.3
ZIAHB	nen	345	15N	200	21.6
34	500	26	15N	Jow	13.5

*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.



Jason Henson Permittee's Signature

11-1015 Date

Landowner Signature

I, <u>Kelis Campbell</u>, agree to allow <u>C+ H Hog</u> Name of Landowrfer to land apply <u>Swine</u> waste from his/her operation located in the County of Operation Type of Waste acres of my property located in $\frac{MeutonCounty}{County of Application Site}$ 35.5 County to Total Acreage Available A description of the areas to be used as waste application sites are as follows:

Site No.	¹ /4 Section	Section	Township	Range	Available Acreage*
22	nw/sw	26	15N	Jow	35.5
					-
		- Fair and the			

^{*}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.



Jason Heuson Permittee's Signature 1 (-10-15 Date

11-10-15

Landowner Signature

Date

I, Grea	9 Grice	, agree to allow	C+4	= Hog	formsInc
Nam	e of Landowner			Name of Permitte	e ,
to land apply	Swine	waste from his/her op	peration loc	ated in the	Newton
	Type of Waste		5	- 1-	County of Operation
County to	28-1	acres of my property locate	d in N.	euton	County.
Tota	al Acreage Available	김 사람은 가슴을 가슴가 앉아?	County of	Application Site	
A description	of the areas to be	e used as waste application s	sites are as	follows:	

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
23	NW	27	15NJ	200	28.1
			· · · · · · · · · · · · · · · · · · ·		
		X	-	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.



Jeson Henson Permittee's Signature

11-10-15 Date

Landowner Signature

Date

I, <u>Ponald Haddock</u> Name of Landowner to land apply Swine C+H (+og Name of Permittee tanns Inc , agree to allow waste from his/her operation located in the to land apply Type of Waste County of Operation acres of my property located in Menter County. 8.0 County to Total Acreage Available County of Application Site A description of the areas to be used as waste application sites are as follows:

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
24	52	23	15 N	ZOW	8.0
		I.I.			

*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.



Jesson Henson Permittee's Signature

16-10-15 Date

11-10 Date

wner Signature

, agree to allow C+ H Hog Farms Inc Name of Permittee Newton I, <u>Howard Criner</u> Name of Landowner waste from his/her operation located in the to land apply _ Swine County of Operation Type of Waste acres of my property located in Newton County. County to 14.0 Total Acreage Available County of Application Site A description of the areas to be used as waste application sites are as follows:

Site No.	¹ / ₄ Section	Section	Township	Range	Available Acreage [*]
32	NE	22	ISN	Jow	(0.0
33	NE	22	15 N	Jow	4.0
55	10	25	1514	8.0 0	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.



Jeson Henson Permittee's Signature

11-10-15 Date

0-23-15 Howard

Landowner Signature

Date

I, <u>2elmer Campbell</u>, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows C & H Hog Farms to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

Campbell Leliner

Landowner Signature

Date

Jason Henson

C & H Hog Farms, Inc. Representative

2-18-16

2-18-16

Date

I, <u>Dar lene Kent</u>, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows C & H Hog Farms to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

Landowner Signature

Jason Henson

C & H Hog Farms, Inc. Representative

2-18-16

Date

I, <u>James C. Campbell</u>, do hereby give consent to C & H Hog Farms, inc. to apply wastewater next to my property line.

.

andowner Signature

<u>Sqson Henson</u> C&H Hog Farms, Inc. Representative

<u>7-21-14</u> Date

7-21-14 Date

012241

26

Field 14

1, <u>Beb</u> <u>Frequence</u>, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows C & H Hog Farms to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

Ro

Landowner Signature

<u>3-22-14</u>

Date

Jason Hensen

C & H Hog Farms, Inc. Representative

3-22-19

Date

A set of the state of the

27

. -

I, <u>Jason</u>, <u>Jason</u>, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows C & H Hog Farms to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

Eandowner Signature

Jason Henson

C & H Hog Farms, Inc. Representative

Date

5-4-15

Date

I, DON T. ROCKWELL, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows C & H Hog Farms to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

Landowner Signature

3-26-14

Date

Jason Henson

C & H Hog Farms, Inc. Representative

n on the parameters of the second second

and a second second

3-26-14

1, Brad Anderson, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater next to my property line.

downer Signature

C & H Hog Farms, Inc. Representative

/ <u>0-24-</u>15

<u>|-24-15</u> Date

I, J.C. Freeman, do hereby give consent to C & H Hog Farms, Inc. to apply wastewater and manure adjacent to my property line and neighboring occupied buildings. I understand this allows C & H Hog Farms to apply wastewater and manure within 50 feet of my property line and within 500 feet of neighboring occupied buildings.

Freingo

Landowner Signature

2-18-16 Date

Jason Henson

2-18-16

Date

C & H Hog Farms, Inc. Representative

Section 4

Collected Information:

County Road Map Overview

Aerial Overview Map of Land Application Sites

Aerial Maps of Individual Fields with BMP Buffers

Soils Maps

Topographical Map

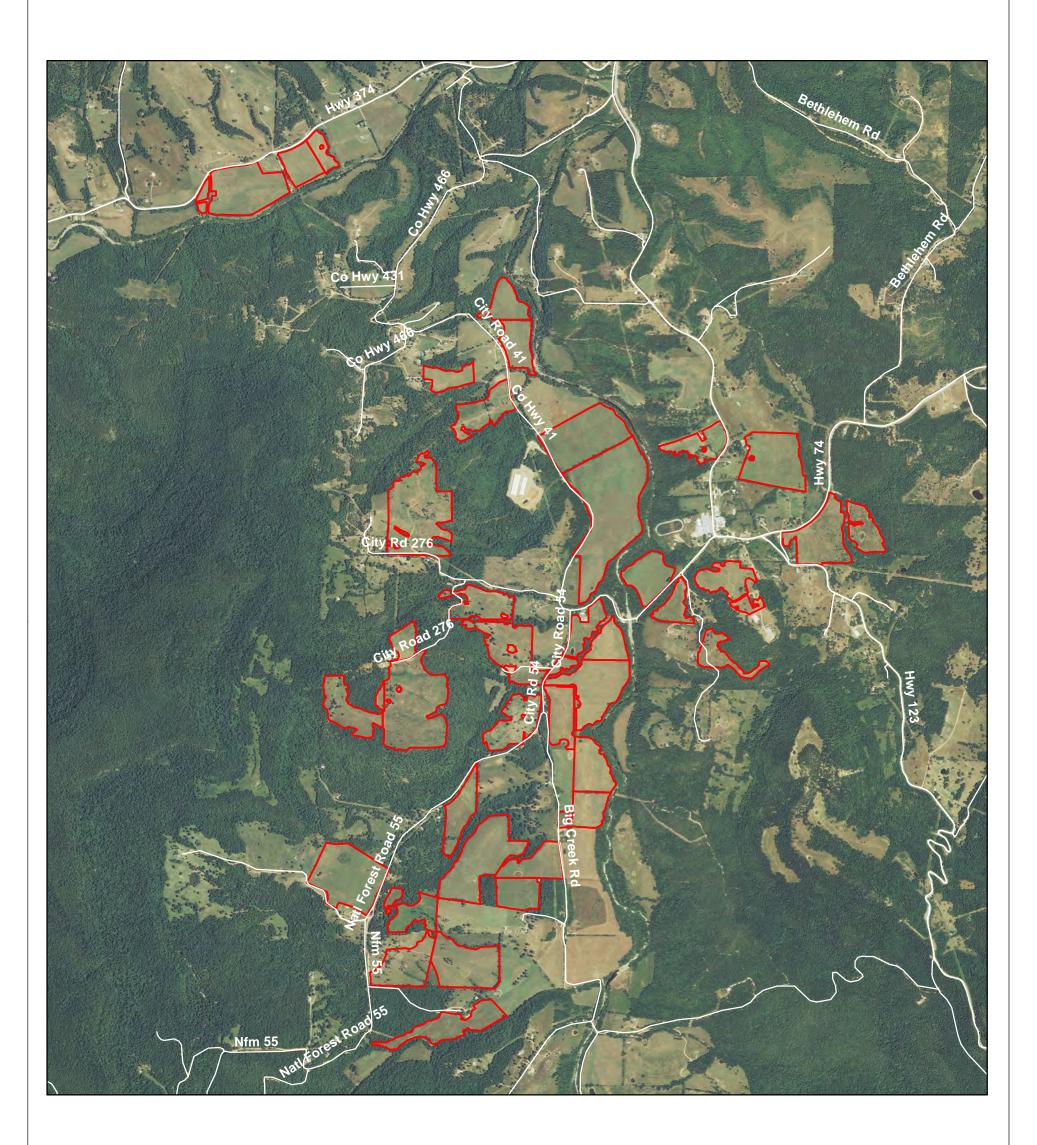
Section, Township, Range Overview Map

Watershed Overview Map (12 digit HUC)

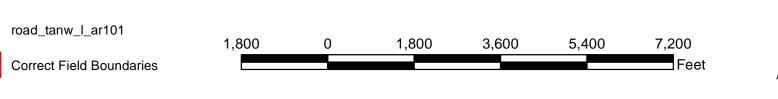
Soil Test Results

Manure Analysis

County Road Map Overview

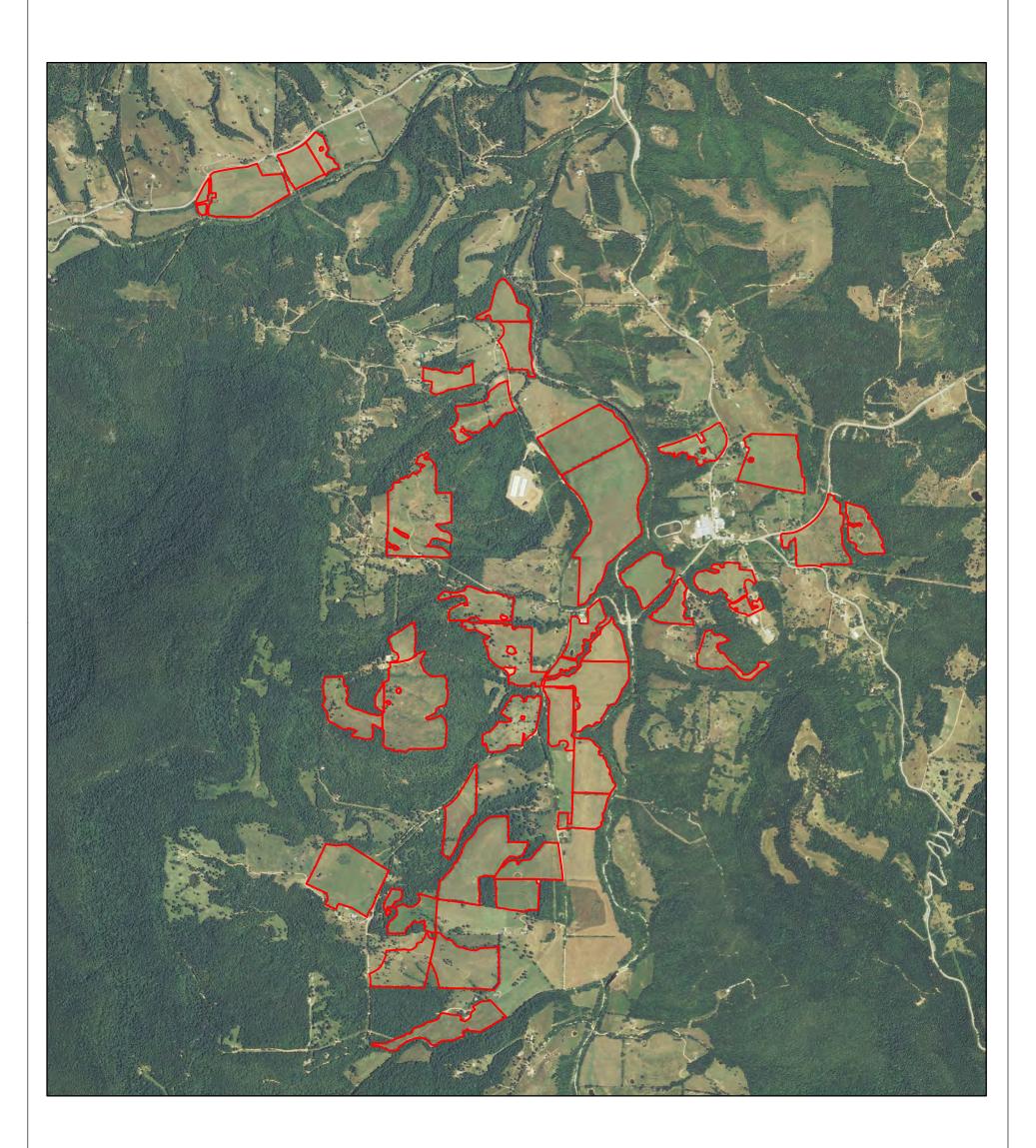


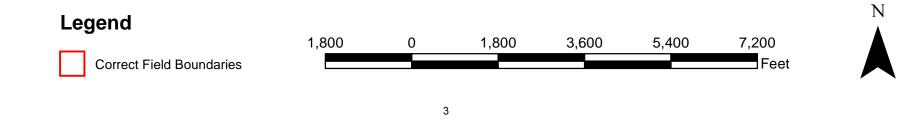
Legend



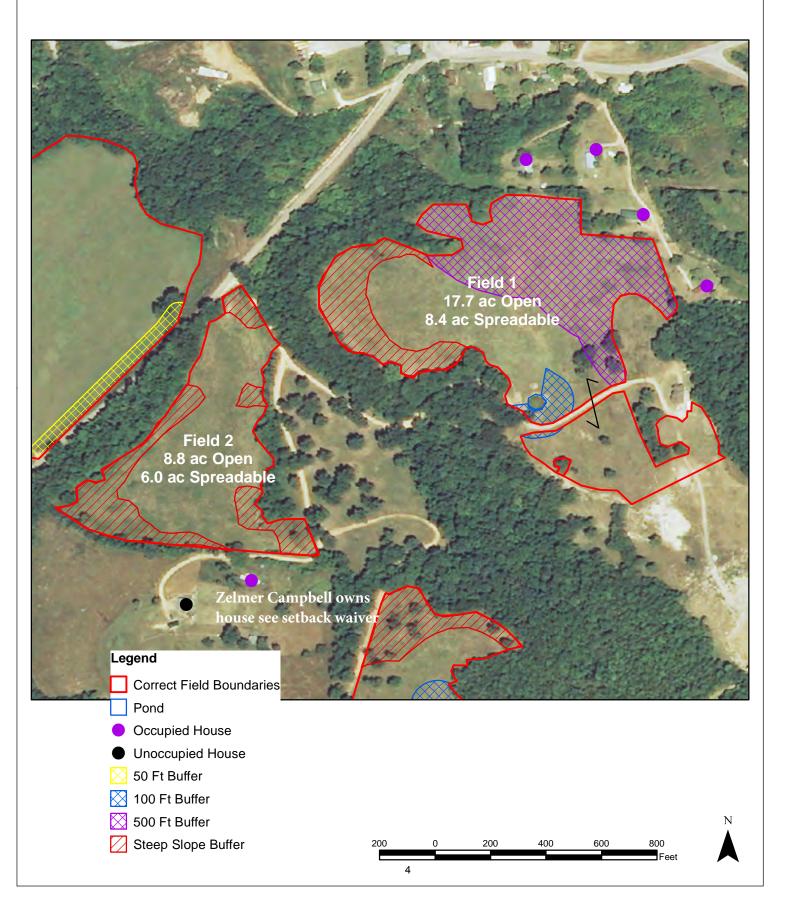
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Correct Field Boundaries

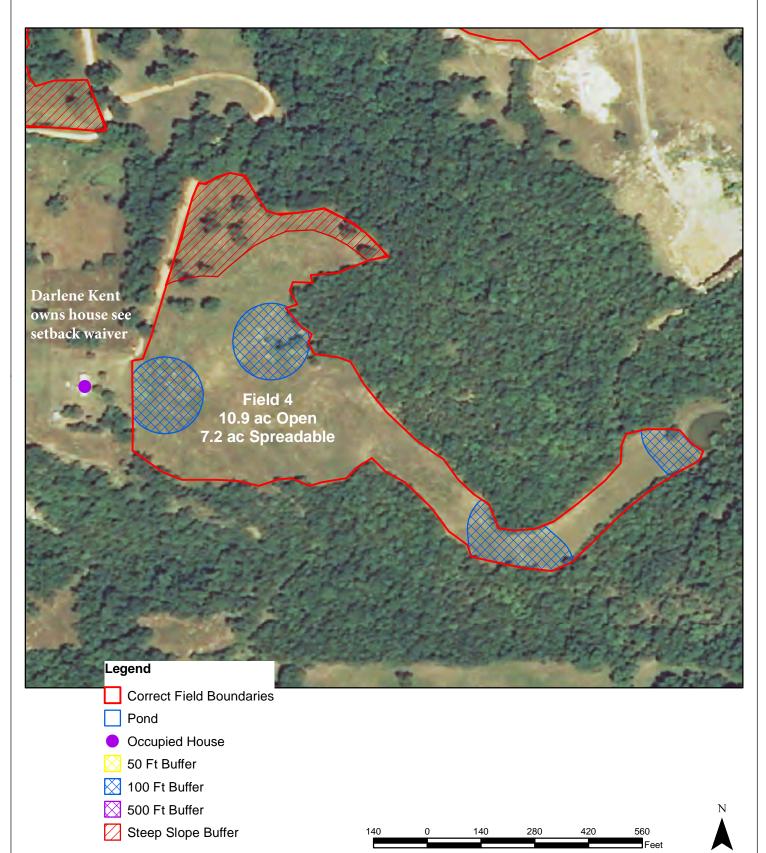




Buffered Field Map Fields 1 and 2 Jason Henson T15N, R20W, S25 Mt. Judea Quad



Buffered Field Map Field 4 Jason Henson T15N, R20W, S36 Mt. Judea Quad

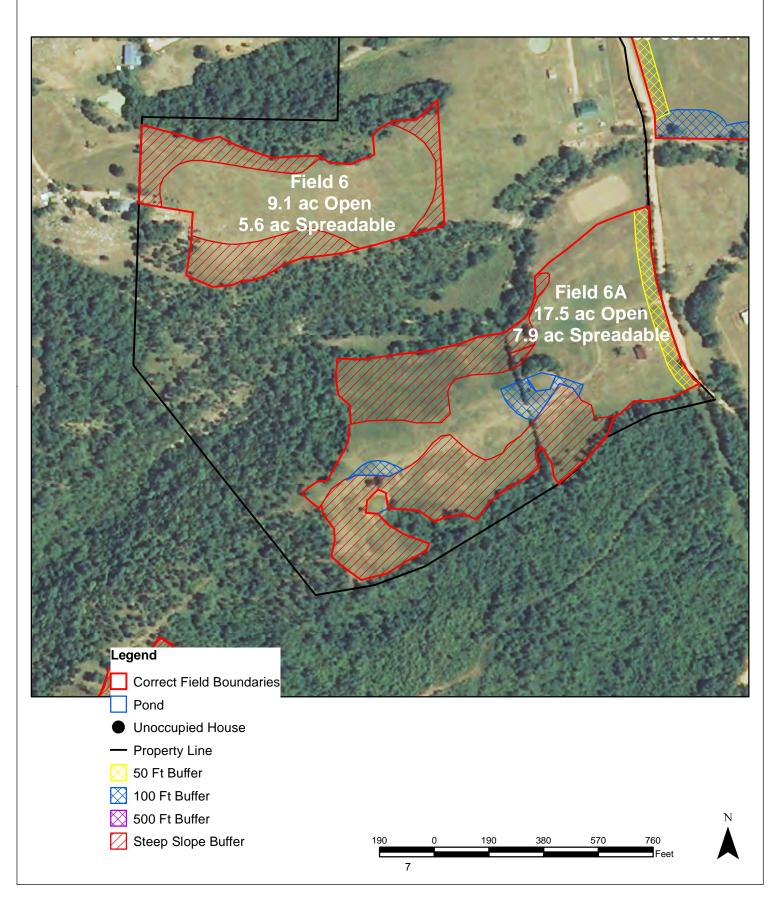


5

Buffered Field Map Field 5 Louetta/Glen Ricketts T15N, R20W, S23 Mt. Judea Quad



Buffered Field Map Field 6 Louetta/Glen Ricketts Field 6A Shawn Ricketts T15N, R20W, S26 Mt. Judea Quad



Buffered Field Map Fields 7 and 7A E. G. Campbell Field 3 Charles Campbell T15N, R20W, S25 and 26 Mt. Judea Quad Field 7A 35.1 ac Open 28.3 ac Spreadable Field 7 72.9 ac Open 64.3 ac Spreadable Field 3 16.7 ac Open 2 ac Spreadable Legend Correct Field Boundaries **Occupied House** property_line Pond 50 Ft Buffer 100 Ft Buffer 500 Ft Buffer 390 780 1,170 1,560 Feet 8

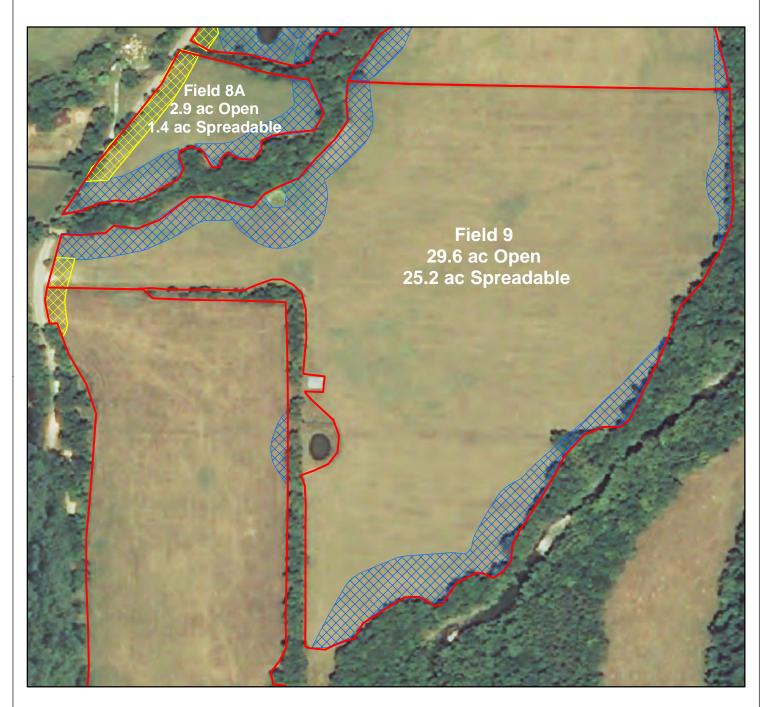
Buffered Field Map Charles Campbell Fields 8 and 9A T15N, R20W, S26 & S35 Mt. Judea Quad



- Correct Field Boundaries
- 🚫 50 Ft Buffer
- 100 Ft Buffer
- 🔀 500 Ft Buffer
- Steep Slope buffer

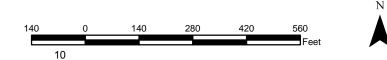


Buffered Field Map Charles Campbell Fields 8A and 9 T15N, R20W, S35 Mt. Judea Quad

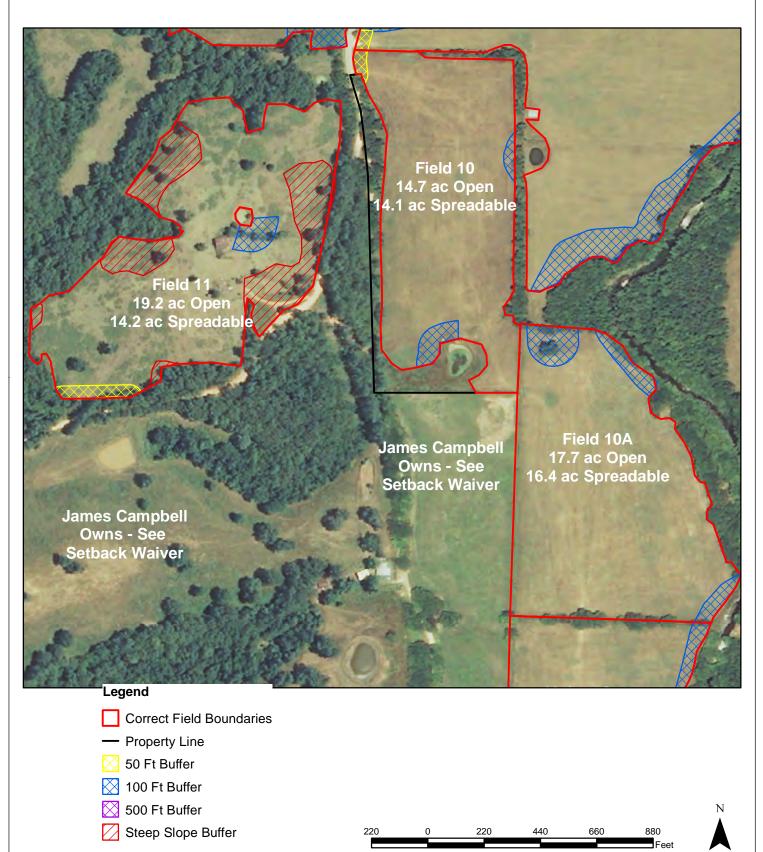


Legend

- Correct Field Boundaries
- 🔀 50 Ft Buffer
- 🔀 100 Ft Buffer
- 🔀 500 Ft Buffer
- Steep Slope buffer

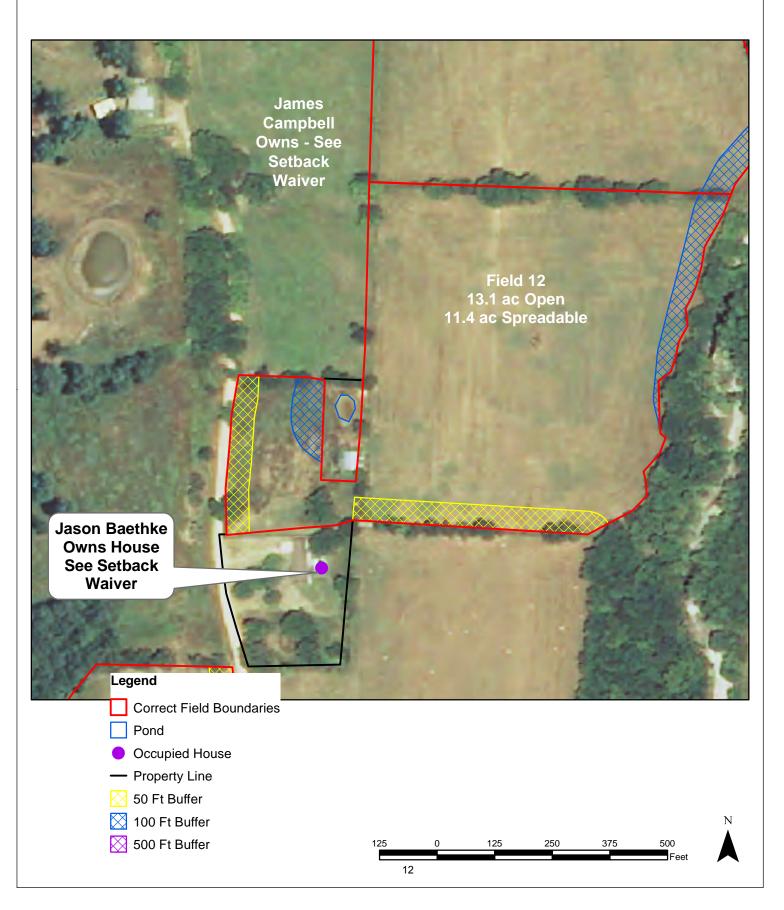


Buffered Field Map Fields 10 and 11 Fayma Dickey Field 10A Billy F. Cheatham T15N, R20W, S35 Mt. Judea Quad

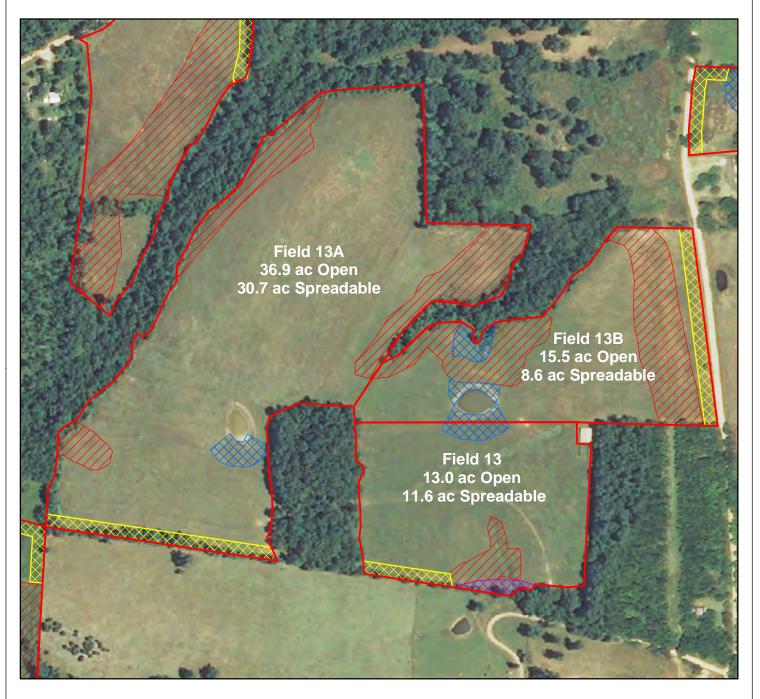


11

Buffered Field Map Robert Flud Field 12 T15N, R20W, S35 Mt. Judea Quad



Buffered Field Map Fields 13, 13A, 13B Charles Campbell T15N, R20W, S35 T14N, R20W, S2 Mt. Judea Quad

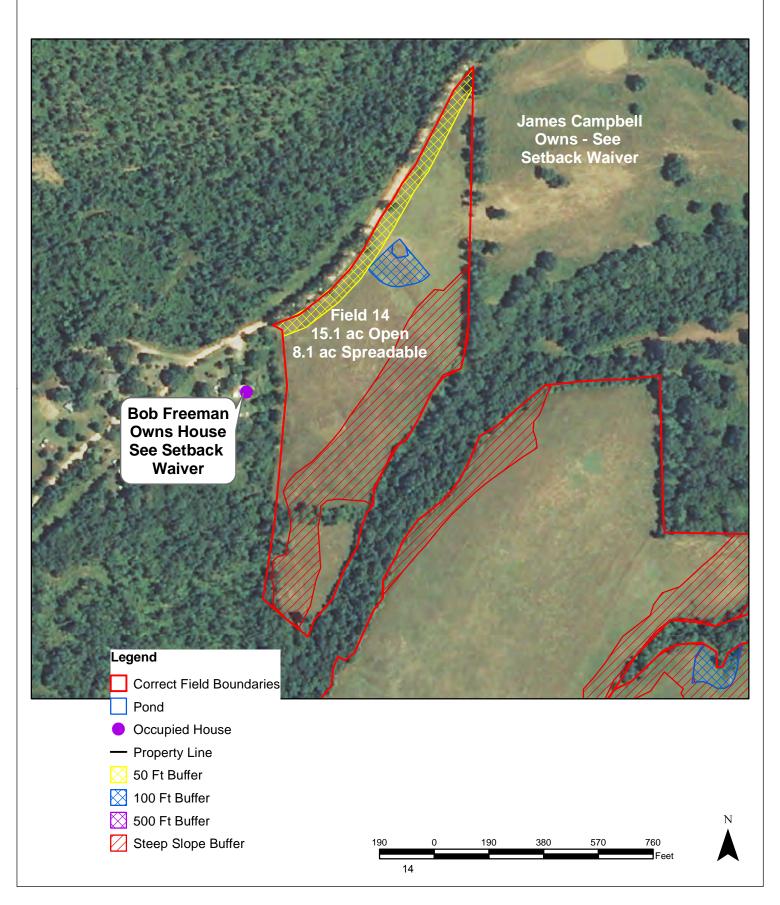


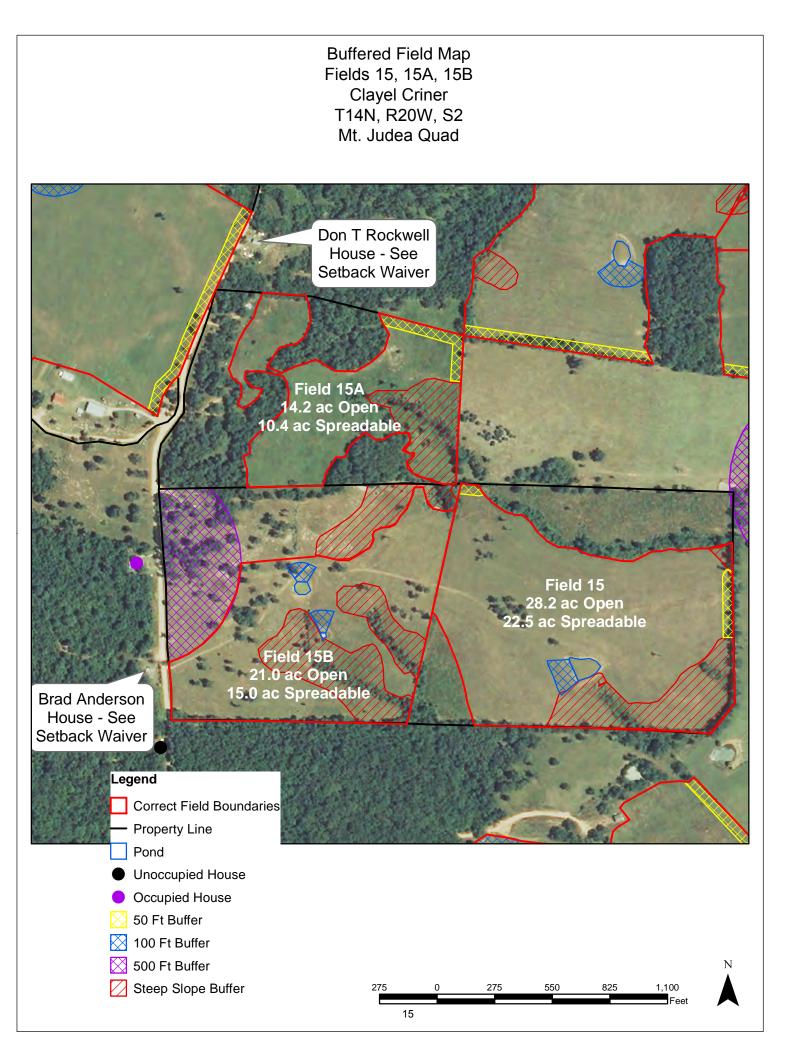
Legend

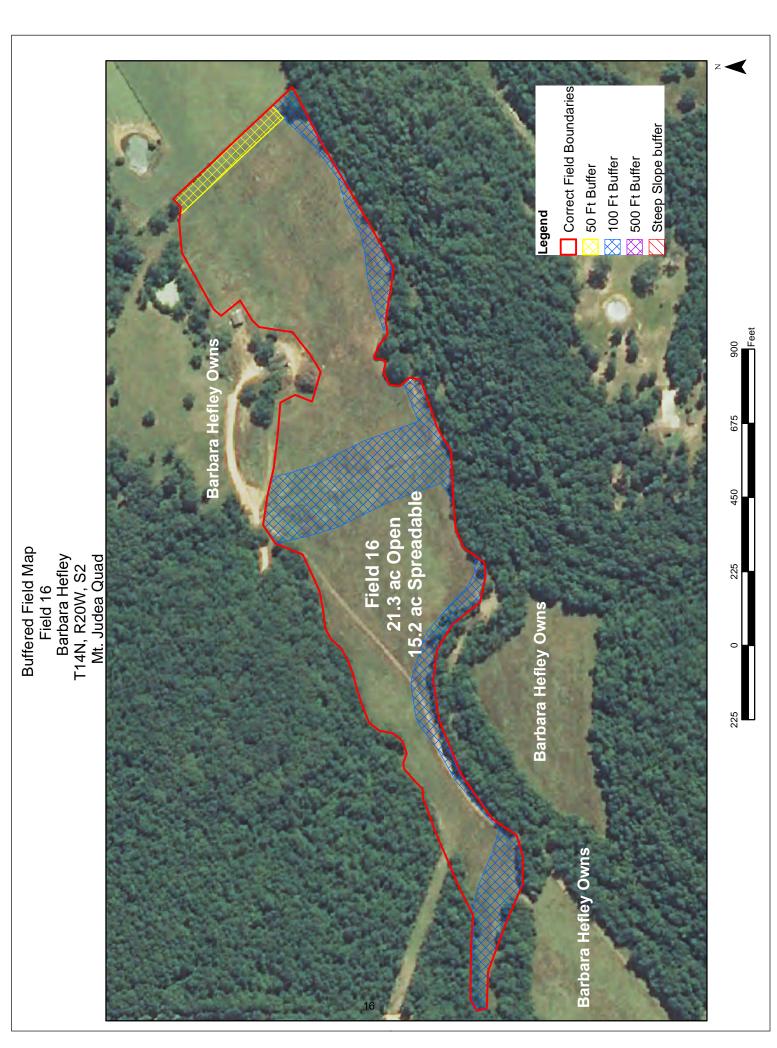
- Correct Field Boundaries
- 🚫 50 Ft Buffer
- 🔀 100 Ft Buffer
- 🔀 500 Ft Buffer
- Steep Slope buffer



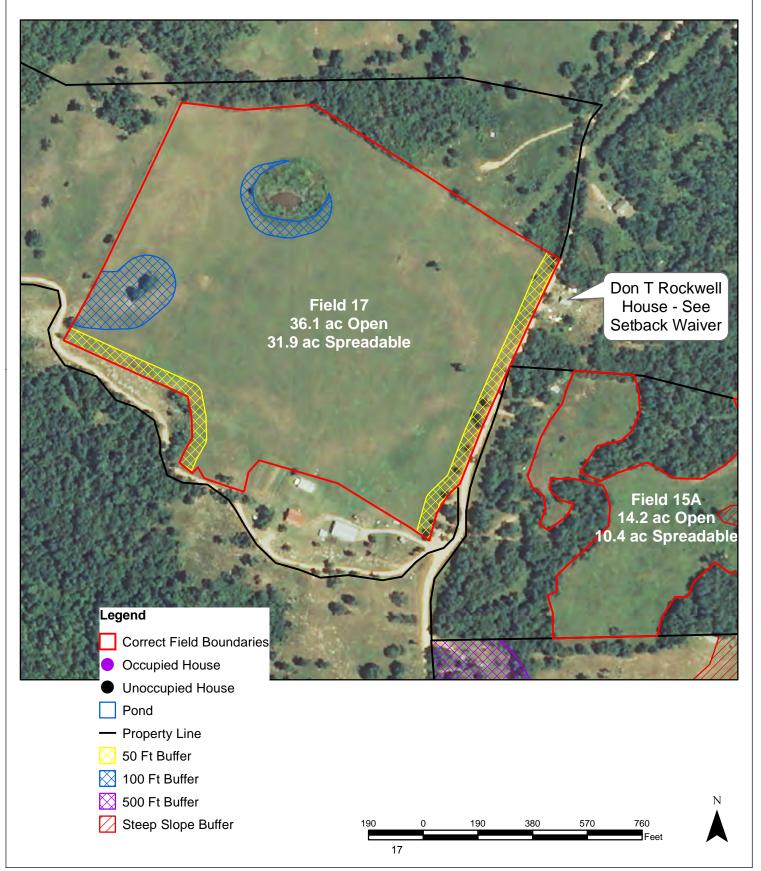
Buffered Field Map Field 14 Charles Campbell T15N, R20W, S35 Mt. Judea Quad



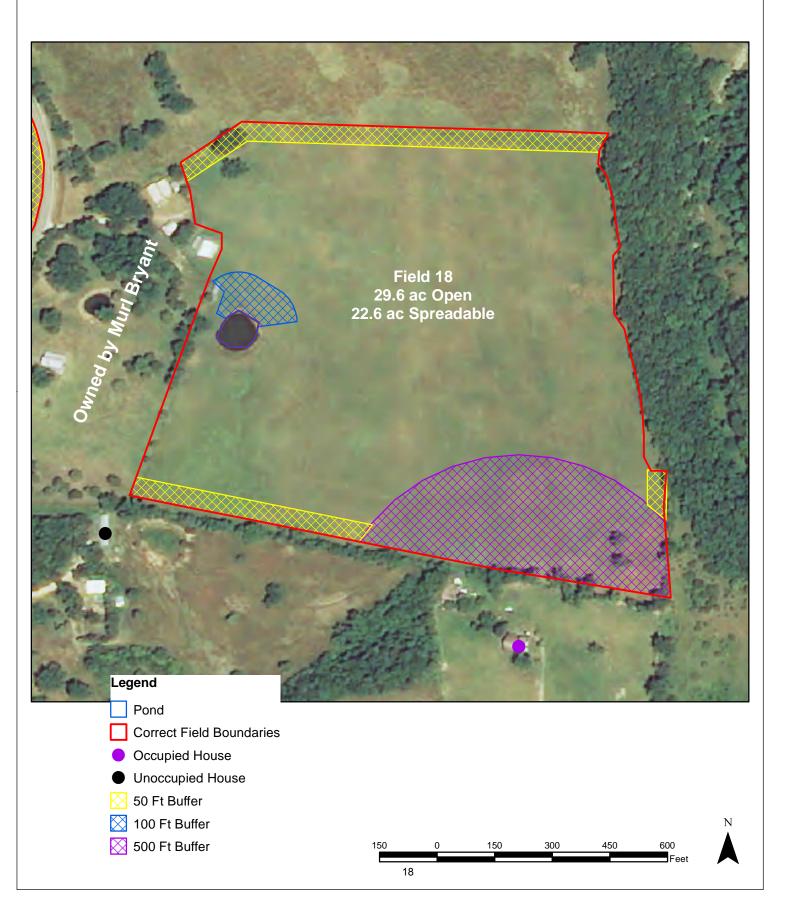




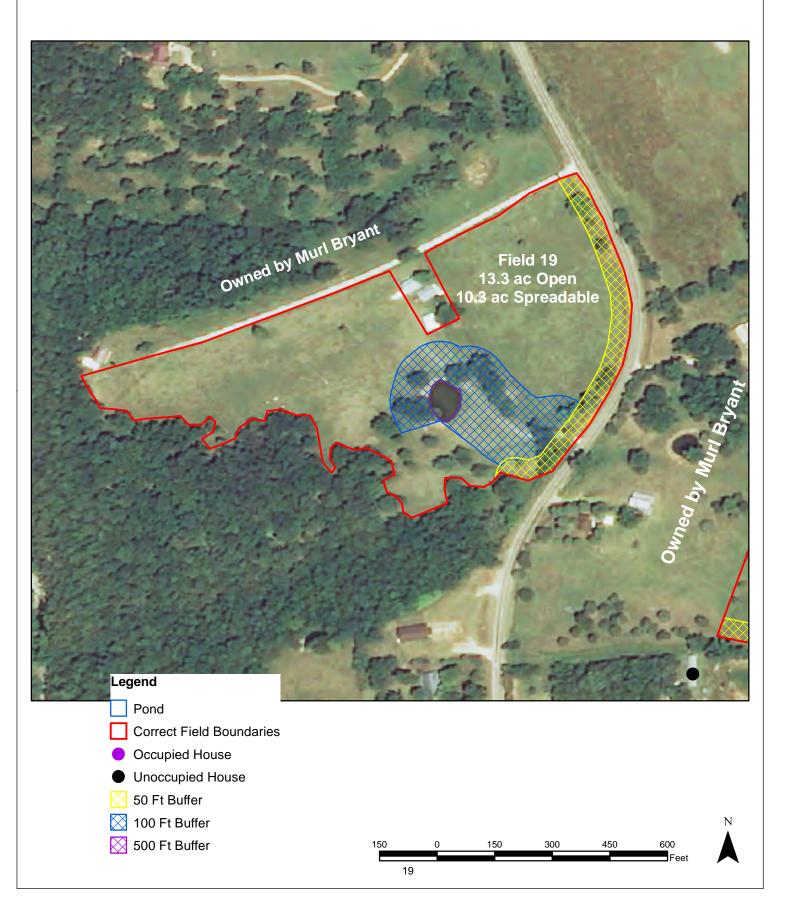
Buffered Field Map Field 17 Jason Criner T15N, R20W, S34 & 35 T14N, R20W, S2&3 Mt. Judea Quad



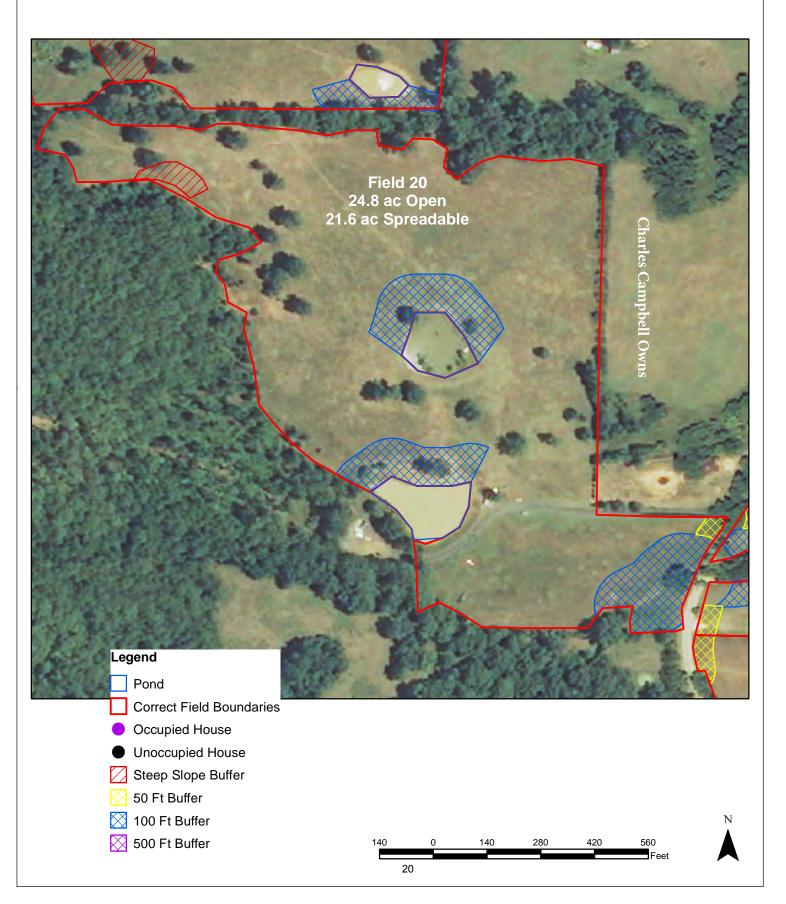
Buffered Field Map Field 18 Murl Bryant T15N, R20W, S25 Mt. Judea Quad



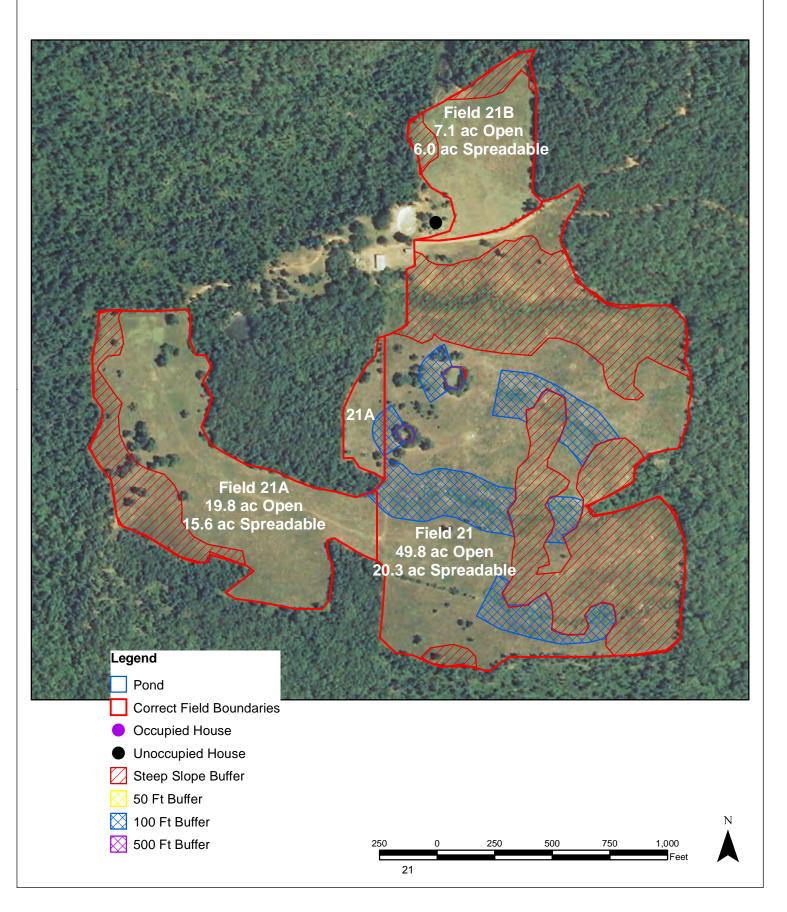
Buffered Field Map Field 19 Murl Bryant T15N, R20W, S25 Mt. Judea Quad



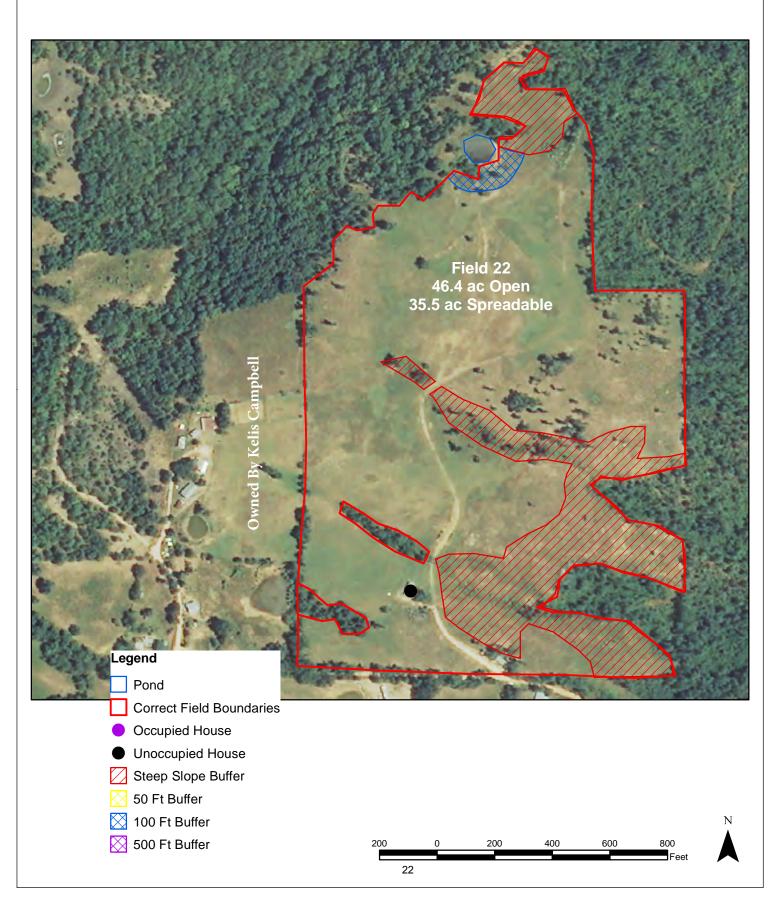
Buffered Field Map Field 20 Rondal Campbell T15N, R20W, S35 Mt. Judea Quad



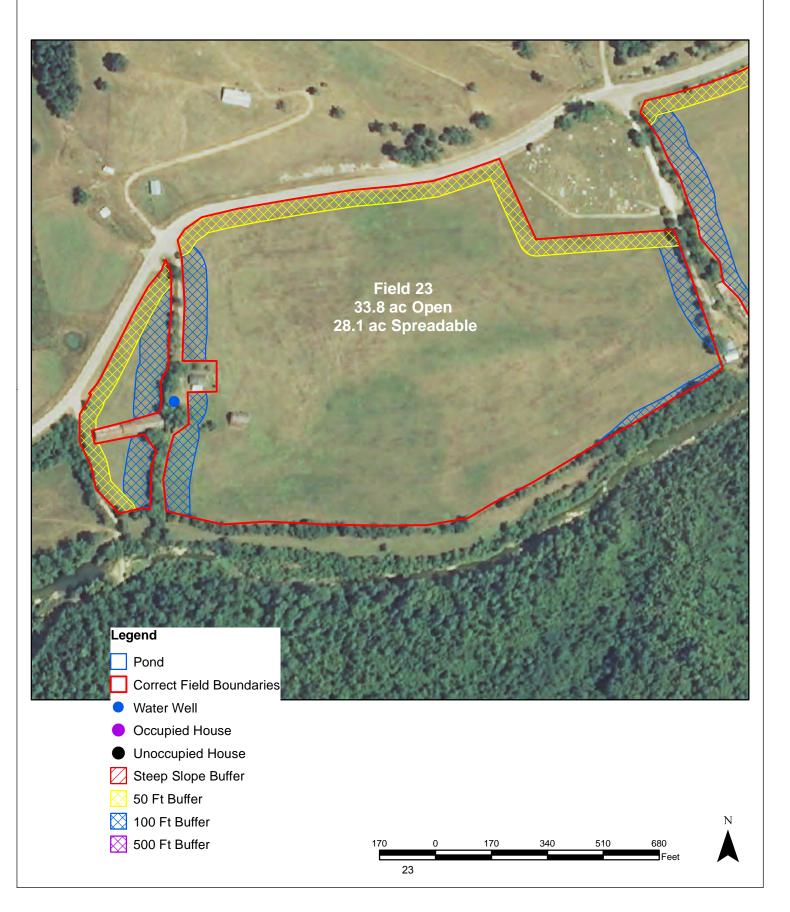
Buffered Field Map Fields 21, 21A, 21B Rondal Campbell T15N, R20W, S34 and S35 Mt. Judea Quad



Buffered Field Map Field 22 Kelis Campbell T15N, R20W, S26 Mt. Judea Quad



Buffered Field Map Greg Grice Field 23 T15N, R20W, S22 Mt. Judea Quad



Buffered Field Map Field 24 Donald Haddock T15N, R20W, S23 Mt. Judea Quad



- Unoccupied House
- 50 Ft Buffer
- 100 Ft Buffer
- 500 Ft Buffer \mathbb{X}
- Steep Slope Buffer

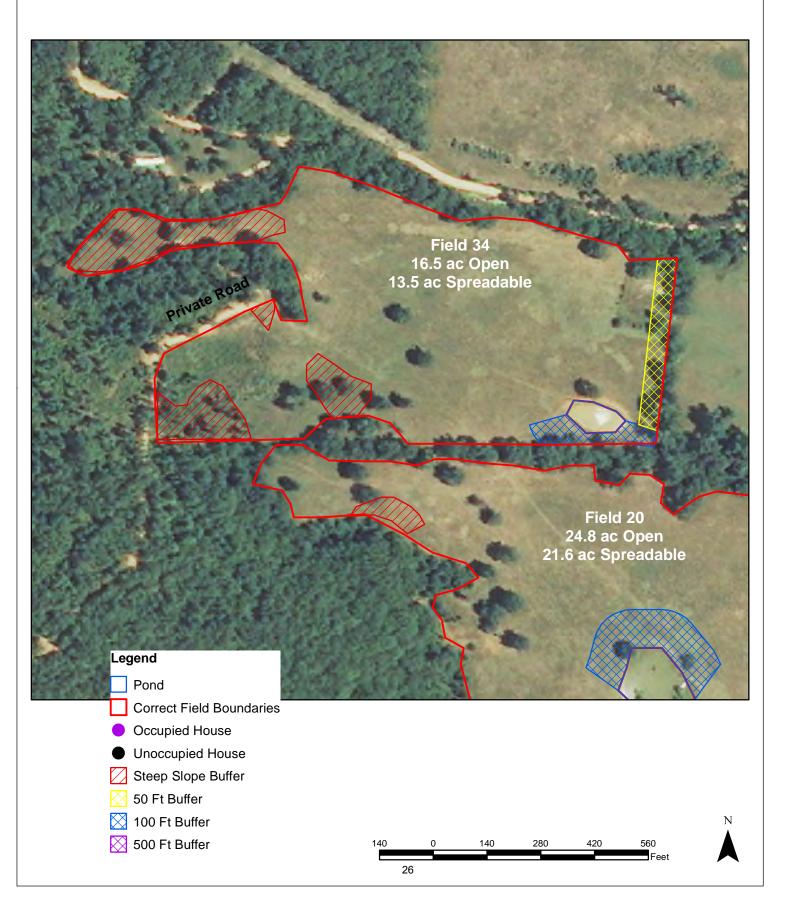


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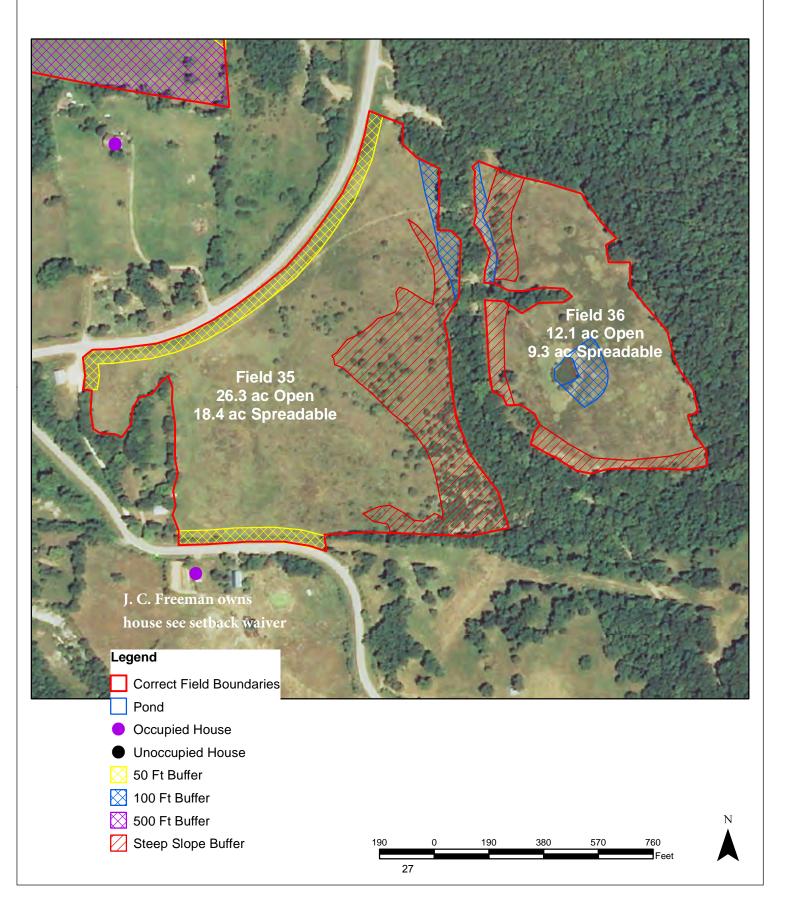
Buffered Field Map Field 32 & 33 Howard Criner T15N, R20W, S22 Mt. Judea Quad

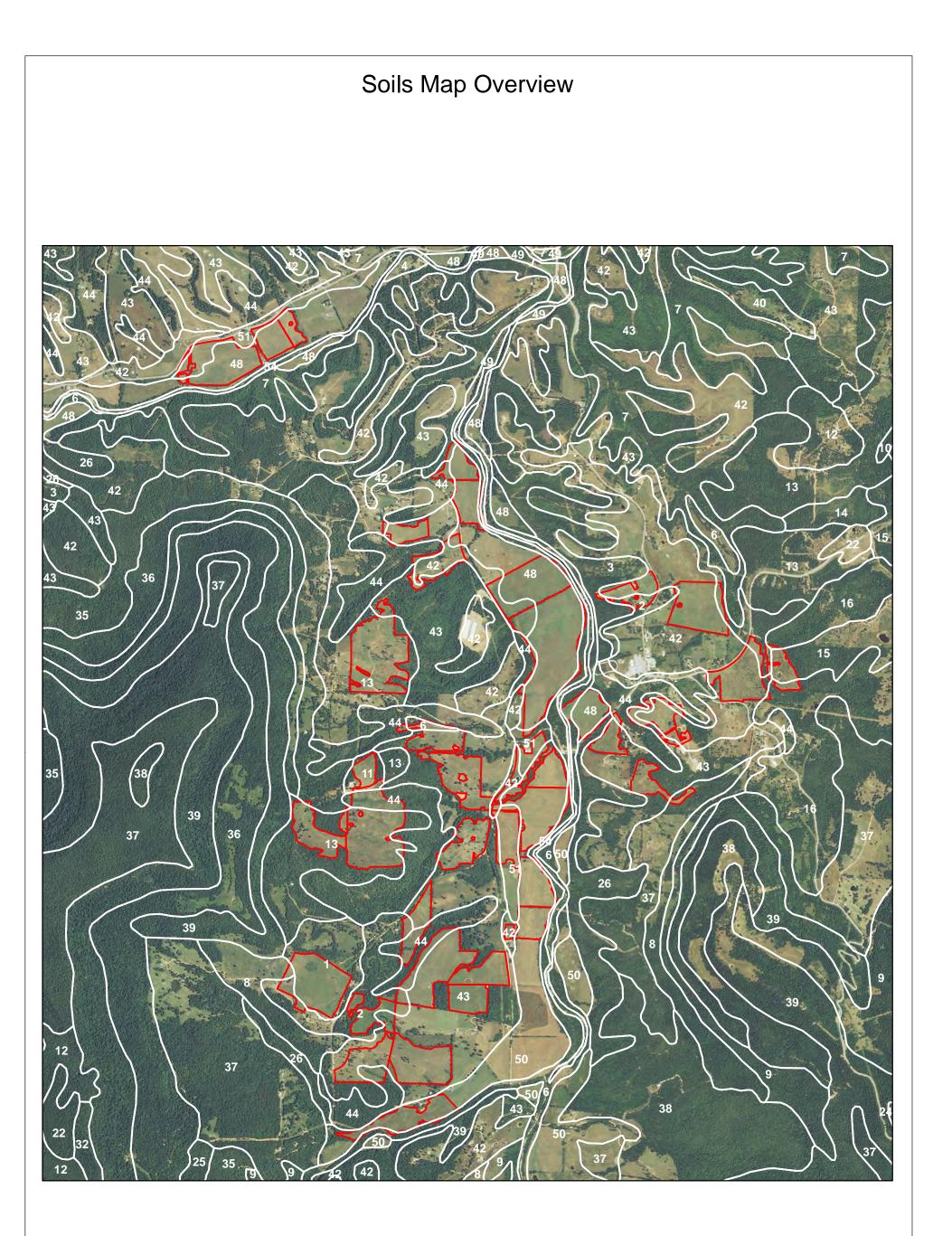


Buffered Field Map Rondal Campbell Field 34 T15N, R20W, S26 Mt. Judea Quad

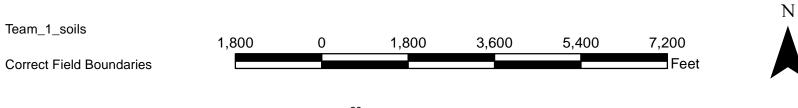


Buffered Field Map Fields 35 and 36 C & H Hog Farms, Inc. T15N, R20W, S25 Mt. Judea Quad





Legend



NAME

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SOIL LEGEND

The legend is numeric. Soils without a slope designation in the name are those on level to nearly level landscapes of occasionally or frequently flooded bottomlands. The soil name followed by the superscript 1/ is a mapping unit that was designed primarily for woodland management. Fewer soil examinations were made in these units and included areas are generally larger.

SYMBOL

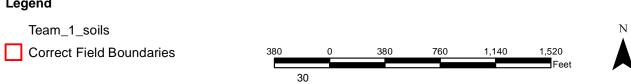
Arkana very cherty silt loam, 3 to 8 percent slopes 2 Arkana-Moko complex, 8 to 20 percent slopes 1/ 3 Arkana-Moko complex, 20 to 40 percent slopes 1/ 4 Britwater gravelly silt loam, 3 to 8 percent slopes 5 Ceda cobbly loam, frequently flooded Ceda-Kenn complex, frequently flooded 6 7 Clarksville very cherty silt loam, 20 to 50 percent slopes 8 Eden-Newnata complex, 8 to 20 percent slopes 1/ 9 Eden-Newnata complex, 20 to 40 percent slopes 1/ 10 Eden-Newnata-Rock outcrop complex, 40 to 60 percent slopes 1/ 11 Enders gravelly loam, 3 to 8 percent slopes Enders gravelly loam, 8 to 20 percent slopes Enders stony loam, 3 to 20 percent slopes 12 13 Enders stony loam, 20 to 40 percent slopes 14 15 Enders-Leesburg stony loams, 8 to 20 percent slopes 1/ 16 Enders-Leesburg stony loams, 20 to 40 percent slopes 1/ 17 Estate-Lily-Portia complex, 8 to 20 percent slopes 1/ Estate-Lily-Portia complex, 20 to 40 percent slopes 1/ 18 19 Leadvale silt loam, 3 to 8 percent slopes 20 Lily-Udorthents-Rock outcrop complex, 8 to 20 percent slopes 1/ 21 Lily-Udorthents-Rock outcrop complex, 20 to 40 percent slopes 1/ Linker loam, 3 to 8 percent slopes Linker gravelly loam, 3 to 8 percent slopes 22 23 24 Linker-Mountainburg complex, 3 to 8 percent slopes 25 Linker-Mountainburg complex, 8 to 20 percent slopes Moko-Rock outcrop complex, 15 to 50 percent slopes 1/ 26 27 Mountainburg gravelly fine sandy loam, 3 to 8 percent slopes 28 Mountainburg very stony fine sandy loam, 3 to 8 percent slopes 29 Mountainburg very stony fine sandy loam, 8 to 20 percent slopes Mountainburg very stony fine sandy loam, 20 to 40 percent slopes 30 31 Nella gravelly loam, 3 to 12 percent slopes Nella gravelly loam, 12 to 20 percent slopes 32 33 Nella stony loam, 8 to 20 percent slopes 34 Nella stony loam, 20 to 40 percent slopes 35 Nella-Enders stony loams, 8 to 20 percent slopes 1/ 36 Nella-Enders stony loams, 20 to 40 percent slopes 1/ Nella-Steprock complex, 8 to 20 percent slopes 1/ 37 38 Nella-Steprock-Mountainburg very stony loams, 20 to 40 percent slopes 1/ 39 Nella-Steprock-Mountainburg very stony loams, 40 to 60 percent slopes 1/ Nixa very cherty silt loam, 3 to 8 percent slopes 40 41 Nixa very cherty silt loam, 8 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 45 Peridge silt loam, 3 to 8 percent slopes 46 Portia sandy loam, 3 to 8 percent slopes 47 Portia sandy loam, 8 to 12 percent slopes 48 Razort loam, occasionally flooded 49 Riverwash, frequently flooded 50 Spadra loam, occasionally flooded 51 Spadra loam, 2 to 5 percent slopes 52 Steprock gravelly loam, 3 to 8 percent slopes

Wideman loamy fine sand, frequently flooded

53

PI

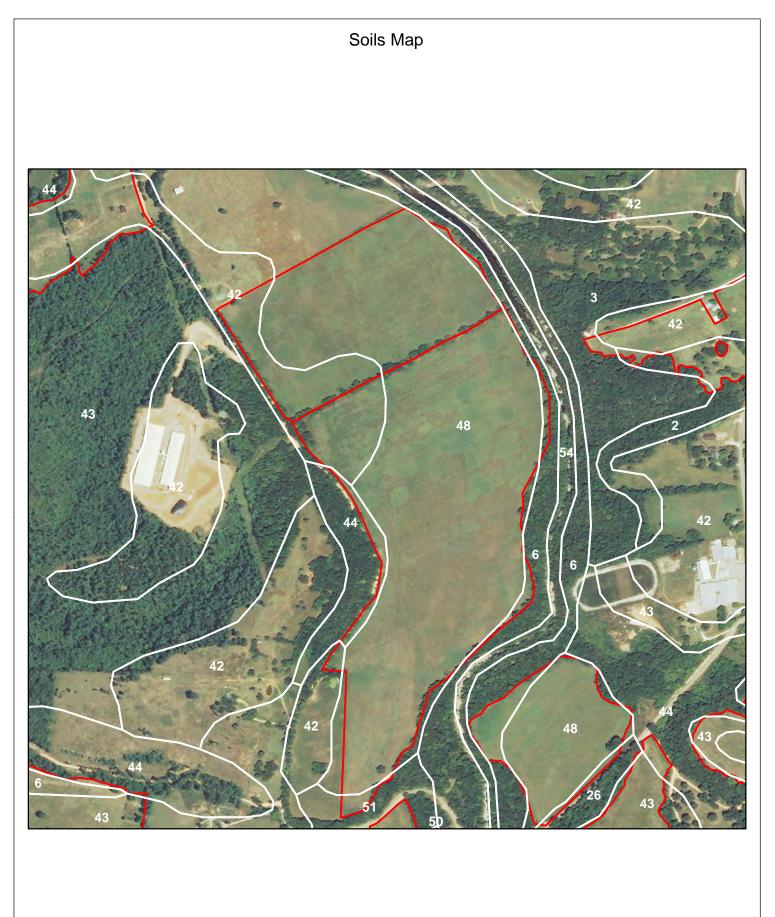
Legend





Team_1_soils
Correct Field Boundaries





Legend

Team_1_soils
Correct Field Boundaries





Team_1_soils Correct Field Boundaries

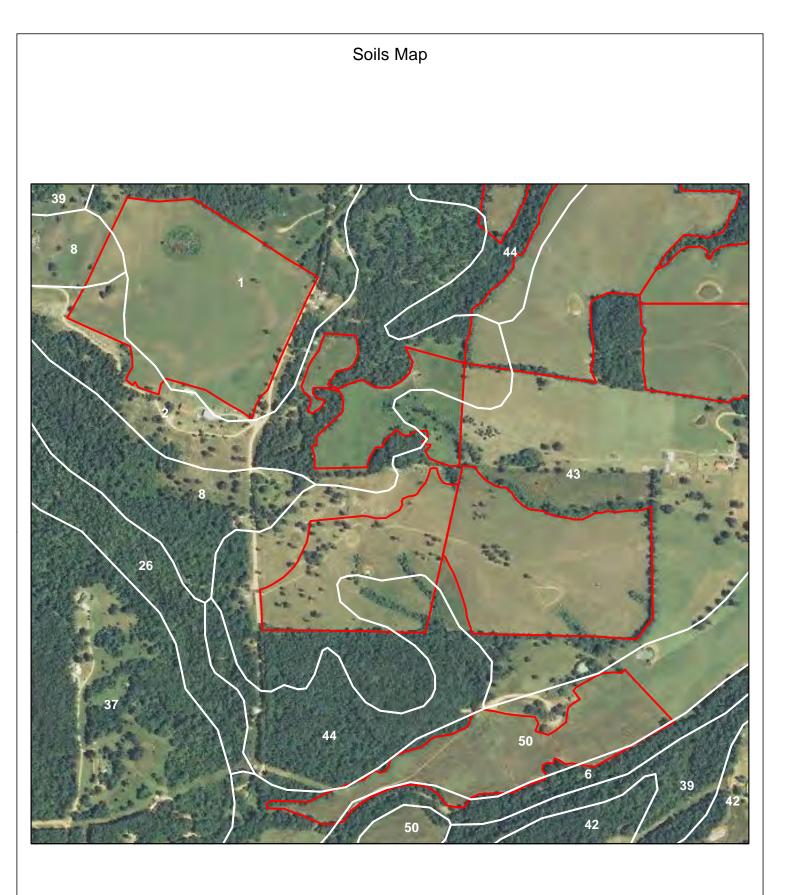




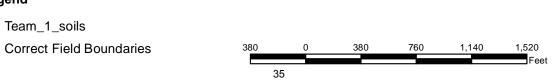
Legend

Team_1_soils Correct Field Boundaries



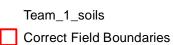




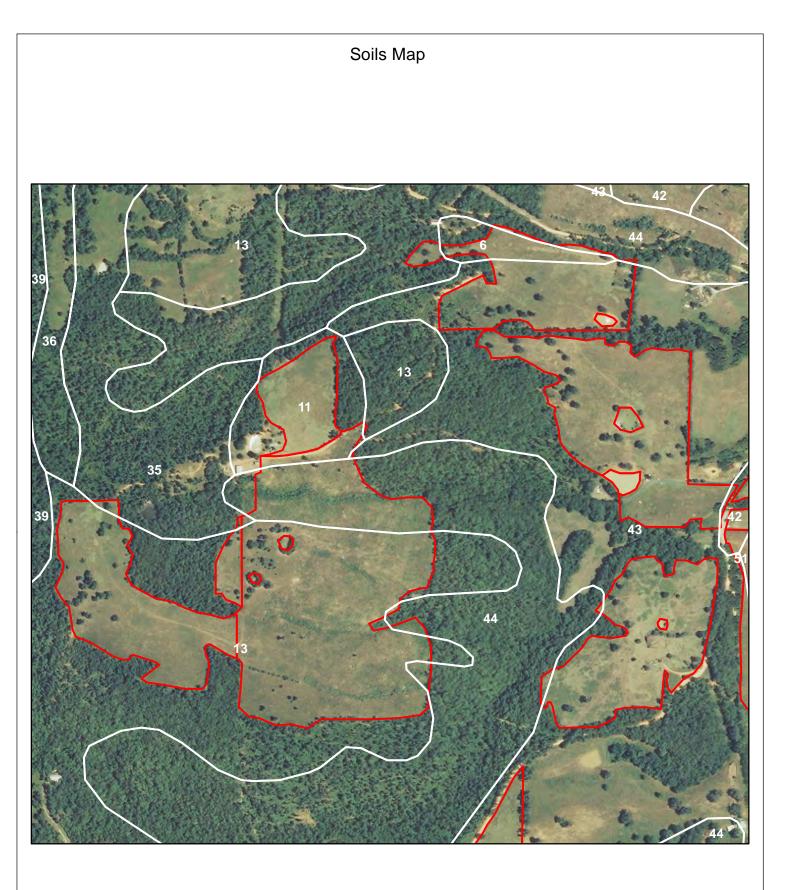


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Legend



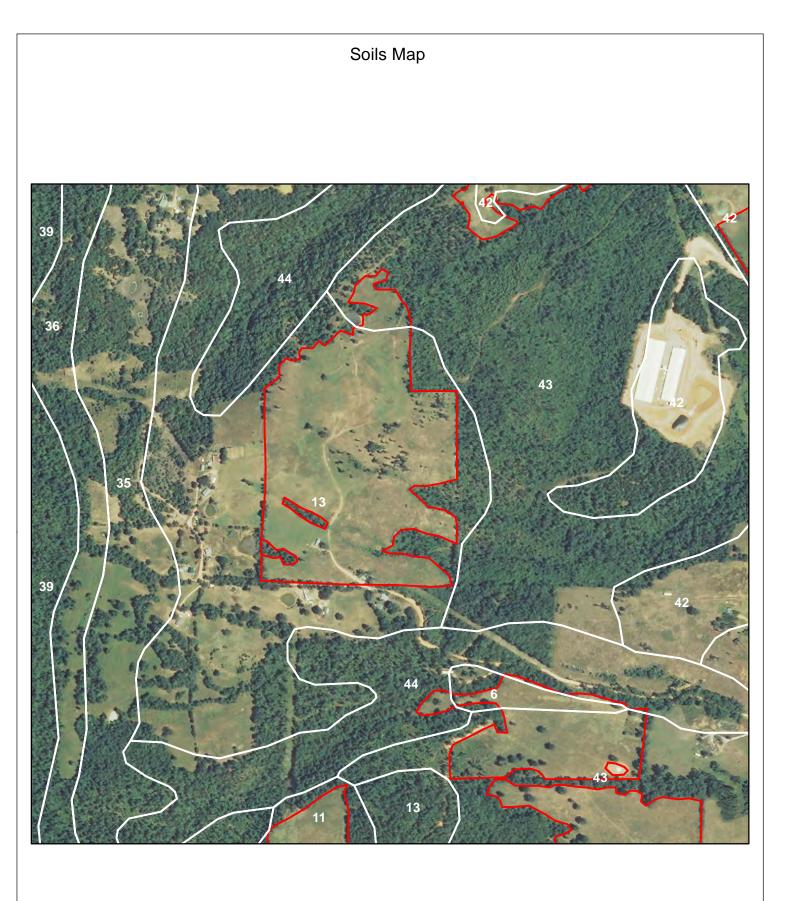




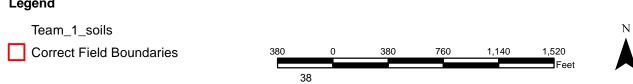


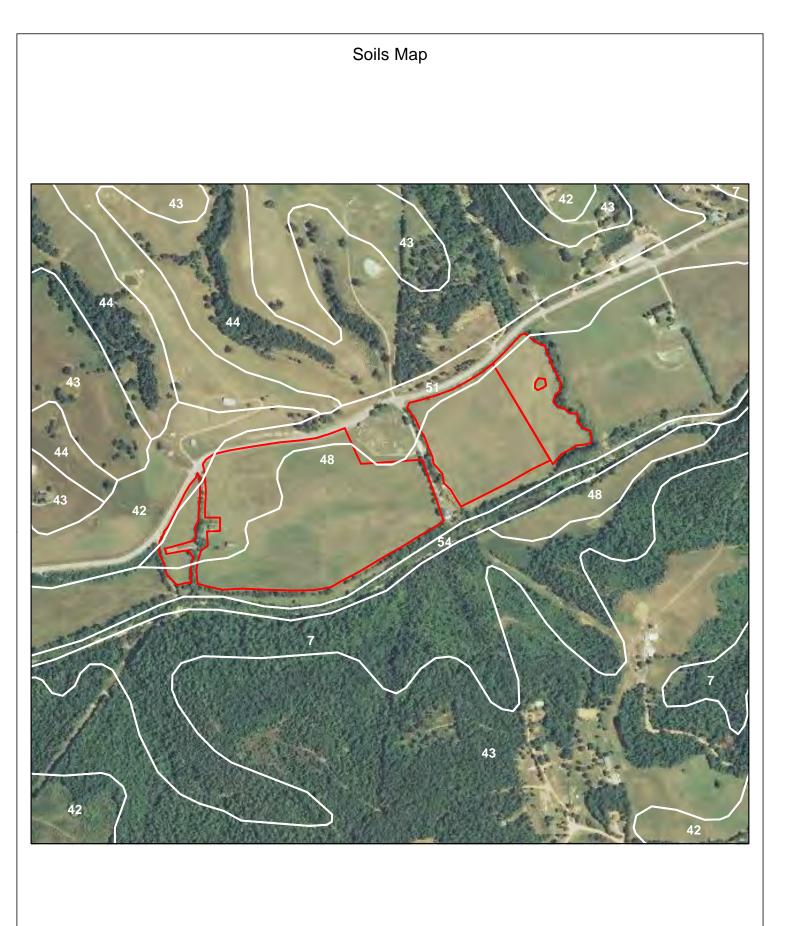
Team_1_soils
Correct Field Boundaries



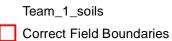


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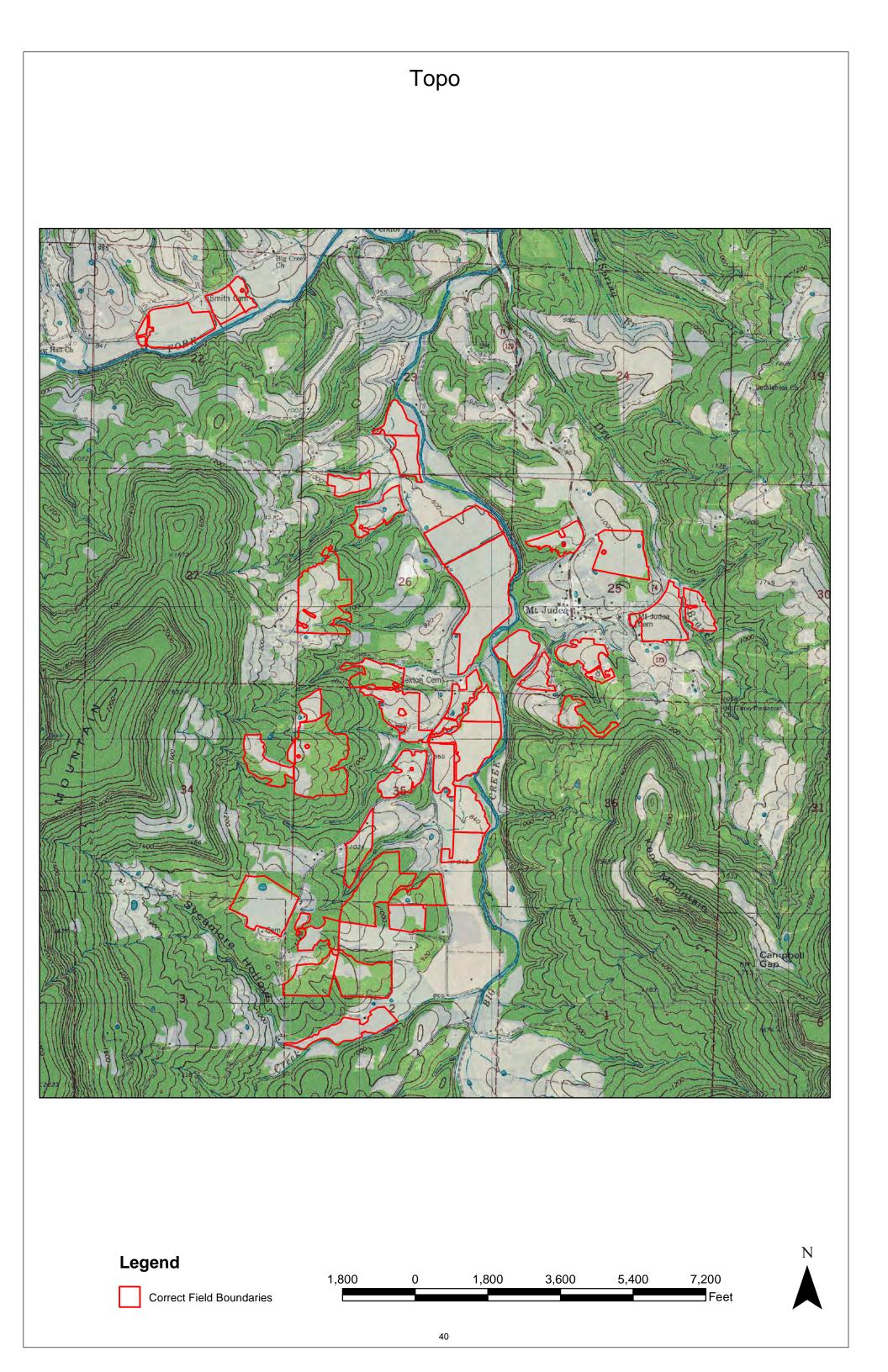


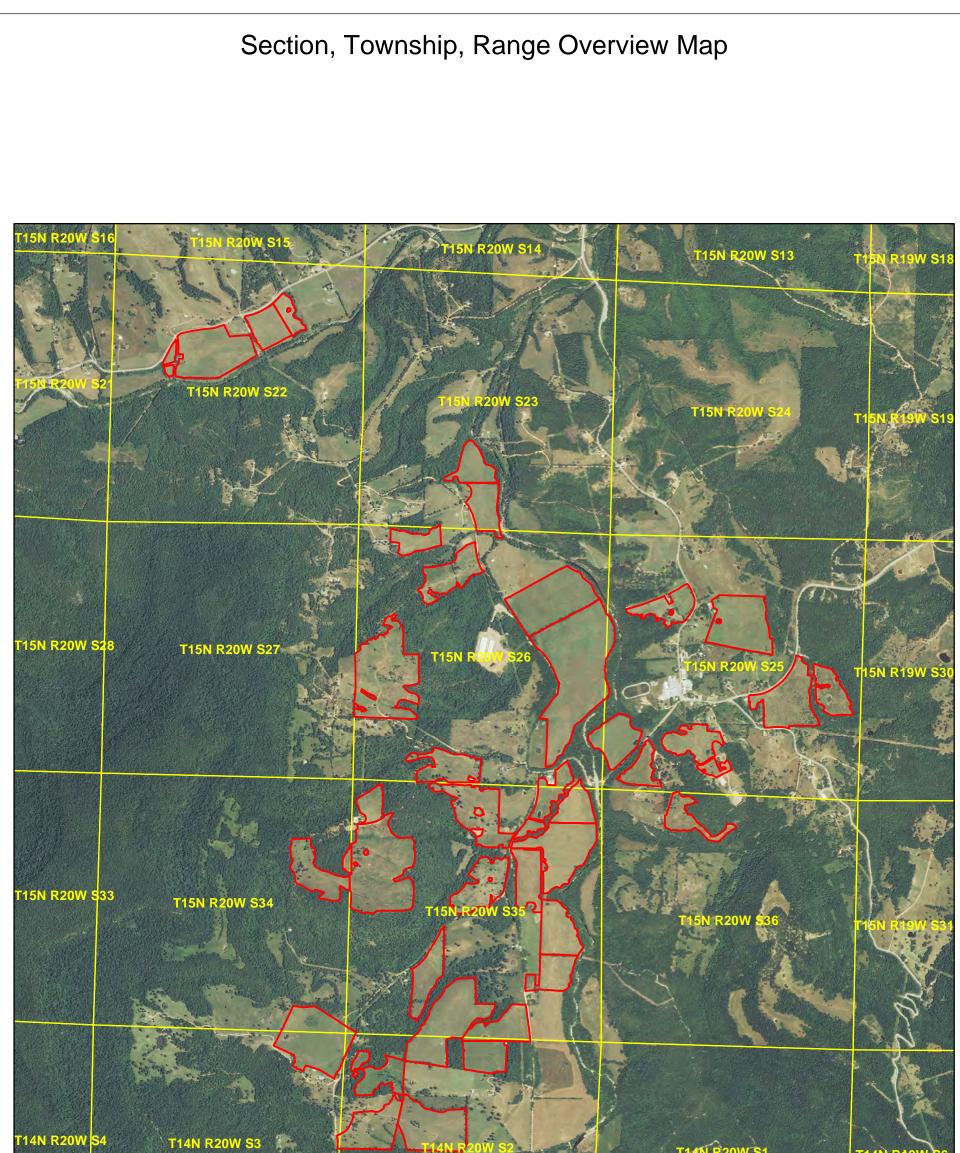


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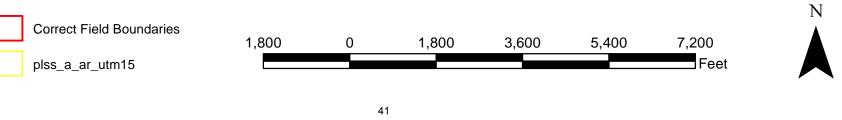




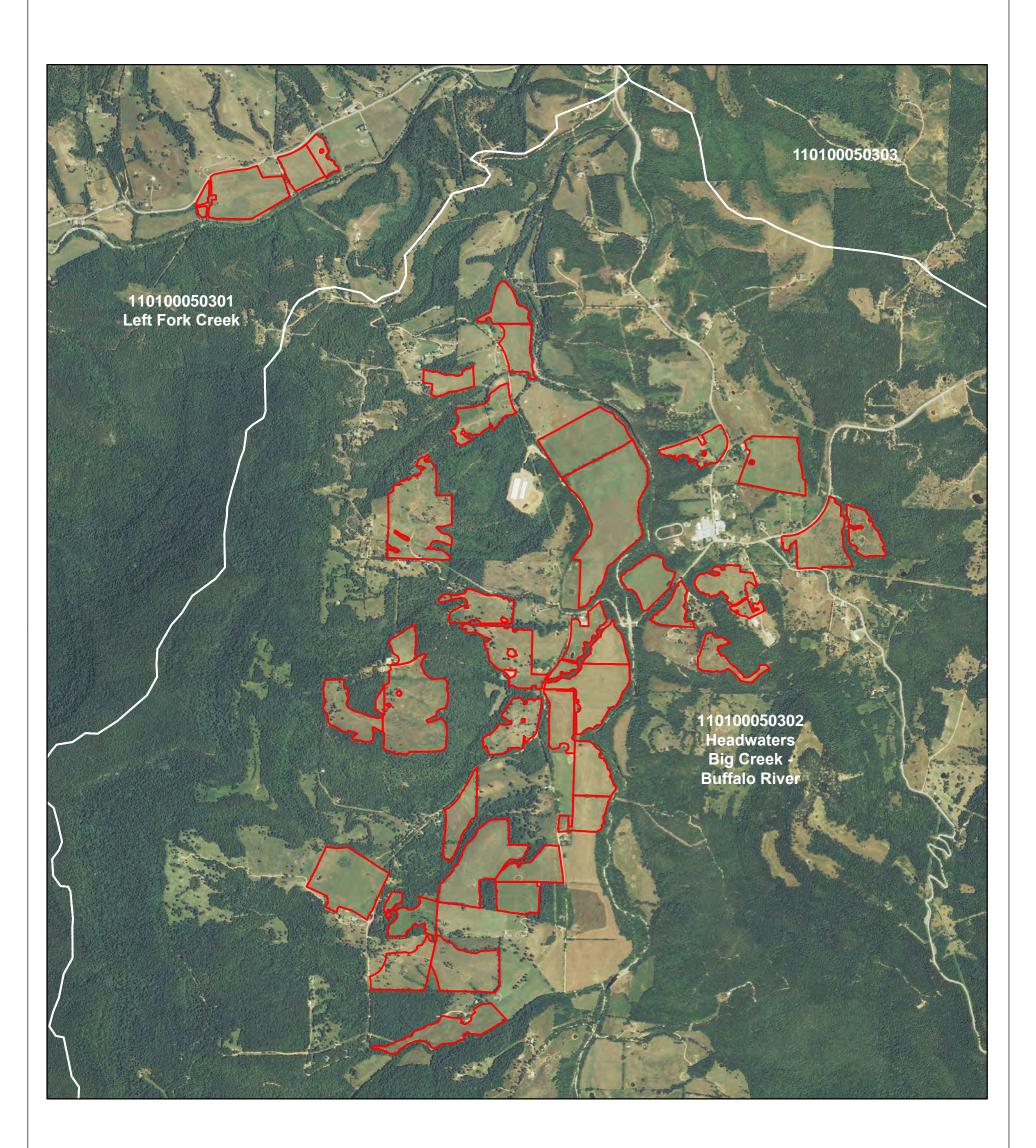




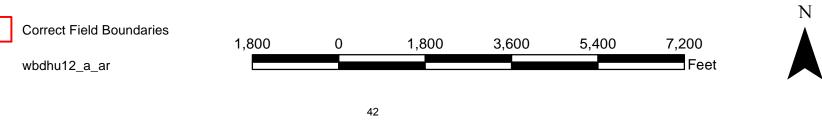
Legend



Watershed Overview Map



Legend





Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

JASON HENSON	Client ID	: 8706881318
HC 72 BOX 10		
MT JUDEA	AR	72655
Date Processed:	12/4	/2015
Field ID:	JH 1	1
Acres:	18	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unk	nown
County:	Pop	e
Lab Number:	154	610
Sample Number:	346	6528

The University of Arkansas is an equal opportunity/affirmative action institution.

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Р	95	190	Above Optimum
к	443	886	Above Optimum
Са	4722	9444	1.405627
Mg	169	338	
SO4-S Zn	19	38 15.8	100 - Hor
	7.9		
Fe	106	212	1
Mn	261	522	
Cu	1	2	1
В	0.6	1.2	
NO3-N	85	170	-

2. Soil Properties

	Property			Units	
Soil pH (1:2 soil-water)			7.1		
Soil EC (1:2 so	il-water)	-	-	umhos/cm	
Soil Estimated CEC			28.25	cmolc/kg	
Organic Matter (Loss on Ignition)				%	
Estimated Soil Texture			Clay		
	Care Mark				
	Estimat	ed Base Satu	iration (%)		
Total	Ca	Mg	К	Na	
92.92	83.58	4.99	4.02	0.34	

The second se		_
3. Recommendations	(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)	
S. Reconnendations	(notice, otate anoth recertar numeric management regulations may supersede these agronomitic recommendations.)	

Crop			P2O5	K20	S04-S	Zn	В	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	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	0
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.



Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

The University of Arkansas is an equal opportunity/affirmative action institution

JASON HENSON	Client ID: 8706881318
HC 72 BOX 10	
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	JH 2
Acres:	9
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	154611
Sample Number:	3466529

2. Soil Properties

No. of Street,	Property		Value	Units				
Soil pH (1:2 soil-water)		Soil pH (1:2 soil-water)		Soil pH (1:2 soil-water)			6.2	-
Soil EC (1:2 so	il-water)			umhos/cm				
Soil Estimated CEC			13.42	cmolc/kg				
Organic Matter (Loss on Ignition)			-	%				
Estimated Soil Texture			Silt Loam - S	ilty Clay Loam				
CO.S.	Estimat	ed Base Sat	turation (%)					
Total	Са	Mg	ĸ	Na				
73.91	60.41	7.70	5.41	0.39				

Nutrient	Conc	entration	Soil Test Leve
	ppm	Ib/acre	(Mehlich 3)
P	108	216	Above Optimum
к	283	566	Above Optimum
Са	1621	3242	
Mg	124	248	1
SO4-S	19	38	
Zn	5.3	10.6	- (11)
Fe	137	274	
Mn	326	652	
Cu	0.8	1.6	
В	0.4	0.8	
NO3-N	52	104	1

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

Crop			P2O5	K20	S04-S	Zn	В	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	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	0
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 ib N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.



Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	CC 3	
Acres:	17	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	nown
County:	Pope)
Lab Number:	1546	12
Sample Number:	3466	530

2. Soil Properties

Nutrient	Conc	entration	Soil Test Leve
	ppm	Ib/acre	(Mehlich 3)
Р	89	178	Above Optimum
к	89	178	Low
Са	1994	3988	
Mg	71	142	
SO4-S	11	22	÷ +
Zn	3.8	7.6	() · · · · ·
Fe	186	372	
Mn	253	506	1
Cu	1.6	3.2	1
В	0.4	0.8	
NO3-N	26	52	

Property			Value	Units
Soil pH (1:2 soil-water)			6.7	
Soil EC (1:2 so	il-water)			umhos/cm
Soil Estimated CEC			13.86	cmolc/kg
Organic Matter (Loss on Ignition)		n)		
Estimated Soil Texture			Silt Loam - S	ilty Clay Loam
	Estimat	ed Base Sat	uration (%)	
Total	Са	Mg	K	Na
78.35	71.96	4.27	1.65	0.47

	10 L 11		-
3. Recommendations	(Notice:	State and/or federal nutrient management regulations may supersede these agronomic recommendations.)	

	Crop	N	P2O5	K20	S04-S	Zn	В	Lime
Last Crop	Pasture (212)				Ib/acre			
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

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JASON HENSON HC 72 BOX 10	Client I	D: 8706881318
MT JUDEA	AR	72655
Date Processed:	12	2/4/2015
Field ID:	JH	14
Acres:	11	
Lime Applied in the last 4 years:	N	D
Leveled in past 4 years:	N	D
Irrigation:	Ur	nknown
County:	Po	ope
Lab Number:	15	54613
Sample Number:	34	466531

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level		
ppm		lb/acre	(Mehlich 3)		
Р	75	150	Above Optimum		
к	220	440	Above Optimum		
Са	1718	3436			
Mg	166	332	1		
SO4-S	19	38	() ·		
Zn	7.5	15			
Fe	255	510	1		
Mn	96	192	1. 2 4 3 -		
Cu	0.9	1.8			
В	0.4	0.8			
NO3-N	32	64	A Destantia d		

2. Soil Properties

	Property	225	Value	Units
Soil pH (1:2 so	il-water)		5.6	
Soil EC (1:2 so	il-water)			umhos/cm
Soil Estimated	CEC	2.2.1	15.64	cmolc/kg
Organic Matter	(Loss on Ignition	n)	and the second	%
Estimated Soil	Texture		Silty Clay Loa	m - Clay Loam
	Estimat	ed Base Sa	turation (%)	
Total	Са	Mg	K	Na
68.03	54.92	8.84	3.61	0.67

3. Recom	mendations (Notice: State and/or federal nutrient mana	igement regi	ulations may	supersed	e these agro	onomic reco	ommendat	ons.)
	Сгор	N	P2O5	K20	SO4-S	Zn	В	Lime
Last Crop	Pasture (212)				Ib/acre			1
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	0	0	0	5000
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	5000
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	5000

4. Crop 1 Notes:

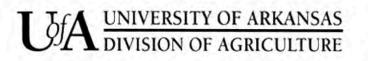
To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	GR 5	
Acres	24	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38459	
Sample Number:	2045423	

2 Coil Droportion

1. Nutrient Ava	ailability In	dex		2. Soil Prop	erties			
Nutrient	Conce	entration	Soil Test Level	Pro	perty		Value	Units
Huthom	ppm	lb/acre	(Mehlich 3)		porty		Tara	Unito
Р	63	126	Above Optimum	Soil pH (1:2 s	oil-water)		6.5	
к	123	246	Medium	Soil EC (1:2 s	oil-water)	1.		umhos/cm
Са	2331	4662		Soil ECEC	Soil ECEC		16	cmolc/kg
Mg	104	208	A	Organic Matter (Loss on Ignition)		n)		%
SO4-S	9	18	π.	Estimated Soil Texture Silty Clay Loam - Clay Loa			- Clay Loam	
Zn	5.4	10.8						
Fe	141	282						
Mn	86	172		-	Estimate	ed Base Satu	ration (%)	
Cu	1.6	3.2			Estimate	eu Dase Sall	nation (%)	
В	0.5	1.0	a and a second	Total	Ca	Mg	к	Na
NO3-N	16	32	**	81.1	73.4	5.5	2.0	0.3

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

	Сгор	N	P2O5	K20	SO4S	Zn	в	Lime
Last Crop	Pasture (207)				- Ib/acre			
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Winter Annuals (EST/MNT) (210)	90	0	40	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	SR 6	
Acres	5	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38460	
Sample Number:	2045424	

2. Soil Properties

Ca

45.5

1. Nutrient Ava	Nutrient Availability Index				
Nutrient	Conce	entration	Soil Test Level	Pr	
Nutrient	ppm	Ib/acre	(Mehlich 3)		
P	116	232	Above Optimum	Soil pH (1:2	
к	216	432	Above Optimum	Soil EC (1:2	
Ca	698	1396		Soil ECEC	
Mg	70	140		Organic Mat	
SO4-S	12	24	CALCOLOUR HAR AND	Estimated S	
Zn	3.4	6.8	1		
Fe	120	240	() - () - () - ()	1	
Mn	181	362	1	Tanana and	
Cu	0.4	0.8			
В	0.3	0.6	-	Total	
NO3-N	13	26		60.8	

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	8	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt	Loam
Estimated Base	e Saturation (%)	

Mg

7.6

K

7.2

Na

0.5

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

	Сгор	N	P2O5	K20	SO4S	Zn	В	Lime	
ast Crop Pasture (207)		lb/acre							
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0	
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	0	
Crop 3	Crop 3 Winter Annuals (EST/MNT) (210)		0	0	0	0	0	0	

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON	Client ID:	8706881318				
HC 72 BOX 10						
MTN JUDEA	AR	72655				
Date Processed:	4/1/2014					
Field ID:	GR 6A					
Acres	9					
Lime Applied in the last 4 years:	No					
Leveled in past 4 years:	No					
Irrigation:	Unknown					
County:	Роре					
Lab Number:	38461					
Sample Number:	2045425					

Silt Loam - Silty Clay Loam

κ

5.2

Units

umhos/cm

cmolc/kg %

Na

0.5

1. Nutrient Ava	ailability In	dex		2. Soil Prop	erties		
Nutrient	Conce	Intration	Soil Test Level	Pro	perty	V	alue
Nutrient	ppm	lb/acre	(Mehlich 3)	110	roperty		aluc
Р	111	222	Above Optimum	Soil pH (1:2 so	oil-water)		5.8
К	238	476	Above Optimum	Soil EC (1:2 s	oil-water)		P
Са	1133	2266		Soil ECEC			12
Mg	117	234		Organic Matte	r (Loss on Ignition	n)	
SO4-S	16	32		Estimated Soi	I Texture	Sil	It Loam -
Zn	4.8	9.6	H H				
Fe	130	260		A Transmission			
Mn	244	488			Entimate	ad Base Catural	lan (9/)
Cu	0.9	1.8		1. 2	Estimate	ed Base Satura	tion (%)
В	0.4	0.8		Total	Са	Mg	, I
NO3-N	29	58		61.9	48.0	8.3	5

eral nutrient management regulations may supersede these agronomic recommendations.)

	Crop	N	P2O5	K20	SO4S	Zn	В	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	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	0
Crop 3 Warm-Season Grasses (MNT) (207)		60	0	0	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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Р	89	178	Above Optimum
к	88	176	Low
Са	889	1778	
Mg	116	232	
SO4-S	15	30	11
Zn	6.4	12.8	1
Fe	182	364	
Mn	205	410	1-2-5-5
Си	1.6	3.2	1 H
В	0.2	0.4	
NO3-N	20	40	

JASON HENSON HC 72 BOX 10	Client ID: 8706881318
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	EGC 7
Acres:	73
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	154614
Sample Number:	3466532

2. Soil Properties

Property			Value	Units	
Soil pH (1:2 soil-water)			5.4	-	
Soil EC (1:2 sc	il-water)		-	umhos/cm	
Soil Estimated	CEC	101	10.24	cmolc/kg	
Organic Matter	(Loss on Ignition	n)		%	
Estimated Soil Texture			Silt Loam		
	Estimat	ed Base Satu	ration (%)		
		Mg	K	Na	
56.04	43.42	9.44	2.20	0.98	

	Сгор	N	P2O5	K20	S04-S	Zn	В	Lime	
ast Crop Hay (144)		lb/acre							
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	5000	
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	5000	
Crop 3			1						

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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	EGC 7A	
Acres	34	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Pope	
Lab Number:	38463	
Sample Number:	2045427	

Silt Loam

K

1.6

Units

umhos/cm

cmolc/kg %

Na

0.7

Nutrient	Concentration		Soil Test Level	Pro	perty		/alue
Nutrient	ppm			FIG	perty	v	alue
P	38	76	Optimum	Soil pH (1:2 so	oil-water)		5.5
к	55	110	Very Low	Soil EC (1:2 s	oil-water)		
Са	751	1502		Soil ECEC			9
Mg	75	150		Organic Matte	er (Loss on Ignition	ו)	
SO4-S	12	24		Estimated Soi	I Texture		Sil
Zn	3.5	7.0	ш.				-
Fe	131	262					
Mn	172	344		-	Estimate	d Dana Catura	AL (0/)
Cu	1.5	3.0		110.00.00	Estimate	ed Base Satura	ition (%)
В	0.3	0.6		Total	Ca	Mg	12.43
NO3-N	13	26	1	50.5	41.3	6.9	1

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

	Сгор	N	P2O5	K20	SO4S	Zn	В	Lime
ast Crop Hay (134)		lb/acre						
Crop 1	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	350	0	0	0	4000
Crop 2	Warm-Season Grasses (MNT) (207)	60	0	160	0	0	0	4000
Crop 3 Winter Annuals (EST/MNT) (210)		90	0	120	0	0	0	4000

4. Crop 1 Notes:

1.1

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

JASON HENSON	Client ID: 8706881318
HC 72 BOX 10	
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	CC 8
Acres:	11
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	154615
Sample Number:	3466533

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Р	82	164	Above Optimum
к	111	222	Medium
Са	2083	4166	
Mg	95	190	1.2.2.2.2
SO4-S	12	24	
Zn	4.4	8.8	
Fe	155	310	1
Mn	224	448	1
Cu	0.9	1.8	
В	0.4	0.8	
NO3-N	30	60	

2. Soil Properties

Property			Value	Units			
Soil pH (1:2 soil-water)			6.5				
Soil EC (1:2 soil-water)			Soil EC (1:2 soil-water)		100	and the second	umhos/cm
Soil Estimated CEC			14.57	cmolc/kg			
Organic Matter (Loss on Ignition)			1. 1. A. A	%			
Estimated Soil Texture			Silty Clay Loa	m - Clay Loam			
	Estimate	ed Base Sat	uration (%)				
Total	Са	Mg	к	Na			
79.41	71.48	5.43	1.95	0.54			

3. Recom	mendations (Notice: State and/or federal nutrient mana	agement regu	ulations may	supersed	e these agro	nomic reco	ommendati	ons.)
	Crop	N	P2O5	K2O	SO4-S	Zn	В	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Crop 1 Mixed Cool and Warm Season Grasses 4 ton (144)		0	180	0	0	0	0
Crop 2	2 Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)		0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Division of Agriculture RESEARCH & EXTENSION University of Arkansas System

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JASON HENSON HC 72 BOX 10	Client ID: 8706881318		
MT JUDEA	AR 72655		
Date Processed:	12/4/2015		
Field ID:	CC 8A		
Acres:	3		
Lime Applied in the last 4 years:	No		
Leveled in past 4 years:	No		
Irrigation:	Unknown		
County:	Pope		
Lab Number:	154616		
Sample Number:	3466534		

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Р	72	144	Above Optimum
к	79	158	Low
Са	1606	3212	W. Y. Star
Mg	80	160	· · · · · · · · · · · · · · · · · · ·
SO4-S	13	26	1
Zn	3	6	1
Fe	168	336)
Mn	194	388	1
Cu	0.8	1.6	
В	0.3	0.6	
NO3-N	20	40	-

2. Soil Properties

Property			Value	Units		
Soil pH (1:2 soil-water)			6.2	-		
Soil EC (1:2 soil-water)				umhos/cm		
Soil Estimated CEC			12.45	cmolc/kg		
Organic Matter (Loss on Ignition)						
Estimated Soil Texture			Silt Loam - Silty Clay Loan			
	Estimat	ed Base Sat	uration (%)			
Total	Са	Mg	к	Na		
71.89	64.49	5.35	1.63	0.42		

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

	Crop	N	P2O5	K2O	S04-S	Zn	В	Lime		
Last Crop	Pasture (212)	lb/acre								
Crop 1 Mixed Cool and Warm Season Grasses 4 ton (144)		160	0	220	0	0	0	0		
Crop 2 Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)		300	0	300	0	0	0	0		
Crop 3 Mixed Cool and Warm-Season Grasses for Pasture (212)		60	0	100	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

The University of Arkansas is an equal opportunity/affirmative action institution.

1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Ρ	82	164	Above Optimum
к	87	174	Low
Са	3027	6054	
Mg	96	192	
SO4-S	= 11	22	1011-14 Pt
Zn	5.2	10.4	
Fe	198	396	C
Mn	140	280	
Cu	2	4	
В	0.5	1	
NO3-N	32	64	

JASON HENSON	Client ID:	8706881318
HC 72 BOX 10		
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	CC 9	Ê
Acres:	30	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	iown
County:	Pope	
Lab Number:	1546	17
Sample Number:	3466	535

2. Soil Properties

	Property		Value	Units	
Soil pH (1:2 soil-water)			6.9		
Soil EC (1:2 sc	il-water)		1.0.0	umhos/cm	
Soil Estimated CEC			18.75	cmolc/kg	
Organic Matter (Loss on Ignition)			%		
Estimated Soil Texture			С	lay	
	Estimat	ed Base Satu	uration (%)		
Total	Са	Mg	к	Na	
86.66	80.74	4.27	1.19	0.46	

2	Decommondations	(Notice:	State and/or federal nutrient management regulations may supersede these agronomic recommendations.)	_
э.	Recommendations	(NULICE.	State and/or recertal nutrient management regulations may supersede these agronomic recommendations.)	

Crop Last Crop Pasture (212)		N	P2O5	K2O	S04-S	Zn	В	Lime
		lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	220	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	300	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	100	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

University of Arkansas System

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

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JASON HENSON HC 72 BOX 10	Client ID: 8706881318		
MT JUDEA	AR	72655	
Date Processed:	12	2/4/2015	
Field ID:	C	C 9A	
Acres:	12		
Lime Applied in the last 4 years:	N	2	
Leveled in past 4 years:	No	0	
Irrigation:	U	hknown	
County:	Po	ope	
Lab Number:	15	64618	
Sample Number:	34	66536	

2. Soil Properties

Property		200	Value	Units
Soil pH (1:2 soil-water)			6.6	
Soil EC (1:2 soil-water)				umhos/cm
Soil Estimated CEC			16.13	cmolc/kg
Organic Matter (Loss on Ignition)				%
Estimated Soil	Texture		Silty Clay Loa	m - Clay Loam
	Estimat	ed Base Sa	turation (%)	
Total	Са	Mg	к	Na
81.40	75.41	3.98	1.48	0.54

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Р	67	134	Above Optimum
К	93	186	Medium
Са	2433	4866	in the second
Mg	77	154	I
SO4-S	11	22	
Zn	2.5	5	
Fe	156	312	
Mn	169	338	the state of the s
Cu	1.5	3	
В	0.3	0.6	1
NO3-N	23	46	

3. Recom	mendations (Notice: State and/or federal nutrient mana Crop	N N	P2O5	K2O	SO4-S	Zn Zn	B	Lime
Last Crop Pasture (212)		lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

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JASON HENSON HC 72 BOX 10	Client ID: 8706881318
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	FD 10
Acres:	15
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Роре
Lab Number:	154619
Sample Number:	3466537

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level	
	ppm	Ib/acre	(Mehlich 3)	
Р	72	144	Above Optimum	
к	109	218	Medium	
Са	1462	2924	1	
Mg	144	288		
SO4-S	17	34	D	
Zn	5.5	11		
Fe	294	588		
Mn	199	398	Sector and	
Cu	2	4	1	
В	0.3	0.6		
NO3-N	72	144	1	

2. Soil Properties

Property			Value	Units
Soil pH (1:2 soil-water)			5.3	
Soil EC (1:2 soil-water)				umhos/cm
Soil Estimated CEC			14.45	cmolc/kg
Organic Matter (Loss on Ignition)				%
Estimated Soil Texture			Silt Loam - S	ilty Clay Loam
	Estimat	ed Base Sat	uration (%)	
Total	Ca	Mg	к	Na
61.93	50.60	8.31	1.93	1.08

	Crop	N	P2O5	K20	S04-S	Zn	В	Lime
Last Crop Pasture (212)		lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	5000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	5000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

JASON HENSON HC 72 BOX 10	Client I	D: 8706881318
MT JUDEA	AR	72655
Date Processed:	12	2/4/2015
Field ID:	B	C 10A
Acres:	18	3
Lime Applied in the last 4 years:	N	D
Leveled in past 4 years:	N	0
Irrigation:	U	nknown
County:	P	ope
Lab Number:	15	54620
Sample Number:	34	466538

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Р	100	200	Above Optimum
к	125	250	Medium
Са	1380	2760	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Mg	127	254	1
SO4-S	15	30	
Zn	6.4	12.8	1
Fe	204	408	
Mn	206	412	
Cu	1.8	3.6	
В	0.4	0.8	*
NO3-N	32	64	

2. Soil Properties

Property			Value	Units	
Soil pH (1:2 soil-water)			5.7		
Soil EC (1:2 soil-water)				umhos/cm	
Soil Estimated CEC			12.91	cmolc/kg	
Organic Matter (Loss on Ignition)			and the second	%	
Estimated Soil Texture			Silt Loam - Silty Clay Loam		
22.2	Estimat	ed Base Sat	uration (%)		
Total	Са	Mg	к	Na	
65.14	53.45	8.20	2.48	1.01	

3. Recommendations	(Notice: State and/or federal nul	trient management regu	lations may	supersed	le these agro	nomic reco	mmendat	ions.)
The second second second second	Crop	M	DOOF	Vao	L COLC L	7- 1		Line

	Сгор		P2O5	K20	SO4-S	Zn	В	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

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JASON HENSON HC 72 BOX 10	Client ID: 8706881318
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	FD 11
Acres:	19
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Роре
Lab Number:	154622
Sample Number:	3466539

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level	
	ppm Ib/acre		(Mehlich 3)	
Р	62	124	Above Optimum	
к	150	300	Optimum	
Са	875	1750		
Mg	157	314		
SO4-S	20	40		
Zn	4.7	9.4		
Fe	157	314		
Mn	281	562		
Cu	0.9	1.8		
В	0.3	0.6		
NO3-N	23	46	-	

2. Soil Properties

	Property		Value	Units		
Soil pH (1:2 so	Soil pH (1:2 soil-water)		(1:2 soil-water) 5.4		5.4	
Soil EC (1:2 so	il-water)	1.00		umhos/cm		
Soil Estimated	CEC		10.64	cmolc/kg		
Organic Matter	(Loss on Ignitio	n)	1.000	%		
Estimated Soil	Texture		Silt	Loam		
	Fatimat	ad Pass Catu				
and the second	Estimat	ed Base Satu	ration (%)	and the second		
Total	Ca	Mg	к	Na		
57.70	41.13	12.30	3.62	0.65		

3. Recommendations	(Notice: State and/or federal nut	trient management regu	ulations may	y supersed	e these agro	nomic reco	mmendat	ons.)
	Cron	N	DOOF	120	LOACT	7. 1	D	Lime

	Crop		P205	K20	S04-S	Zn	В	Lime
Last Crop	Pasture (212)	-	lb/acre		lb/acre			
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	5000
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	0	0	0	0	0	5000
Crop 3	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	5000

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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level		
	ppm	Ib/acre	(Mehlich 3)		
Ρ	88	176	Above Optimum		
к	128	256	Medium		
Са	1247	2494			
Mg	101	202	Le Contra a		
SO4-S	14	28			
Zn	3.9	7.8	H		
Fe	185	370			
Mn	206	412			
Cu	1.5	3	1 m		
В	0.4	0.8			
NO3-N	21	42			

JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	RF 1	2
Acres:	13	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	nown
County:	Pope	
Lab Number:	1546	23
Sample Number:	3466	540

2. Soil Properties

	Property		Value	Units		
Soil pH (1:2 so	Soil pH (1:2 soil-water)		pil pH (1:2 soil-water)		5.8	
Soil EC (1:2 so	il-water)			umhos/cm		
Soil Estimated	CEC		12.00	cmolc/kg		
Organic Matter	(Loss on Ignition	n)	and the second	%		
Estimated Soil	Texture		Silt Loam - S	ilty Clay Loam		
	Estimate	ed Base Sal	uration (%)			
Total	Ca	Mg	к	Na		
62.50	51.96	7.01	2.73	0.80		

	Сгор	N	P2O5	K20	SO4-S	Zn	В	Lime
Last Crop	Pasture (212)				Ib/acre			
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Р	86	172	Above Optimum
к	176	352	Above Optimum
Са	1670	3340	
Mg	131	262	
SO4-S	18	36	1
Zn	7.6	15.2	· · · · · ·
Fe	122	244	- +
Mn	510	1020	
Cu	1.2	2.4	1 m
В	0.5	1	
NO3-N	45	90	

JASON HENSON	Client ID:	8706881318
HC 72 BOX 10 MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	CC 1	3
Acres:	13	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkn	lown
County:	Pope	50
Lab Number:	1546	24
Sample Number:	3466	541

2. Soil Properties

Property		27.00	Value	Units	
Soil pH (1:2 soil-water)			6.4		
Soil EC (1:2 soil-water)				umhos/cm	
Soil Estimated CEC			13.49	cmolc/kg	
Organic Matter (Loss on Ignition)			9		
Estimated Soil Texture			Silt Loam - S	ilty Clay Loam	
	Estimate	ed Base Sat	uration (%)		
Total	Ca	Mg	ĸ	Na	
74.06	61.88	8.09	3.34	0.74	

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

Crop Last Crop Pasture (212)			P2O5	K2O	S04-S	Zn	В	Lime
			lb/acre					
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	0
Crop 2	pp 2 Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)		0	0	0	0	0	0
Crop 3 Mixed Cool and Warm-Season Grasses for Pasture (212)		60	0	0	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

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The University of Arkansas is an equal opportunity/affirmative action institution.

1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	Ib/acre	(Mehlich 3)
Ρ	75	150	Above Optimum
к	233	466	Above Optimum
Са	1805	3610	
Mg	144	288	
SO4-S	18	36	
Zn	7.9	15.8	
Fe	110	220	· · · · · · · · · · · · · · · · · · ·
Mn	483	966	In a star
Cu	1.1	2.2	
В	0.6	1.2	1
NO3-N	46	92	-

JASON HENSON	Client ID:	8706881318
HC 72 BOX 10		
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	CC 1	3A
Acres:	37	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	iown
County:	Pope	
Lab Number:	1546	25
Sample Number:	3466	542

2. Soil Properties

Property			Value	Units
Soil pH (1:2 soil-water)			6.3	- +
Soil EC (1:2 so	il-water)			umhos/cm
Soil Estimated CEC			14.41	cmolc/kg
Organic Matter (Loss on Ignition)			12.1.1.1	%
Estimated Soil Texture			Silt Loam - S	ilty Clay Loam
ne!	Estimat	ed Base Sat	uration (%)	
Total	Ca	Mg	к	Na
75.70	62.65	8.33	4.15	0.57

3. Recom	mendations (Notice: State and/or federal nutrient mana	agement regu	lations may	supersed	e these agro	nomic reco	ommendati	ons.)
1.5.4.	Crop	N	P2O5	K2O	SO4-S	Zn	В	Lime
Last Crop	Pasture (212)	lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level		
	ppm	Ib/acre	(Mehlich 3)		
Р	61	122	Above Optimum		
к	227	454	Above Optimum		
Са	1730	3460	1		
Mg	121	242	1		
SO4-S	15	30			
Zn	4.8	9.6			
Fe	93	186			
Mn	477	954	140		
Cu	1	2	8		
В	0.5	1	10		
NO3-N	40	80			

JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	CC 1	3B
Acres:	16	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	iown
County:	Pope	
Lab Number:	1546	26
Sample Number:	3466	543

2. Soil Properties

Property			Value	Units	
Soil pH (1:2 so	Soil pH (1:2 soil-water)			-	
Soil EC (1:2 so	il-water)			umhos/cm	
Soil Estimated	CEC		13.31	cmolc/kg	
Organic Matter (Loss on Ignition)				%	
Estimated Soil Texture			Silt Loam - Silty Clay Loam		
	Estimat	ed Base Satu	iration (%)		
Total	Са	Mg	К	Na	
77.46	64.99	7.58	4.37	0.52	

O December of the	(Mation:	Chate and/or indexed a chieve and a second second state of the sec
3. Recommendations	fridelide.	State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

	Сгор	N	P2O5	K2O	S04-S	Zn	В	Lime
Last Crop	Pasture (212)			Ib/acre				
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

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JASON HENSON	Client ID: 8706881318				
HC 72 BOX 10 MT JUDEA	AR	72655			
Date Processed:	12/4/	/2015			
Field ID:	CC 1	4			
Acres:	15				
Lime Applied in the last 4 years:	No				
Leveled in past 4 years:	No				
Irrigation:	Unkr	nown			
County:	Pope				
Lab Number:	1546	527			
Sample Number:	3466	544			

1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Ρ	75	150	Above Optimum
к	149	298	Optimum
Са	894	1788	
Mg	145	290	
SO4-S	19 8.3	38 16.6	
Zn			- #
Fe	141	282	
Mn	446	892	1 4
Cu	1.1	2.2	A SHOT
В	0.3	0.6	
NO3-N	48	96	

2. Soil Properties

Property			Value	Units		
Soil pH (1:2 soil-water)			5.8	-		
Soil EC (1:2 soil-water)			-	umhos/cm		
Soil Estimated CEC			10.14	cmolc/kg		
Organic Matter (Loss on Ignition)				%		
Estimated Soil Texture			Silt Loam			
	Estimat	ed Base Satu	ration (%)			
Total	Са	Mg	К	Na		
60.55	44.09	11.92	3.77	0.77		

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

PSA.	Crop	N	P2O5	K2O	S04-S	Zn	В	Lime
Last Crop	Pasture (212)	lb/acre						1000
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	150	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

The University of Arkansas is an equal opportunity/affirmative action institution.

1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Ρ	72	144	Above Optimum
к	144	288	Optimum
Са	908	1816	1022.48
Mg	155	310	1
SO4-S	18	36	
Zn	6.9	13.8	
Fe	131	262	- 0 4 . 8
Mn	498	996	24
Cu	1.5	3	
В	0.4	0.8	
NO3-N	45	90	

JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	C1C	15
Acres:	28	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	nown
County:	Pope	
Lab Number:	1546	28
Sample Number:	3466	545

2. Soil Properties

Property			Value	Units	
Soil pH (1:2 so		5.7	-		
Soil EC (1:2 soil-water)				umhos/cm	
Soil Estimated	CEC		10.28	cmolc/kg	
Organic Matter (Loss on Ignition)				%	
Estimated Soil Texture			Silt Loam		
	Estimat	ed Base Satu	ration (%)		
Total	Са	Mg	K	Na	
61.10	44.15	12.56	3.59	0.80	

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recomm	nendations.)
---	--------------

Сгор		N	P2O5	K2O	SO4-S	Zn	В	Lime	
Last Crop	Pasture (212)	lb/acre							
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	150	0	0	0	4000	
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	4000	
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	40	0	0	0	4000	

4. Crop 1 Notes:

To favor col-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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:



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JASON HENSON	Client ID:	8706881318
HC 72 BOX 10		
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	C1C 15A	
Acres	10	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	-
Lab Number:	38485	
Sample Number:	2045502	

1. Nutrient Av	ailability In	dex		2. Soil Prop	erties			
Nutrient	Conce	ntration	Soil Test Level	Property		V	alue	Units
Nutrient	ppm	Ib/acre	(Mehlich 3)		perty		alue	Units
Р	18	36	Low	Soil pH (1:2 soil-water)			5.6	
к	98	196	Medium	Soil EC (1:2 soil-water)			1	umhos/cn
Са	1165	2330		Soil ECEC		12.1	11	cmolc/kg
Mg	81	162		Organic Matter (Loss on Ignition)		n)		%
SO4-S	11	22	*	Estimated Soil Texture		Si	Silt Loam - Silty Clay Loan	
Zn	2.5	5.0						
Fe	91	182						
Mn	133	266	*	1	Entimat	ed Base Satura	tion (9/)	
Cu	0.6	1.2	÷	1. Same	Estimat	ed base Satura	1000 (%)	
В	0.3	0.6		Total	Са	Mg	к	Na
NO3-N	27	54		60.2	51.5	6.0	2.2	0.5

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

	Сгор	N	P2O5	K2O	SO4S	Zn	В	Lime
Last Crop	Pasture (212)				- Ib/acre			1
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	80	60	0	0	0	4000
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	70	50	0	0	0	4000
Crop 3	Warm-Season Grasses (MNT) (207)	60	70	60	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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

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MT JUDEA AR 72655 Date Processed: 12/4/2015 Field ID: C1C 15B Acres: 21 Lime Applied in the last 4 years: No Leveled in past 4 years: No Irrigation: Unknown County: Pope 154630 Lab Number: Sample Number: 3466547

Client ID:

8706881318

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Р	66	132	Above Optimum
к	238	476	Above Optimum
Са	1600	3200	
Mg	201	402	4
SO4-S	25	50	
Zn	9.1	18.2	· · · ·
Fe	139	278	1
Mn	699	1398)
Cu	1.7	3.4	
В	0.5	1	((++
NO3-N	64	128	100

2. Soil Properties

JASON HENSON

HC 72 BOX 10

	Property		Value	Units	
Soil pH (1:2 soil-water)			5.9	+	
Soil EC (1:2 soil-water)				umhos/cm	
Soil Estimated CEC			13.86	cmolc/kg	
Organic Matter (Loss on Ignition)				%	
Estimated Soil Texture			Silty Clay Loam - Clay Loam		
	Estimat	ed Base Sat	uration (%)		
Total	Са	Mg	К	Na	
74.75	57,71	12.08	4.40	0.56	

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

	Сгор	N	P2O5	K2O	S04-S	Zn	В	Lime
Last Crop	Pasture (212)				Ib/acre			
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Ρ	68	136	Above Optimum
к	183 1145	366 2290	Above Optimum
Са			
Mg	138	276	
S04-S	17	34	1
Zn	4.9	9.8	
Fe	190	380	1.1.1.0
Mn	236	472	
Cu	1.4	2.8	
В	0.3	0.6	75.0., t e tra
NO3-N	47	94	

JASON HENSON	Client ID:	8706881318
HC 72 BOX 10		
MT JUDEA	AR	72655
Date Processed:	12/4/	2015
Field ID:	BH 1	6
Acres:	21	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unkr	nown
County:	Pope	
Lab Number:	1546	31
Sample Number:	3466	548

2. Soil Properties

Property			Value	Units
Soil pH (1:2 soil-water)			5.5	-
Soil EC (1:2 soil-water)				umhos/cm
Soil Estimated CEC			12.91	cmolc/kg
Organic Matter (Loss on Ignition)				%
Estimated Soil Texture			Silt Loam - S	ilty Clay Loam
	Estimate	ed Base Sat	uration (%)	
Total	Са	Mg	ĸ	Na
57.41	44.33	8.91	3.63	0.54

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

	Crop	N	P2O5	K20	S04-S	Zn	В	Lime
Last Crop	Pasture (212)	1			Ib/acre			
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	0	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	0	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Division of Agriculture RESEARCH & EXTENSION University of Arkansas System

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

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1.	Nutrient Availability	Index
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Nutrient	Conc	entration	Soil Test Level
	ppm	lb/acre	(Mehlich 3)
Ρ	86	172	Above Optimum
к	93	186	Medium
Са	2539	5078	1
Mg	106	212	Line terms
SO4-S	17	34	1
Zn	7.1	14.2	1.5 - 24
Fe	158	316	1000
Mn	207	414	1
Cu	1.9	3.8	i meniner
В	0.4	0.8	
NO3-N	38	76	

JASON HENSON HC 72 BOX 10	Client ID: 8706881318
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	JC 17
Acres:	36
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	154632
Sample Number:	3466549

2. Soil Properties

Property			Value	Units	
Soil pH (1:2 soil-water)			6.5		
Soil EC (1:2 soil-water)				umhos/cm	
Soil Estimated CEC			17.00	cmolc/kg	
Organic Matter (Loss on Ignition)				%	
Estimated Soil Texture			Silty Clay Loam - Clay Loam		
	Estimat	ed Base Sat	uration (%)		
Total	Ca	Mg	K	Na	
82.35	74.68	5.20	1.40	1.07	

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

Сгор		N	P2O5	K20	S04-S	Zn	В	Lime
Last Crop	Pasture (212)				Ib/acre			
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	0	180	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	0	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	MB 18	
Acres	37	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38472	
Sample Number:	2045507	

2. Soil Properties

Nutrient	Conce	ntration	Soil Test Level	1 (S N
Nutrient	ppm	lb/acre	(Mehlich 3)	
Р	42	84	Optimum	
к	54	108	Very Low	1112
Са	1683	3366		6.118
Mg	71	142	4	
S04-S	13	26	1	
Zn	3.7	7.4		
Fe	86	172		
Mn	339	678	¥.	Г
Cu	1.0	2.0		1
В	0.4	0.8		
NO3-N	29	58		1 - F

Property	Value	Units
Soil pH (1:2 soil-water)	6.5	
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	12	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt Loam - S	Silty Clay Loam
Estimated Base	e Saturation (%)	

	1.0	2.0						Contraction of the local division of the loc
	0.4	0.8		Total	Са	Mg	к	Na
	29	58	÷.	75.4	68.9	4.8	1,1	0.6
_								

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

Сгор		N	P2O5	K20	SO4S	Zn	В	Lime
Last Crop	Pasture (207)				- Ib/acre			
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	160	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	350	0	0	0	0
Crop 3	Winter Annuals (EST/MNT) (210)	90	0	120	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON	Client ID:	8706881318
HC 72 BOX 10 MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	MB 19	
Acres	10	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38473	
Sample Number:	2045508	

1. Nutrient Availability Index		2. Soil Properties						
Nutrient	Conce	ntration Ib/acre	Soil Test Level (Mehlich 3)	Pro	perty	Va	alue	Units
P	66	132	Above Optimum	Soil pH (1:2 so	oil-water)		5.8	
к	221	442	Above Optimum	Soil EC (1:2 s	oil-water)			umhos/cn
Са	1982	3964		Soil ECEC			14	cmolc/kg
Mg	100	200		Organic Matte	er (Loss on Ignitio	n)		%
SO4-S	13	26		Estimated Soi	I Texture	Sil	t Loam - Silty	Clay Loam
Zn	5.0	10.0	-					
Fe	92	184	·					
Mn	352	704			Estimat	od Base Catural	lan (0/)	manu a
Cu	1.1	2.2		5.	Estimat	ed Base Satural	tion (%)	
В	0.6	1.2	1999 - Print -	Total	Ca	Mg	к	Na
NO3-N	35	70	1 7 7	82.0	71.5	6.0	4.1	0.4

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

Сгор		N	P2O5	К2О	SO4S	Zn	В	Lime
Last Crop	Pasture (207)				- Ib/acre			
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	0	0	0	0	0
Crop 3	Winter Annuals (EST/MNT) (210)	90	0	0	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	-
Field ID:	RC 20	
Acres	30	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38474	
Sample Number:	2045509	

Soil Properties

Nutrient	Conce	ntration	Soil Test Level (Mehlich 3)	
Nutrient	ppm	lb/acre		
Р	63	126	Above Optimum	
к	168	336	Optimum	
Са	1612	3224		
Mg	103	206		
SO4-S	11	22	10 4 0 -	
Zn	3.6	7.2		
Fe	104	208	+	
Mn	234	468	÷.	
Cu	0.9	1.8	7 K	
В	0.6	1.2		
NO3-N	21	42	1 A A A A A A A A A A A A A A A A A A A	

Value	Units	
6.5		
	umhos/cm	
12	cmolc/kg	
	%	
Silt Loam - Silty Clay Loam		
	6.5	

0.6	1.2	 Total	Са	Mg	К	Na
21	42	75.8	65.0	6.9	3.5	0.4

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

Сгор		N	P2O5	K20	SO4S	Zn	В	Lime
Last Crop	Pasture (207)	lb/acre						
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Сгор З	Winter Annuals (EST/MNT) (210)	90	0	0	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON	Client ID:	8706881318
HC 72 BOX 10 MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	RC 21	
Acres	7	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Pope	
Lab Number:	38475	
Sample Number:	2045510	

Soil Properties

1. Nutrient Ava	ailability In	Idex		2. Soil Properti
Nutrient	Conce	entration	Soil Test Level	Property
ppm	ppm	lb/acre	(Mehlich 3)	riopen
Р	12	24	Very Low	Soil pH (1:2 soil-wa
к	142	284	Optimum	Soil EC (1:2 soil-wa
Ca	635	1270		Soil ECEC
Mg	72	144		Organic Matter (Lo
SO4-S	9	18	l A	Estimated Soil Tex
Zn	1.5	3.0		Ke an the
Fe	85	170	1	
Mn	174	348	+	
Cu	0.3	0.6	+	a second second
В	0.3	0.6		Total
NO3-N	13	26	The second second	62.6

Property	Value	
Soil pH (1:2 soil-water)	6.2	
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	7	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt	Loam

÷.		Estimat	1011 (76)		
	Total	Ca	Mg	к	Na
	62.6	47.5	9.0	5.4	0.7

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

	Сгор	N	P2O5	K2O	SO4S	Zn	В	Lime
Last Crop	Pasture (212)	ib/acre						
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	120	40	0	0	0	0
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	100	0	0	0	0	0
Crop 3	Warm-Season Grasses (MNT) (207)	60	100	0	0	0	0	0

4. Crop 1 Notes:

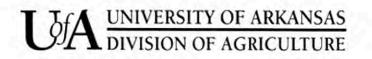
To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	RC21A	
Acres	24	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38505	
Sample Number:	2045465	

2. Soil Properties

Nutrient	Conce	entration	Soil Test Level
Nutrient	ppm	lb/acre	(Mehlich 3)
Р	21	42	Low
к	181	362	Above Optimum
Са	865	1730	
Mg	78	156	÷
SO4-S	11	22	÷
Zn	2.4	4.8	-
Fe	72	144	(A)
Mn	280	560	H.
Cu	0.7	1.4	n de la tra
В	0.3	0.6	
NO3-N	27	54	

6.3 umhos/c 8 cmolc/k
8 cmolc/k
%
Silt Loam

- 1 s	Estimated base Saturation (%)								
	Total	Са	Mg	к	Na				
	68.7	54.1	8.1	5.8	0.7				

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

	Сгор	N	P2O5	K20	SO4S	Zn	В	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	Pasture - Cool-Season Grasses (MNT) (203)	60	70	0	0	0	0	0
Crop 3	Warm-Season Grasses (MNT) (207)	60	70	0	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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318		
MTN JUDEA	AR	72655		
Date Processed:	4/1/2014			
Field ID:	RC 21B			
Acres	5			
Lime Applied in the last 4 years:	No			
Leveled in past 4 years:	No			
Irrigation:	Unknown			
County:	Роре			
Lab Number:	38490			
Sample Number:	2045451			

2. Soil Properties

Nutrient	Conce	entration	Soil Test Leve
	ppm	lb/acre	(Mehlich 3)
2	38	76	Optimum
к	162	324	Optimum
Са	910	1820	Lin Org
Mg	66	132	4
SO4-S	12	24	
Zn	2.3	4.6	44
Fe	117	234	14
Mn	119	238	
Cu	0.5	1.0	4
В	0.4	0.8	÷
NO3-N	18	36	

Property	Value	Units	
Soil pH (1:2 soil-water)	6.3		
Soil EC (1:2 soil-water)		umhos/cm	
Soil ECEC	8	cmolc/kg	
Organic Matter (Loss on Ignition)		%	
Estimated Soil Texture	Silt Loam		

Na 0.7

в	0.4	0.0	 Total	Ca	ivig	n	1
NO3-N	18	36	69.0	56.4	6.8	5.1	
							-

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

Сгор		N	P2O5	K2O	SO4S	Zn	В	Lime
Last Crop	Pasture (207)	lb/acre						
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Сгор 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	200	0	0	0	0
Сгор З	Winter Annuals (EST/MNT) (210)	90	0	0	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON	Client ID:	8706881318
HC 72 BOX 10 MTN JUDEA	AR	72655
		72000
Date Processed:	4/1/2014	
Field ID:	KC 22	
Acres	49	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38491	
Sample Number:	2045452	

operties

1. Nutrient Ava	ailability In	dex		2. Soil Pro
Nutrient	Conce	entration	Soil Test Level	Pr
Nutrient	ppm	lb/acre	(Mehlich 3)	
Р	38	76	Optimum	Soil pH (1:2
ĸ	126	252	Medium	Soil EC (1:2
Са	405	810		Soil ECEC
Mg	60	120		Organic Mat
SO4-S	13	26		Estimated Se
Zn	1.4	2.8	÷	
Fe	109	218	A	
Mn	156	312	-	
Cu	0.3	0.6		
В	0.2	0.4		Total
NO3-N	15	30		42.0

Property	Value	Units
Soil pH (1:2 soil-water)	5.6	
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	7	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Sand	y Loam
	h	

	Estimat	ed Base Saturat	ion (%)	
Total	Са	Mg	к	Na
 42.0	29.3	7.2	4.7	0.8

(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.) 3. Recommendations

	Сгор	N	P2O5	K20	SO4S	Zn	В	Lime
Last Crop	Pasture (212)	-			- Ib/acre		******	-
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	30	60	0	0	0	3000
Crop 2	Pasture - Cool-Season Grasses (MNT) (203)	60	0	50	0	0	0	3000
Сгор 3	Warm-Season Grasses (MNT) (207)	60	0	60	0	0	0	3000

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:

Apply the recommended rate of N, P, and K in late winter. For higher production apply an additional 50 lb N/Acre after every 4 to 6 weeks of grazing. For fall/winter grazing, apply 50 lbs N/Acre in late summer.

6. Crop 3 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.



JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	GN 23	
Acres	32	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38492	
Sample Number:	2045453	

2.6

1.1

0.8

2. Soil Properties

tration Ib/acre	Soil Test Level	Pro	perty	Value	Units
112	(Mehlich 3) Above Optimum	Soil pH (1:2 so	oil-water)	5.8	
70	Very Low	Soil EC (1:2 so			umhos/cm
1468		Soil ECEC		8	cmolc/kg
50		Organic Matte	r (Loss on Ignition)		%
22		Estimated Soil	Texture	Silt	Loam
3.0					· · · · · · · · · · · · · · · · · · ·
190	÷	19			
378	*		Estimated F	Base Saturation (%)	
1.0		1	Latinated		an The Car
0.4	1995 H 1997	Total	Ca	Mg H	K Na

45.7

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Nutrient	Conce	entration	Soil Test Level
Nutrient	ppm	lb/acre	(Mehlich 3)
Р	56	112	Above Optimum
к	35	70	Very Low
Са	734	1468	
Mg	25	50	Sec.
SO4-S	11	22	
Zn	1.5	3.0	
Fe	95	190	1.1.4
Mn	189	378	*
Cu	0.5	1.0	1997 - H
В	0.2	0.4	1
NO3-N	8	16	

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

	Сгор	N	P2O5	К2О	SO4S	Zn	В	Lime
Last Crop	Hay (134)				- Ib/acre			-
Crop 1	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	350	0	0	0	0
Crop 2	Warm-Season Grasses (MNT) (207)	60	0	160	0	0	0	0
Crop 3							1.2 2	11 E

50.2

4. Crop 1 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	DH 24	
Acres	12	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38493	
Sample Number:	2045454	

2. Soil Properties

Nutrient	Conce	entration	Soil Test Level	
Nutrient	ppm	lb/acre	(Mehlich 3)	
Р	45	90	Optimum	
к	68	136	Low	
Са	922	1844	+	
Mg	58	116	÷.	
SO4-S	14	28		
Zn	1.9	3.8		
Fe	126	252	-	
Mn	162	324		
Cu	1.0	2.0	4	
В	0.2	0.4	+	
NO3-N	11	22	19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

	Units
5.4	
	umhos/cm
10	cmolc/kg
	%
Silt	Loam
	10

Mg

4.9

κ

1.8

Na

0.6

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

	Crop	N	P2O5	K2O	SO4S	Zn	В	Lime
Last Crop	Pasture (207)				- Ib/acre			1
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	110	0	0	0	5000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	300	0	0	0	5000
Crop 3	Winter Annuals (EST/MNT) (210)	90	0	80	0	0	0	5000

Total

54.2

Ca

46.9

4. Crop 1 Notes:

100

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



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JASON HENSON	Client ID:	8706881318
HC 72 BOX 10 MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	HC 32	
Acres	15	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38503	
Sample Number:	2045463	

2. Soil Properties

Nutrient	Conce	entration	Soil Test Level
Nutrient	ppm	lb/acre	(Mehlich 3)
Р	57	114	Above Optimum
к	101	202	Medium
Са	707	1414	-
Mg	48	96	1
SO4-S	12	24	
Zn	1.9	3.8	4
Fe	99	198	-
Mn	260	520	#
Cu	0.6	1.2	4
В	0.2	0.4	1.00
NO3-N	15	30	-

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	7	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt	Loam
		100 million (1990)

4		Lotiniati	eu Dase Saturat	1011 (78)	
180	Total	Са	Mg	К	Na
*	58.6	48.7	5.5	3.6	0.8

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

	Сгор	N	P2O5	K20	SO4S	Zn	В	Lime
Last Crop	Pasture (207)				- Ib/acre ·			-
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	60	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	250	0	0	0	0
Crop 3	Winter Annuals (EST/MNT) (210)	90	0	40	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1. If S deficiency has occurred previously on this field apply 20 lb SO4-S/Acre.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.



JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	HC 33	
Acres	5	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Pope	
Lab Number:	38504	
Sample Number:	2045464	

2. Soil Properties

t Level ich 3)	Property	Value	Units
Optimum	Soil pH (1:2 soil-water)	6.0	
num	Soil EC (1:2 soil-water)		umhos/cm
	Soil ECEC	14	cmolc/kg
	Organic Matter (Loss on Ignition)		%
1.5	Estimated Soil Texture	Silty Clay Loa	am - Clay Loam
0			
	Entimated Rea	Columbian (9/)	-
1	Estimated bas	e Saturation (%)	

Mg

5.4

K

3.1

Na

0.4

Ca

65.2

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Nutrient	Conce	ntration	Soil Test Level
Nutrient	ppm	Ib/acre	(Mehlich 3)
Р	52	104	Above Optimum
к	165	330	Optimum
Са	1766	3532	π
Mg	88	176	
SO4-S	14	28	
Zn	3.6	7.2	
Fe	115	230	
Mn	156	312	
Cu	1.1	2.2	2040
В	0.3	0.6	i π.
NO3-N	12	24	1

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

Total

74.1

	Сгор	N	P2O5	K2O	SO4S	Zn	в	Lime
Last Crop	Pasture (207)				- Ib/acre			
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 2	Winter Annuals (EST/MNT) (210)	90	0	0	0	0	0	0
Сгор 3			2.4	77. TON				

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

5. Crop 2 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.

6. Crop 3 Notes:



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JASON HENSON HC 72 BOX 10	Client ID:	8706881318
MTN JUDEA	AR	72655
Date Processed:	4/1/2014	
Field ID:	RC 34	
Acres	10	
Lime Applied in the last 4 years:	No	
Leveled in past 4 years:	No	
Irrigation:	Unknown	
County:	Роре	
Lab Number:	38506	
Sample Number:	2045466	

2. Soil Properties

Nutrient	Conce	entration	Soil Test Level
Nutrient	ppm	lb/acre	(Mehlich 3)
Р	56	112	Above Optimum
к	134	268	Optimum
Са	638	1276	-
Mg	93	186	
SO4-S	13	26	÷
Zn	2.8	5.6	
Fe	108	216	1
Mn	195	390	÷
Cu	1.1	2.2	
В	0.5	1.0	1
NO3-N	18	36	

Property	Value	Units
Soil pH (1:2 soil-water)	5.9	
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	7	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silt	Loam

	Louind	ed Base Saturati	011 (10)	
Total	Са	Mg	к	Na
59.3	43.3	10.5	4.7	0.9

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

Сгор		N	P2O5	K2O	SO4S	Zn	В	Lime
Last Crop Pasture (207)		lb/acre						
Crop 1	Warm-Season Grasses (MNT) (207)	60	0	0	0	0	0	0
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	0	200	0	0	0	0
Сгор 3	Winter Annuals (EST/MNT) (210)	90	0	0	0	0	0	0

4. Crop 1 Notes:

Apply the recommended rates of N, P, and K, in spring when night temperatures are > 60 degrees F for 1 week. For higher production, topdress an additional 60 lb N/Acre after every 4 to 6 weeks of grazing. For fall grazing apply 50 lb N/Acre in early August. Do not apply N after September 1.

5. Crop 2 Notes:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 Notes:

Apply the recommended P and K fertilizer rates and one-third of the total N rate immediately before or after stand is successfully established. Apply the remaining N(60 lb N/Acre/application) during mid February. For higher production, apply an additional 50 lb N/Acre in mid March.

DIVISION OF AGRICULTURE RESEARCH & EXTENSION University of Arkansas System

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

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JASON HENSON	Client ID: 8706881318		
HC 72 BOX 10			
MT JUDEA	AR	72655	h
Date Processed:	12	2/4/2015	ī
Field ID:	C	H 35	
Acres:	26	5	
Lime Applied in the last 4 years:	N	D	
Leveled in past 4 years:	N	0	
Irrigation:	U	nknown	
County:	P	ope	1
Lab Number:	15	54664	
Sample Number:	34	466550	

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1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level	
ppm lb/acre		Ib/acre	(Mehlich 3)	
Ρ	40	80	Optimum	
к	92	184	Medium	
Са	681	1362	-	
Mg	89	178	-	
SO4-S	19	38	÷	
Zn	2.6	5.2		
Fe	111	222		
Mn	506	1012	and the second second	
Cu	0.7	1.4		
В	0.2	0.4		
NO3-N	36	72	-	

2. Soil Properties

Property			Value	Units
Soil pH (1:2 so	Soil pH (1:2 soil-water)		5.6	
Soil EC (1:2 so	il-water)			umhos/cm
Soil Estimated	CEC	141 5	8.43	cmolc/kg
Organic Matter (Loss on Ignition)		n)		%
Estimated Soil Texture			Silt	Loam
	Estimat	ed Base Satu	ration (%)	
Total	Са	Mg	К	Na
52.55	40.39	8.80	2.80	0.57

3. Recommendations	(Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)
5. Recommendations	(Notice. State and/or rederar nutrient management regulations may supersede these autonomic recommendations.)

Crop Last Crop Pasture (212)		N	P2O5	K2O	S04-S	Zn	В	Lime
		lb/acre						
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	40	180	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	45	250	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	30	60	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 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.

DIVISION OF AGRICULTURE RESEARCH & EXTENSION University of Arkansas System

Cooperative Extension Service Soil Testing And Research Laboratory Marianna, AR 72360 http://soiltest.uark.edu

JASON HENSON	Client ID: 8706881318
HC 72 BOX 10	
MT JUDEA	AR 72655
Date Processed:	12/4/2015
Field ID:	CH 36
Acres:	12
Lime Applied in the last 4 years:	No
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Роре
Lab Number:	154665
Sample Number:	3466551

The University of Arkansas is an equal opportunity/affirmative action institution.

1. Nutrient Availability Index

Nutrient	Conc	entration	Soil Test Level		
ppm		lb/acre	(Mehlich 3)		
Р	20	40	Low		
К	183	366	Above Optimum		
Са	427	854			
Mg	77	154			
SO4-S	16	32	1		
Zn	1.2	2.4			
Fe	105	210	in the second		
Mn	420	840	-		
Cu	0.3	0.6	i de la companya de l		
В	0.1	0.2			
NO3-N	41	82			

2. Soil Properties

	Property		Value	Units
Soil pH (1:2 soil-water)			5.4	
Soil EC (1:2 so	il-water)	2010		umhos/cm
Soil Estimated	il Estimated CEC		7.78	cmolc/kg
Organic Matter (Loss on Ignition)		n)		%
Estimated Soil Texture			Sandy I	₋oam
	Estimat	ed Base Satur	ation (%)	
Total	Total Ca Mg		K	Na
42.13	27.46	8.25	6.03	0.39

	Crop	N	P2O5	K2O	SO4-S	Zn	В	Lime
Last Crop	Pasture (212)				lb/acre			5.00
Crop 1	Mixed Cool and Warm Season Grasses 4 ton (144)	160	100	0	0	0	0	4000
Crop 2	Hay - Warm-Season Grasses (MNT) - 6 ton/acre (134)	300	110	0	0	0	0	4000
Crop 3	Mixed Cool and Warm-Season Grasses for Pasture (212)	60	80	0	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:

For optimum fertilizer efficiency, divide the recommended N, P, and K rates by the estimated number of harvests/year. Make the first fertilizer application in spring when night temperatures are > 60 degrees F for one week. Make subsequent applications following each harvest. Do not apply N after Sept. 1.

6. Crop 3 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.

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

Name:	KARL VanDE	VENDER / ANDREW SHA	RPLE Received in lab:	4/17/2015	
Address:	1 A Ca 1		Mailed:	4/24/2015	
City:			State,Zip:	AR	
County:			Phone #:		
E-Mail:	kvan@uaex.e	du, sharpley@uark.edu	Check #:	Big Creek Res	search Projec
Lab. No.	M50518	M50519		1 6 - S. S.	
Sample I.D.	C&HP1P	C&HP2P		And Street or other	
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			
pН	7.6	8.0			
EC(µmhos/cm)	13580	8710		No. of the second s	
% Solids	3.37	2.42			
		-mg/l on as-is bas	is-		
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 a	elie haeie		
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			

*Ibs/1000gal P2O5 = mg/I Total P on "as-is" basis multiplied by 2.29*0.00833

*Ibs/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 5

Nutrient Management

Determining Acceptable Manure Application Rates Example Phosphorous Index Calculations

Methodology for Determining Acceptable Manure Application Rates

Determination of acceptable application rates will be done using the Arkansas Phosphorous Index. This index classifies evaluated potential field phosphorous runoff risk as Low, Medium, High, or Very High. Only conditions and management decisions that result in risk values in the Low or Medium ranges will allow for applications. The most variable inputs to the evaluation process are: application rate; manure total and soluble phosphorous concentrations; application timing; application method; soil test phosphorous concentrations and land use. Section 5 of this plan shows an example of typical initial conditions for each field of this operation. As these conditions change, the phosphorous runoff risk should be re-evaluated as necessary to insure applications are made only when the associated risk is in the Low or Medium range. As a result, inputs such as application rates will vary over time, however the phosphorous runoff risk will remain in the low to medium range. In addition, no application should be made that exceeds nitrogen recommendations. As demonstrated by the example calculations, this farm has sufficient land to manage pond volume levels.

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 to 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 to 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. Apply nutrients to meet crop phosphorus needs according to NRCS Nutrient Management Standard (590).
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.

Interpreting P Index Values with the ARNMP Phosphorous Index:

	Arkansas Nutrient Managemnt Planner with 2009 Pl (Beta draft ver 0916)
Planner:	Monica Hancock
Plan Description:	C & H Hog Farms, Inc

Date: 1/14/2016

Beta Test Version for Use by Select Planners working with Author. 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.

Nutrient Source and Description Information

Manure Source	Source Type	Amount Av	vailable	N Conce	N Concentration	P205 Cor	P2O5 Concentration	K20 Con	K2O Concentration	Water Ext	Water Extractable P	Alum
M50518	Liquid Manure	2,624	1000 gal	20.1	lb/1000 gal	4.8	lb/1000 gal	13.6	Ib/1000 gal	1.4	Ib/1000 gal	No
ond 2 M50519	Liquid Manure	2.624	1000 gal	15.2	lb/1000 gal	7.9	lb/1000 gal	10.4	Ib/1000 gal	0.7	Ib/1000 gal	No
-												
												No. of the second secon

		z	đ	P205	×	K2O
Manure Source	Storage Losses (%)	Appl. Losses (%)	storage Appl. Storage Losses (%) Losses (%)		Appl. Storage Losses (%) Losses (%)	Appl. Losses (%
Pond 1 M50518		25%				
Pond 2 M50519		25%				
0						
0				To a contract		
0						

2,624 is the 365 day amount available and was calculated from the engineering section.

(%)

Manure Source Notestimation Total (lb) Concentration Total (lb) <th></th> <th>CSUIMALEU</th> <th>EStimated Fiam Available Nu</th> <th>AULIEIUS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		CSUIMALEU	EStimated Fiam Available Nu	AULIEIUS									
Concentration Total (lb) Concentration Total (lb) Concentration Total (lb) Concentration 15.08 lb/1000 gal 39,557 4.80 lb/1000 gal 12,595 13.60 lb/1000 gal 35,686 1.40 lb/1000 gal 140 lb/1000 gal 140 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 gal 11.40 lb/1000 gal 11.40 lb/1000 gal 27,290 0.70 lb/1000 lb/1000 gal 11.40			z			P205			K20		2	Vater Extractab	еР
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33,325 62,976	Pond 2 M50519	11.40	Ib/1000 gal	29,914	7.90	Ib/1000 gal	20,730	10.40	Ib/1000 gal	27,290	0.70	Ib/1000 gal	1836.8
33,325 62,976	0												
33,325 62,976	0												
33,325 62,976	0												
				69,470			33,325			62,976			5,510

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 Arkansas Nutrient Managerinit Planner with 2009 PI (Beta draft ver 02252106)

 Planner.
 Monica Hancock

 Plan Description.
 C & H Hog Farms, Inc.

 Description.
 C & H Hog Farms, Inc.

 Nutrient Management Plans Section of the manuer worksheet is intended to assist in the writing of Nutrient Management Plans for the application of manuer 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 rutifients to the various receiving fields, and estimates the amount of litter available for of farm use. This

Arkansas Nutrient Managemnt Plann	Monica Hancock	C & H Hog Farms, Inc	ta Test Version for Use by Select Planners working wit	
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Planner.	Monica Hancock
Plan Description:	C & H Hog Farms, Inc
on for Use by	Select Planners working with
Nutrient Management Plans for the application of manure to	the application of manure to
litter production for the farm, estimates the P Index risk value	timates the P Index risk value
allocation of nutrients to the various receiving fields, and esti	rious receiving fields, and esti

1 1									Applicati	on Group 1	Application Group 1 Application Group 1 Application Group 2	Group 1 -	Applica	ion Group	1			Applica	tion Group	Application Group 2 Application Grou	cation Grou
	50	ā.	Nutrie	nt Balanc	(-/+) 80	Pasture Use	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)	Timing	Appl Method	Nutrient Source	Bulk Rate	Units	z		-			Appl	Nutrient Source	Bulk Rate
	Field	Value	z	P205	K20									-	-	-		- 1			
	Field 1	20	-5	62+	+141	Rotational Grazing	0.12	0.12	March-June	Surface	Pond 1 M50518	5.00	1000 gal/ac	+	+	+	+	-		SLENGW Z DUOH	
	Field 2	22	ŝ	6/+	+141	Rotational Grazing	0.28	0.28	March-June	Surface	BLCOCW L DUOA	00.6	TUUU gai/ac	0)	+	+	+	-		SI COCIW Z DUOL	
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	Field 4	20	ç	6/+	141+	Rotational Grazing	0.28	0.28	March-June	Sunace	DI COCIM I DUOL	0.50	1000 gal/ac	2	+	+	+	+		Dend 2 MOODIG	
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	Field 6	21	ŝ	62+	+141	Rotational Grazing	0.12	0.12	March-June	Surface	BIGOGW L DUOA	0.00	1000 gai/ac	2	+	0	LOW		Surrace	SI COCIN Z DUOL	
9 0	Field 6A	21	-2	62+	+141	Rotational Grazing	0.12	0.12	March-June	Surface	BLCUCM L DUOH	00.0	TUUU gai/ac	+	+	+	+	+		SI COCIN Z DUOL	
1 1	Field 7	57	5	+152	-30	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	+	+	+	+		Pond Z M50519	
1 1	Field 7A	50	6.	+107	-80	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-	+	-		Pond 2 M50519	
9 0	Field 8	29	-3	+152	+20	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-	-			Pond 2 M50519	
9 9	Field 8A	55	e-	+152	-30	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	+	-	-	+			Pond 2 M50519	
3 3 143 0.0 Retrieved Grandy of the state of	Field 9	56		+152	-30	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-	+			Pond 2 M50519	
10 1	Field 9A	54	9	+152	+20	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-				Pond 2 M50519	
1 1	Field 10	29	5	+152	+20	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-		-			Pond 2 M50519	
1 1	Field 10A	59	e-	+152	+20	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-	-			Pond 2 M50519	
2 3 112 20 31 32 31 32 </td <td>Field 11</td> <td>18</td> <td>5</td> <td>62+</td> <td>+101</td> <td>Rotational Grazing</td> <td>0.28</td> <td>0.28</td> <td>March-June</td> <td>Surface</td> <td>Pond 1 M50518</td> <td>5.00</td> <td>1000 gal/ac</td> <td></td> <td></td> <td>_</td> <td></td> <td>July-Oct</td> <td></td> <td>Pond 2 M50519</td> <td></td>	Field 11	18	5	62+	+101	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	5.00	1000 gal/ac			_		July-Oct		Pond 2 M50519	
3 3 1/2 7/2	Field12	57	6.	+152	+20	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-						Pond 2 M50519	
31 3 413 213 413 214	Field13	32	-3	+152	+270	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac		-	-	-		_	Pond 2 M50519	
30 31 32 412 710 Retrieved Greened 203 102 31 302 312 <	Field 13A	31	£-	+152	+270	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-	-			Pond 2 M50519	
31 3 112 70 Reutional Grandy Grand Constrained Constrained States Constrained France Constraind France </td <td>Field 13B</td> <td>30</td> <td>£.</td> <td>+152</td> <td>+270</td> <td>Rotational Grazing</td> <td>0.28</td> <td>0.28</td> <td>March-June</td> <td>Surface</td> <td>Pond 1 M50518</td> <td>9.50</td> <td>1000 gal/ac</td> <td>-</td> <td>-</td> <td>-</td> <td>+</td> <td></td> <td></td> <td>Pond 2 M50519</td> <td></td>	Field 13B	30	£.	+152	+270	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	-	+			Pond 2 M50519	
31 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Field 14	31	-3	+152	0/+	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	-	-	+	+		_	Pond 2 M50519	
33 5 -1 </td <td>Field 15</td> <td>31</td> <td></td> <td>+152</td> <td>+70</td> <td>Rotational Grazing</td> <td>0.28</td> <td>0.28</td> <td>March-June</td> <td>Surface</td> <td>Pond 1 M50518</td> <td>9.50</td> <td>1000 gal/ac</td> <td>+</td> <td>+</td> <td>-</td> <td>+</td> <td>July-Oct</td> <td></td> <td>Pond 2 M50519</td> <td></td>	Field 15	31		+152	+70	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	+	+	-	+	July-Oct		Pond 2 M50519	
3 112 2710 Relational Graning 2011	Field 15A	35	-5	-	+81	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	5.00	1000 gal/ac	+	+	+	+			Pana 2 Mault	
2 3 112 2.0 Relational Grange 0.12	Field 15B	31	e,	+152	+270	Rotational Grazing	0.28	0.28	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	+	+	-	+			Pand 2 Moust	
3 3 113 300 Relational Granty 0.12 0.14 400 Relational Granty 0.12 0.14 400 Relational Granty 0.12 0.14 1100 110 110 110<	Field 16	54	e,	+152	+270	Rotational Grazing	0.05	0.05	March-June	Surface	Pond 1 M50518	9.50	1000 gal/ac	+	+	+	+	July-Oct	Surface	Pond 2 M50519	
28 3 1121 200 Relational Gazarga 012 012 Match-June Sufface Proof Proof Match-June	Field 17	32	e-	+152	+20	Rotational Grazing	21.0	21.0	March-June	Sunace	DI COCINI I DUOL	0.50	1000 gal/ac	+	+	+	+	Inder Oot	-	Dond 2 MED510	
2 3 152 470 Relational diama 201 2111 2111 2111	Field 18	26	e, e	+107+	- 080	Rotational Grazing	21.0	21.0	March-June	Surface	BLOOCH I DOOD	05.0	1000 gal/ac	+	+	+	+	- Iniv-Oct		Pond 2 M50519	
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A 1	Field 20	30		+152	0/+	Rotational Grazing	0.47	0.47	March June	Curtage	Pond 1 M50518	5 00	1000 gal/ac	+	+	+	+	-link-Oct	-	Pond 2 M50519	
2 3 1(1) 7(1) Relations (Gasing) 0(1) Match-June Summer Fundamer Factorial Fund (MisOS) (Gasing) Fund (MisOS) (Gasi	Field 21	17	, u	4	1014	Potetonal Grading	2+0	0.47	March-Inne	Surface	Pond 1 M50518	5 00	1000 gallac	+	+	+	+	July-Oct		Pond 2 M50519	
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Farm Totals Available Surpluses/Deficits (+/-)

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 Arkansas Nutrient Managemit Plann

 Planner.
 Monica Hancock

 Plan Description:
 C & H Nog Famis, Inc

 Beta Test Version for Use by Select Plannes working with Nutrient Management Plans for the application of maxure to litter production for the fam, estimates the P Index nsk value allocation of nutrients to the various receiving fields, and esti

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 Arkansas Nutrient Managernnt Plann

 Planner:
 Monica Hancock

 Plan Description:
 C& H Hog Fams, Inc

 Beta Test Version for Use by Select Plannes working with Nutrient Management Plans for the application of manure to litter production for the fam., estimates the P Index risk value allocation of nutrients to the various receiving fields, and esti

50 Field 1 Field 2 Field 2 Field 2	Total A	Total Annual Summary	marv	utrient Budget -	Per Field Nutrie	Nutrient Budget		Per Field Nutrient Budget		Per Field Nutrient Budge					5	1000 gal	
50 Field	-			lication Rate Totals		lutnent	acomr	(ib/field)		Surpluses / Deficits	(-/+)	Nov	Nov-Feb	Marc	March-June	July-Oct	ΓΥL
		trien	(-/+) eou	P2O5 (Ib/field)	K2O (lb/field)	N (Ib/field)	P2O5 (Ib/field)	K2O (Ib/field)	N (Ib/field)	P2O5 (lb/field)	K2O (lb/field)	Per Acre	Per Field	Per Acre	Per Field	Per Acre	A deal
	20 -5	62+	+141		1,183	1,344	0	0	-41	666	1,183	0.0	0.0	5.0	42.0	0.0	
	22 -5		-	476	845	960	0	0	-29	476	845	0.0	0.0	5.0	30.0	0.0	
			-		4,098	4,560	0	4,560	44	2,314	-462	0.0	0.0	6.6	76.0	0.0	
	_	1	+		1,014	1,152		0 100	CS-	110	1,014	0.0	0.0	0.5	30.0	0.0	
		1	+	1	CL0'7	016'7		624,2	207-	444	788	000		5.0	28.0	00	
	C- 17	t	+		00/	1 264			38	626	1112	0.0	00	5.0	39.5	0.0	
		t	+		17 335	19 290	0	19.290	-186	9.790	-1.955	0.0	0.0	9.5	610.9	0.0	
		t	+	1	7 630	8 490	1 274	9.905	-82	3,035	-2,275	0.0	0.0	9.5	268.9	0.0	
1		t	+		1941	2 160	0	1,800	-21	1,096	141	0.0	0:0	9.5	68.4	0.0	
		t	+		377	420	0	420	4	213	-43	0.0	0.0	9.5	13.3	0.0	
		t	+		6.794	7,560	0	7,560	-73	3,837	-766	0.0	0.0	9.5	239.4	0.0	
		t	+		2.777	3,090	0	2,575	-30	1,568	202	0.0	0.0	9.5	67.9	00	
	29 3	+152	-		3,801	4,230	0	3,525	-41	2,147	276	0.0	0.0	9.5	134.0	00	
		+152	_	15	4,421	4,920	0	4,100	47	2,497	321	0.0	0.0	9.5	155.8	0.0	
1					1,999	2,272	0	568	-69	1,126	1,431	00	0.0	5.0	0.17	0.0	
	57 -3		-		3,073	3,420	0	2,850	-33	1,/36	223	0.0	0.0	0.0	108.3	0.0	
		1	-		3,127	3,480	0	0	55-	1,100	3, 121	0.00	0.0	0.0	2.01		
			+	-	8,277	9,210	0		69-	4,0/4	117.0	0.0		0.40	1167		
	30	+152	+	1	2,319	2,580		0.0	67-	RUS'L	2,318 8,6,4		0.00	20	77.0	000	
	4	761+	+	+	2,184	2,43U		4 500	39	3 426	1 566	00	00	56	213.8	0.0	
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		+152	+		A DAA	4 500	-	0	-43	2.284	4.044	0.0	0.0	9.5	142.5	0.0	
		1152	+		4 098	4 560	0	0	-44	2.314	4,098	0.0	0.0	9.5	144.4	0.0	
Field 17	32	+152	+		8.600	9,570	0	7,975	-92	4,857	625	0.0	0.0	9.5	303.1	0.0	
		+107	+		6,093	6,780	1,017	7,910	-65	2,424	-1,817	0.0	0.0	9.5	214.7	0.0	
1		+152	-		2,777	3,090	0	0	-30	1,568	2,777	0.0	0.0	9.5	97.9	0.0	
-	30 -3	+152	-		5,823	6,480	0	4,320	-62	3,289	1,503	0.0	0.0	9.5	205.2	0.0	1
		-41		Ľ.	2,858	3,248	2,436	812	-98	-826	2,046	0.0	0.0	5.0	101.5	0.0	
		7	-		2,196	2,496	1,248	0	-75	-11	2,196	0.0	0.0	5.0	78.0	0.0	
		+107	-		1,618	1,800	270	1,200	-12	644	418	00	0.0	9.9	57.0	0.0	
	25 -5	+49			4,998	5,680	1,065	2,130	-171-	1,750	2,868	0.0	0.0	5.0	177.5	0.0	
		+152			7,576	8,430	0	9,835	61	4,278	-2,259	0.0	00	9.5	267.0	0.0	
		+107			2,157	2,400	360	2,400	-23	858	-243	0.0	0.0	9.5	76.0	0.0	
	53 -3	+152			2,696	3,000	0	2,500	-29	1,523	196	0.0	0.0	9.5	95.0	0.0	
	31 -5	+79	-	_	563	640	0	0	-19	317	563	0.0	0.0	5.0	20.0	0'0	
		+152	02+	2,055	3,640	4,050	0	2,700	-39	2,055	940	0.0	0.0	0.6	128.3	0.0	
	26 -3	+107	-		4,961	5,520	828	4,600	-53	1,9/3	361	0.0	0.0	0.8	1/4.0	0.0	
		+42	-		2,507	2,790	1,023	0	-27	293	2,507	0.0	0.0	0.5	60.4	nin	
1																	
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				A Start B						1							
Farm Totals Available				86,062 33,325	152,447 62,976	170,086	10,353	112,704	-2,081	75,709	39,743						
Surpluses/Dencits (+/-)				101'70-	1.14'20-												

 Arkansas Nutrient Managemnt Plann

 Planner.
 Monica Hanzuck

 Plan Description.
 0.6 JH Hog Famms, Inc.

 Bear Test Version.
 0.6 st Hog Famms, Inc.

 Nutrient Management Planners vorkling wit Nutrient Management Planners for the application of manue to litter production for the fam. estimates the P Index risk value

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Planner.	Monica Hancock
Plan Description:	C & H Hog Farms, Inc
Beta Test Version for Use by	Beta Test Version for Use by Select Planners working wit
Nutrient Management Plans fo	Nutrient Management Plans for the application of manure to
litter production for the farm, estimates the P Index risk value	istimates the P Index risk value
allocation of nutrients to the va	allocation of nutrients to the various receiving fields, and esti

Training	Total Annual Summary Total Annual Summary Pl Nutrent Balance (+) Value N P205 K20 Z2 5 +79 +141 Z2 5 +79 +141 Z3 5 +79 +141 Z1 5 +152 -20 Z2 3 +152 -20 Z3 3 +152 -20 Z3 3 +152 -20 Z3 3 +152 -20	S Shown Call Annual Summary Solution Table Summary Nutrient Balance (+) Nutrient Balance (+) Nutrient Balance (+) Nutrient Balance (+) Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign Sign	al Per Field 42 0 42 0 42 0 42 0 30 0 39 5 58 0 58 0 58 0 58 0 58 0 58 0 58 0 58	Adverter Adv			000 gal Per Acre 7 7 7 7 7 7 7 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14 14	Y-Oct Per Field 59 50 50 50 50 50 50 50 50 50 33 30 30 31 31 31 31 31 31 31 31 31 31 31 31 31	A Per Acre 77 77 77 74 74 74 14 14 14	mual Per Field 42 56 50 50 56 382 382 382 382 382 382 382 37 97 37 97 37 97	ton Annua Acre Acre 00 00 00 00 00 00 00 00 00 00 00 00 00	Per	Annua Per	
1 1	File Plane Nutrent Balance 2010 N Nutrent Balance Nutrent Balance 22 5 720 Nutrent Balance 27 5 790 Nutrent Balance 27 5 790 Nutrent Balance 27 5 79 710 Nutrent Balance 27 5 79 710 710 710 27 5 73 7152 730 7117 710 21 5 71 5 710<	Field Value Nutrent Balancer (+/) 2010 N P79 F470 201 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 5 +79 +141 27 3 +152 20 28 3 +152 +20 29 3 +152 +20 31 3 +152 +20 31 3 +152 +20 31 3 +152 +20 <t< th=""><th>al Per Per 42.0 30.0 30.0 30.0 30.0 30.0 30.0 26.0 30.5 51.0 13.3 20.0 13.4 13.3 1108 213.8 1108 211.7 71.0 213.8 213.8 213.8 214.7 71.0 214.4 214.7 2</th><th>Acre Acre Acre Acre Acre Acre Acre Acre</th><th>а <u>5</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</th><th></th><th>Ju Acre Acre 14 14 14 14 14 14 14 14 14 14 14 14 14</th><th>y. Oct Per Field 5 5 5 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3</th><th>Acre Per Acre 14 14 14 14 14 14 14 14 14 14</th><th>mual Per Fer 59 50 50 50 50 50 50 50 50 53 888 888 882 882 382 392 139</th><th>Amua Per Acre 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0</th><th>Per Field</th><th>Per</th><th>-</th></t<>	al Per Per 42.0 30.0 30.0 30.0 30.0 30.0 30.0 26.0 30.5 51.0 13.3 20.0 13.4 13.3 1108 213.8 1108 211.7 71.0 213.8 213.8 213.8 214.7 71.0 214.4 214.7 2	Acre Acre Acre Acre Acre Acre Acre Acre	а <u>5</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Ju Acre Acre 14 14 14 14 14 14 14 14 14 14 14 14 14	y. Oct Per Field 5 5 5 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Acre Per Acre 14 14 14 14 14 14 14 14 14 14	mual Per Fer 59 50 50 50 50 50 50 50 50 53 888 888 882 882 382 392 139	Amua Per Acre 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Per Field	Per	-
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Nor Nor <th>Nor Nor Nor<th>Field Value N P205 KZO Acre 27 3 $+152$ $+39$ $+141$ 50 57 3 $+152$ -30 95 -95 57 3 $+152$ $+30$ 9141 50 95 57 3 $+152$ $+79$ $+141$ 50 95 57 3 $+152$ $+79$ $+141$ 50 95 57 3 $+152$ -20 95 95 95 59 3 $+152$ -20 95 95</th><th>Preid 420 1444 360 360 322 380 380 380 392 392 392 392 393 133 133 133 133 133 133 133 133 133</th><th>e</th><th></th><th></th><th>Ada 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</th><th>Tield 59 45 205 205 205 39 39 39 39 39 39 39 39 139 139 139 139</th><th>Acte 14 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -</th><th>Field 45 205 50 205 55 858 858 858 855 339 340 340 37 3139 3139</th><th></th><th>1</th><th></th><th>Per</th></th>	Nor Nor <th>Field Value N P205 KZO Acre 27 3 $+152$ $+39$ $+141$ 50 57 3 $+152$ -30 95 -95 57 3 $+152$ $+30$ 9141 50 95 57 3 $+152$ $+79$ $+141$ 50 95 57 3 $+152$ $+79$ $+141$ 50 95 57 3 $+152$ -20 95 95 95 59 3 $+152$ -20 95 95</th> <th>Preid 420 1444 360 360 322 380 380 380 392 392 392 392 393 133 133 133 133 133 133 133 133 133</th> <th>e</th> <th></th> <th></th> <th>Ada 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</th> <th>Tield 59 45 205 205 205 39 39 39 39 39 39 39 39 139 139 139 139</th> <th>Acte 14 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -</th> <th>Field 45 205 50 205 55 858 858 858 855 339 340 340 37 3139 3139</th> <th></th> <th>1</th> <th></th> <th>Per</th>	Field Value N P205 KZO Acre 27 3 $+152$ $+39$ $+141$ 50 57 3 $+152$ -30 95 -95 57 3 $+152$ $+30$ 9141 50 95 57 3 $+152$ $+79$ $+141$ 50 95 57 3 $+152$ $+79$ $+141$ 50 95 57 3 $+152$ -20 95 95 95 59 3 $+152$ -20 95	Preid 420 1444 360 360 322 380 380 380 392 392 392 392 393 133 133 133 133 133 133 133 133 133	e			Ada 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Tield 59 45 205 205 205 39 39 39 39 39 39 39 39 139 139 139 139	Acte 14 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -	Field 45 205 50 205 55 858 858 858 855 339 340 340 37 3139 3139		1		Per
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35 5 1 610 520 60 00 17 73 73 73 73 00 00 03<	8 5 1 61 60 92 92 1 7 <th7< th=""> 7 7 7</th7<>	35 5 -1 +81 6.0 31 -3 +152 +270 95 54 -3 +152 +270 95 52 -3 +152 +270 95 28 -3 +152 +270 95 28 -3 +152 +270 95 28 -3 +152 +270 95 20 -3 +152 +70 95 21 -1107 +101 50 20 22 -5 -1 +141 50 28 -3 +152 -80 95 28 -3 +152 -80 95 28 -3 +152 -80 95 26 -3 +152 -80 95 23 -3 +152 -80 95 57 -3 +152 -80 95 50 -3 +152 -80<	52.0 142.5 144.4 303.1 214.7	00			14	304	14	304	0.0		-	517.5
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30 3 4132 470 95 5032 0 00 230 22 5 -1 441 50 70 0 <td>30 3 +12 +10 50 705 0 0 14 282 14 292 00 22 5 -1 +141 50 70 0 0 7 142 7 142 00 22 5 -1 +141 50 70 0 0 14 123 100 7 142 00 10 28 3 +127 -00 95 77 0 0 14 135 100 0 0 0 0 0 14 135 100 0</td> <td>30 -3 +152 +70 95 21 -5 -41 +101 50 22 -5 -11 +101 50 28 -3 +107 +70 95 28 -3 +107 +70 95 28 -3 +152 -80 95 29 -3 +152 -80 95 51 -3 +152 -80 95 51 -3 +152 -80 95 51 -3 +152 -80 95 51 -3 +152 -80 95 51 -5 +70 95 95 51 -5 +70 +141 50</td> <td>6'16</td> <td>0</td> <td></td> <td></td> <td>14</td> <td>139</td> <td>14</td> <td>139</td> <td>0.0</td> <td></td> <td>_</td> <td>236.9</td>	30 3 +12 +10 50 705 0 0 14 282 14 292 00 22 5 -1 +141 50 70 0 0 7 142 7 142 00 22 5 -1 +141 50 70 0 0 14 123 100 7 142 00 10 28 3 +127 -00 95 77 0 0 14 135 100 0 0 0 0 0 14 135 100 0	30 -3 +152 +70 95 21 -5 -41 +101 50 22 -5 -11 +101 50 28 -3 +107 +70 95 28 -3 +107 +70 95 28 -3 +152 -80 95 29 -3 +152 -80 95 51 -3 +152 -80 95 51 -3 +152 -80 95 51 -3 +152 -80 95 51 -3 +152 -80 95 51 -5 +70 95 95 51 -5 +70 +141 50	6'16	0			14	139	14	139	0.0		_	236.9
21 5 -11 +101 50 1015 0 0 7 142 7 142 0 00 120 28 3 +101 50 77 0 0 0 1 7 142 7 142 7 142 7 142 7 142 7 142 7 143 109 00 00 120<	21 5 -41 +101 50 101 0 0 0 7 142 7 142 0 22 5 -10 50 77 0 0 0 0 7 142 0 0 28 5 50 95 570 0 0 0 14 379 14 139 14 139 00 0 28 5 57 30 95 5770 0 0 0 14 379 16 0 0 0 0 0 0 14 136 0 <td>21 -5 -41 +101 50 22 -5 -1 +141 50 28 -5 -107 50 95 26 -5 +49 +81 50 95 26 -5 +49 +81 50 95 53 -3 +107 -30 95 95 53 -3 +152 -80 95 95 53 -3 +152 -80 95 95 53 -5 +79 +141 50 95 31 -5 +79 +141 50 95</td> <td>205.2</td> <td>0</td> <td></td> <td></td> <td>14</td> <td>292</td> <td>14</td> <td>292</td> <td>0.0</td> <td>-</td> <td></td> <td>496.8</td>	21 -5 -41 +101 50 22 -5 -1 +141 50 28 -5 -107 50 95 26 -5 +49 +81 50 95 26 -5 +49 +81 50 95 53 -3 +107 -30 95 95 53 -3 +152 -80 95 95 53 -3 +152 -80 95 95 53 -5 +79 +141 50 95 31 -5 +79 +141 50 95	205.2	0			14	292	14	292	0.0	-		496.8
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Section 6

Record Keeping Forms

Example Table for Recordkeeping

Copy of ADEQ's Annual Report Form

ARKANSAS RECORD KEEPING REQUIREMENTS

The Arkansas Department of Environmental Quality (ADEQ) requires that the following test results and records be submitted to them annually by January 31th from any person operating a liquid waste management and disposal system under Regulation 6. All manure sampling and analysis shall be in accordance with the University of Arkansas Cooperative Extension Service guidelines. 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 at the facility showing dates, volumes or weights, destinations and acreage over which the wastes are applied.
- 2. A representative sample of the waste/wastewater shall be collected once per year and analyzed 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.
- 3. The soils of each field where liquid animal waste has been land applied shall be sampled and analyzed at least once every five (5) years for the following parameters: pH, Potassium, Phosphorous and Nitrates. A field shall be delineated by its land management and natural or manmade borders, regardless of acreage. As acreage increases, more soil cores will need to be taken and composited into one sub-sample for each individual field.mpling of fields will be based on land management units and not total acres in the field.

It should be noted that these are ADEQ requirements and any failure to produce or obtain the reports shall be deemed a violation of Regulation No. 6 and the permit.

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.

Record of Nutrients Applied to Permitted Land*

	Date	Field	Temp	Wind/Dir	Hours	Gal	Crop	Method	Total Acres	Condition Of Field	Equip Condition	Pond Liner	Source
							<u> </u>						
Image: selection of the													

useu. D D nonnain n la riiell system in place,

ANIMAL WASTE LAND APPLICATION RECORD FOR PERMITTED CONFINED ANIMAL FACILITIES

PERMITTEE: _____ PERMIT NUMBER: _____

APPLICATION METHOD:

Field Name or/and Number	Date Applied	Стор Туре	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 CAFO Operations Permitted Under NPDES General Permit ARG590000

Reporting Period: _____ through ____

Permit Tracking Number: ARG59_____

Number & type of animals: (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other.)

Estimated amount of total manure, process water & litter in previous 12 months:

(Express in tons or gallons)

Estimated amount of total manure, littler and process wastewater transferred to other person by the CAFO in the previous 12 months:

(express in tons or gallons, units consistent with previous answer)

Total number of acres available for land application in accordance with NMP:

Total number of acres used for land application of manure, litter and process wastewater in previous 12 months:

Summary of all manure, litter or process wastewater discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume. Please list in chronological order. Add additional pages if necessary.

	Date	Time	Approximate Volume (gallons)
Discharge 1			
Discharge 2			
Discharge 3			
Discharge 4			

Has the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner?

Yes	
No	

Signature D	late
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wastewater applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of The actual crop(s) planted and actual yield(s) for each field, the actual nitrogen and phosphorus content of the manure, litter, and process wastewater, the results of calculations conducted in accordance with paragraphs 3.2.5.1.b and 3.2.5.2.d of this section, and the amount of manure, litter, and process application in accordance with paragraph 3.2.5.2 of this section, the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with paragraph 3.2.5.2.4 of this section, and the amount of any supplemental fertilizer applied during the previous 12 months.

Amount of supplemental fertilizer, if any, used in previous 12 months. Express lbs/acre in 0-0-0 format				
Results of soil testing for Phosphorus, if required. Include data used for calculations (mg/kg)				
Results of soil testing for Nitrogen, if required. Include data for calculations (mg/kg)				
ied				
PhosphorusAmount of Content of waste appl wasteContent of wastewaste appl in previous (lbs/1000 gal(lbs/1000 gal12 months (gal or tons/acre)				
Nitrogen Content of waste (lbs/1000 gal or lbs/ton)				
Crop Yield (lbs., bu., or ton/acre)				
Crop Planted				
Field ID or Name (same as in NMP)				

WASTEWATER SAMPLE LOCATION:

You must submit a copy of the wastewater analysis for each sample provided to cooperative extension service or a private lab. The wastewater analysis must include pH (s.u.), total nitrogen, ammonia nitrogen, total potassium, total phosphorus, and percent solid. 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 10 acre track. Please complete the table on the back for 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 this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
I certify under penalty of law that this document and all attachments supervision in accordance with a system designed to assure that qualified pe information submitted. Based on my inquiry of the person or persons wh directly responsible for gathering the information, the information submit belief, true, accurate, and complete. I am aware that there are significant pe including the possibility of fine and imprisonment for knowing violations.	

DATE

SIGNATURE

OPERATOR (Please Print)

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

Water-permit@adeq.state.ar.us

From:	<u>C H Hog Farms Inc</u>
To:	Water Permit Application
Subject:	Regulation 6 Permit Renewal Application for C & H Hog Farms, Inc.
Date:	Wednesday, April 20, 2016 2:33:31 PM
Attachments:	Signed NOI for Reg 6 Permit Renewal Application 4-20-16.pdf
	Disclosure Statement for Reg 6 Permit Renewal Application 4-20-16.pdf
	Certification Document for Reg 6 Permit Renewal Application 4-20-16.pdf

To Whom It May Concern:

C & H Hog Farms, Inc. is seeking renewal of its Regulation 6 permit. Attached are the application documents. Due to file size restrictions, the Nutrient Management Plan will be sent in a separate email.

Please contact us if there are any questions concerning this submittal.

Thank you, Jason Henson C & H Hog Farms, Inc. To Whom It May Concern:

C & H Hog Farms, Inc. is seeking renewal of its Regulation 6 permit. Attached is the Nutrient Management Plan. Additional application documents were submitted in a prior email.

Please contact us if there are any questions concerning this submittal.

Thank you, Jason Henson C & H Hog Farms, Inc.