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

December 10, 2015

Re: Permit No.: 3540-WR-7; AFIN: 51-00020

Ms. Katherine McWilliams
Engineer, No-Discharge Section
Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Dear Ms. McWilliams:

Thank you for allowing me to address the concerns identified in your letter dated November 30, 2015. After consulting with my Nutrient Management Planner, the following list should resolve each of the stated items.

1. The coordinates for Fields HB1 and HB2 have been updated in the enclosed Longitude & Latitude table.

2. The Land Base table has been updated to include the additional Sections and Range for Field RM1.

3. The coordinates on the quad maps associated with Fields GD1 and JG-A have been updated. On this same quad map, the coordinates and Section for Fields CCGW & CC1 have also been updated, and a revised Land Use Contract is included which reflects the correct Section.

4. The quad map for Field JG-A has been updated to include Section 34 in the label.

5. After further review, the Nutrient Management Planner has determined that soil type 37 is the more predominate soil type in Field JG-A with 7 acres, followed by soil type 25 at 6.5 acres. Soil type 25 will actually be less than 6.5 acres if the footprint of the pond and buffer are removed. Based on that information, the Nutrient Management Planner has determined that the most appropriate soil type to use for Field JG-A is soil type 37. This change is reflected in the revised P-Index calculations and Maximum Application Rate tables for Pond 1 and Pond 2. Both of these revised documents are enclosed.

6. The P-Index calculations and Maximum Application Rate tables have been updated to reflect soil type 35 as per ADEQ's request.

The Nutrient Management Planner also identified the need for a correction to the coordinates for Field HB2 on the quad map. The revised quad map is included in the enclosed documents.

I appreciate the opportunity to submit these revisions.

Please contact me if you have any questions.

Respectfully,

Ellis Campbell

Ellis Campbell
EC Farms

Enclosures

LAND USE CONTRACT

I, Richard Campbell, agree to allow EC Farms
(Name of Landowner) (Name of Permittee)
to land apply Swine waste from his/her operation located in the Newton
(Type of Waste) (County of Operation)
County to 55.6 acres of my property located in Newton County.
(Total Acreage Available) (County of Application Site)
A description of the areas to be used as waste application sites are as follows:

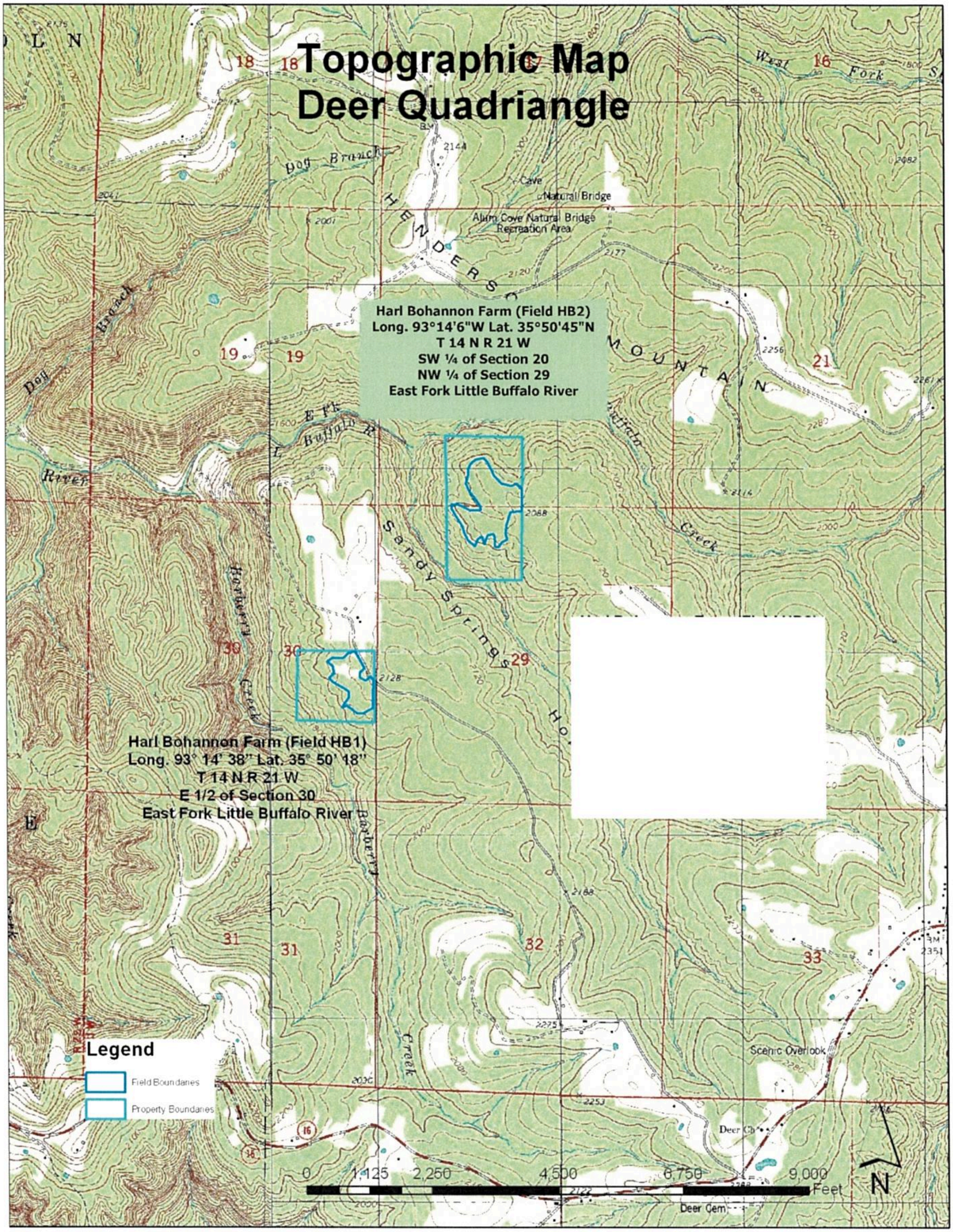
Site No.	¼ Section	Section	Township	Range	Available Acreage*
CCGW	W 1/2	34	15N	21W	20
CC1	W 1/2	34	15N	21W	5.2
RC3	SE	29	15N	20W	12
RC4	NW	33	15N	20W	18.4

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

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

Ellis Campbell 12-10-15
Permittee's Signature Date

Richard Campbell 12-10-15
Landowner Signature Date


Topographic Map
Deer Quadriangle
Harl Bohannon Farm (Field HB2)
Long. 93°14'6"W Lat. 35°50'45"N
T 14 N R 21 W
SW ¼ of Section 20
NW ¼ of Section 29
East Fork Little Buffalo River
Harl Bohannon Farm (Field HB1)
Long. 93° 14' 38" Lat. 35° 50' 18"
T 14 N R 21 W
E 1/2 of Section 30
East Fork Little Buffalo River
Legend
Field Boundaries
Property Boundaries
0
1,125
2,250
4,500
6,750
9,000
Feet
N
Dog Branch
Cave
Natural Bridge
Alum Cove Natural Bridge Recreation Area
HENDERSON MOUNTAIN
Sandy Springs
Scenic Overlook
Deer Ch
Deer Cem
West Fork

(3540–WR–7) Ellis Campbell Land Application Sites – Longitude & Latitude

Field	Owner Name	New/ Existing	Section	Township	Range	Acreage	Longitude & Latitude
*CCGW	Richard Campbell	Existing	34	15 N	21 W	20.0	93°12'7.737"W 35°54'45.857"N
CC1	Richard Campbell	Existing	34	15 N	21 W	5.2	93°12'12.133"W 35°54'43.427"N
JG-A	John Gunter	Existing	33,34	15 N	21 W	14.0	93°12'19.986"W 35°54'42.571"N
*JG-B	John Gunter	Existing	34	15 N	21 W	3.0	93°12'3.83"W 35°54'53.904"N
EC-A	Phillis/Eugene Casey	Existing	4	14 N	21 W	4.8	93°12'26.422"W 35°54'11.135"N
*DC	Daryl Campbell	Existing	34	15 N	21 W	15.7	93°12'0.667"W 35°54'50.869"N
HB1	Harl Bohannon	Existing	30	14 N	21 W	11.1	93°14'41.726"W 35°50'21.505"N
HB2	Harl Bohannon	Existing	20,29	14 N	21 W	13.1	93°14'6.534"W 35°50'45.286"N
LCM1	Lynn Carl Middleton	Existing	14,22,23	14 N	21 W	18.5	93°11'1.47"W 35°51'45.009"N
LCM2	Lynn Carl Middleton	Existing	14,22,23	14 N	21 W	16.2	93°10'52.464"W 35°51'38.009"N
LCM3	Lynn Carl Middleton	Existing	14,22,23	14 N	21 W	19.1	93°11'22.681"W 35°51'38.573"N
RM1	Robert/Wilma Middleton	Existing	25,36/30,31	15 N	21W/20W	82.2	93°9'13.749"W 35°54'47.608"N
RM2	Robert/Wilma Middleton	Existing	36	15 N	21 W	21.4	93°9'13.186"W 35°54'45.98"N
MM1	Mike L. Middleton	Existing	29	15 N	20 W	13.8	93°7'21.302"W 35°55'24.985"N
MM2	Mike L. Middleton	Existing	28 & 29	15 N	20 W	29.8	93°7'10.543"W 35°55'19.393"N
MM3	Mike L. Middleton	Existing	29	15 N	20 W	10.9	93°7'13.254"W 35°55'17.607"N
RC3	Richard Campbell	Existing	29	15 N	20 W	12.0	93°7'12.208"W 35°55'15.91"N
RC4	Richard Campbell	Existing	33	15 N	20 W	18.4	93°7'5.394"W 35°54'56.137"N
PC1	Phillip Campbell	Existing	28 & 33	15 N	20 W	18.3	93°6'49.953"W 35°54'59.632"N
CB1	Joy/Charles Burdine	Existing	21	15 N	20 W	12.5	93°6'52.448"W 35°56'27.536"N
CB2	Joy/Charles Burdine	Existing	20 & 21	15 N	20 W	37.5	93°6'59.954"W 35°56'36.365"N
CB3	Joy/Charles Burdine	Existing	21	15 N	20 W	3.8	93°6'54.057"W 35°56'38.732"N
CB4	Joy/Charles Burdine	Existing	20 & 21	15 N	20 W	16.1	93°7'2.932"W 35°56'22.651"N
CB5	Joy/Charles Burdine	Existing	20	15 N	20 W	1.8	93°7'19.9"W 35°56'32.232"N
CB6	Joy/Charles Burdine	Existing	20	15 N	20 W	13.3	93°7'23.27"W 35°56'31.162"N
CB7	Joy/Charles Burdine	Existing	20	15 N	20 W	44.0	93°7'26.546"W 35°56'29.407"N

Field	Owner Name	New/ Existing	Section	Township	Range	Acreage	Longitude & Latitude
CB8	Joy/Charles Burdine	Existing	20	15 N	20 W	6.5	93°7'44.149"W 35°56'25.656"N
CB9	Joy/Charles Burdine	Existing	19 & 20	15 N	20 W	19.7	93°8'9.429"W 35°56'19.915"N
CB10	Joy/Charles Burdine	Existing	19 & 20	15 N	20 W	22.5	93°8'2.521"W 35°56'33.329"N
CB11	Joy/Charles Burdine	Existing	20	15 N	20 W	8.5	93°7'57.787"W 35°56'3.476"N
CB12	Joy/Charles Burdine	Existing	20	15 N	20 W	4.4	93°7'58.92"W 35°56'8.654"N
CB13	Joy/Charles Burdine	Existing	19	15 N	20 W	8.5	93°8'22.65"W 35°56'28.126"N
EM1	Patrisia/ Ed Mills	Existing	33	15 N	21 W	6.6	93°12'36.204"W 35°54'36.129"N
GD1	Gary Dotson	Existing	5	13 N	20 W	10.2	93°8'39.719"W 35°48'22.963"N
VIV1	Ricky Campbell	Existing	15	14 N	21 W	22.9	93°11'30.893"W 35°52'14.285"N
VIV1A	Ricky Campbell	Existing	15	14 N	21 W	10.2	93°11'35.059"W 35°52'17.313"N

*No application will be made to these fields.

Land Base

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

Field No.	Owner Name	Section	Township	Range	Total Available Acres
*CCGW	Richard Campbell	34	15 N	21 W	20.0
CC1	Richard Campbell	34	15 N	21 W	5.2
JG-A	John Gunter	33,34	15 N	21 W	14.0
*JG-B	John Gunter	34	15 N	21 W	3.0
EC-A	Phyllis/Eugene Casey	4	14 N	21 W	4.8
*DC	Daryl Campbell	34	15 N	21 W	15.7
HB1	Harl Bohannon	30	14 N	21 W	11.1
HB2	Harl Bohannon	20,29	14 N	21 W	13.1
LCM1	Lynn Carl Middleton	14,22,23	14 N	21 W	18.5
LCM2	Lynn Carl Middleton	14,22,23	14 N	21 W	16.2
LCM3	Lynn Carl Middleton	14,22,23	14 N	21 W	19.1
RM1	Robert/Wilma Middleton	25,36/30,31	15 N	21 W/20 W	82.2
RM2	Robert/Wilma Middleton	36	15 N	21 W	21.4
MM1	Mike L. Middleton	29	15 N	20 W	13.8
MM2	Mike L. Middleton	28 & 29	15 N	20 W	29.8
MM3	Mike L. Middleton	29	15 N	20 W	10.9
RC3	Richard Campbell	29	15 N	20 W	12.0
RC4	Richard Campbell	33	15 N	20 W	18.4
PC1	Philip Campbell	28 & 33	15 N	20 W	18.3
CB1	Joy/Charles Burdine	21	15 N	20 W	12.5
CB2	Joy/Charles Burdine	20 & 21	15 N	20 W	37.5
CB3	Joy/Charles Burdine	21	15 N	20 W	3.8
CB4	Joy/Charles Burdine	20 & 21	15 N	20 W	16.1
CB5	Joy/Charles Burdine	20	15 N	20 W	1.8
CB6	Joy/Charles Burdine	20	15 N	20 W	13.3
CB7	Joy/Charles Burdine	20	15 N	20 W	44.0
CB8	Joy/Charles Burdine	20	15 N	20 W	6.5
CB9	Joy/Charles Burdine	19 & 20	15 N	20 W	19.7

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

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

Pasture Management

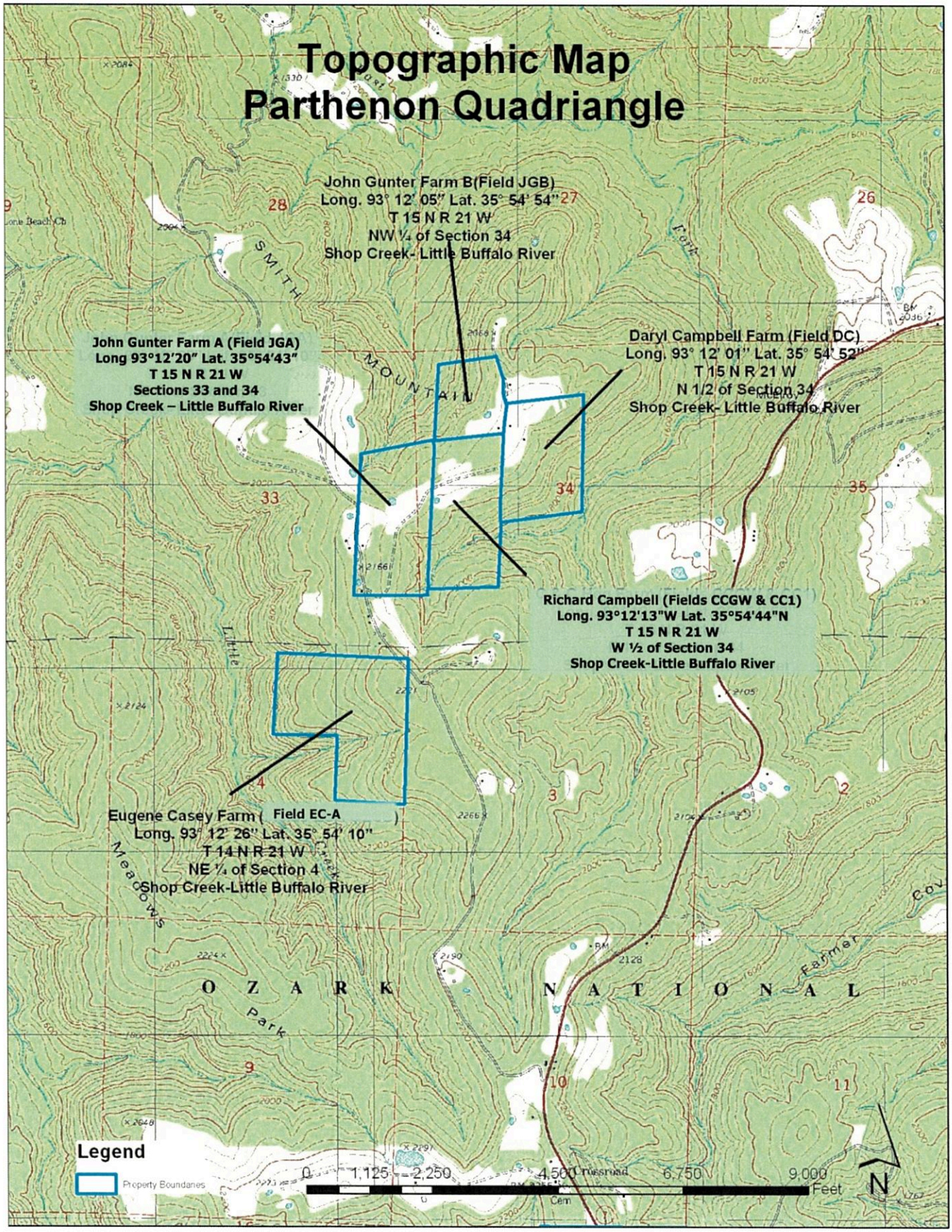
Land application areas used for nutrient utilization are predominantly mixed warm and cool season grasses used for pasture and hay production. Phosphorous Index calculations were made for each field for the most restrictive timing window (November to February) which will allow for land application during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

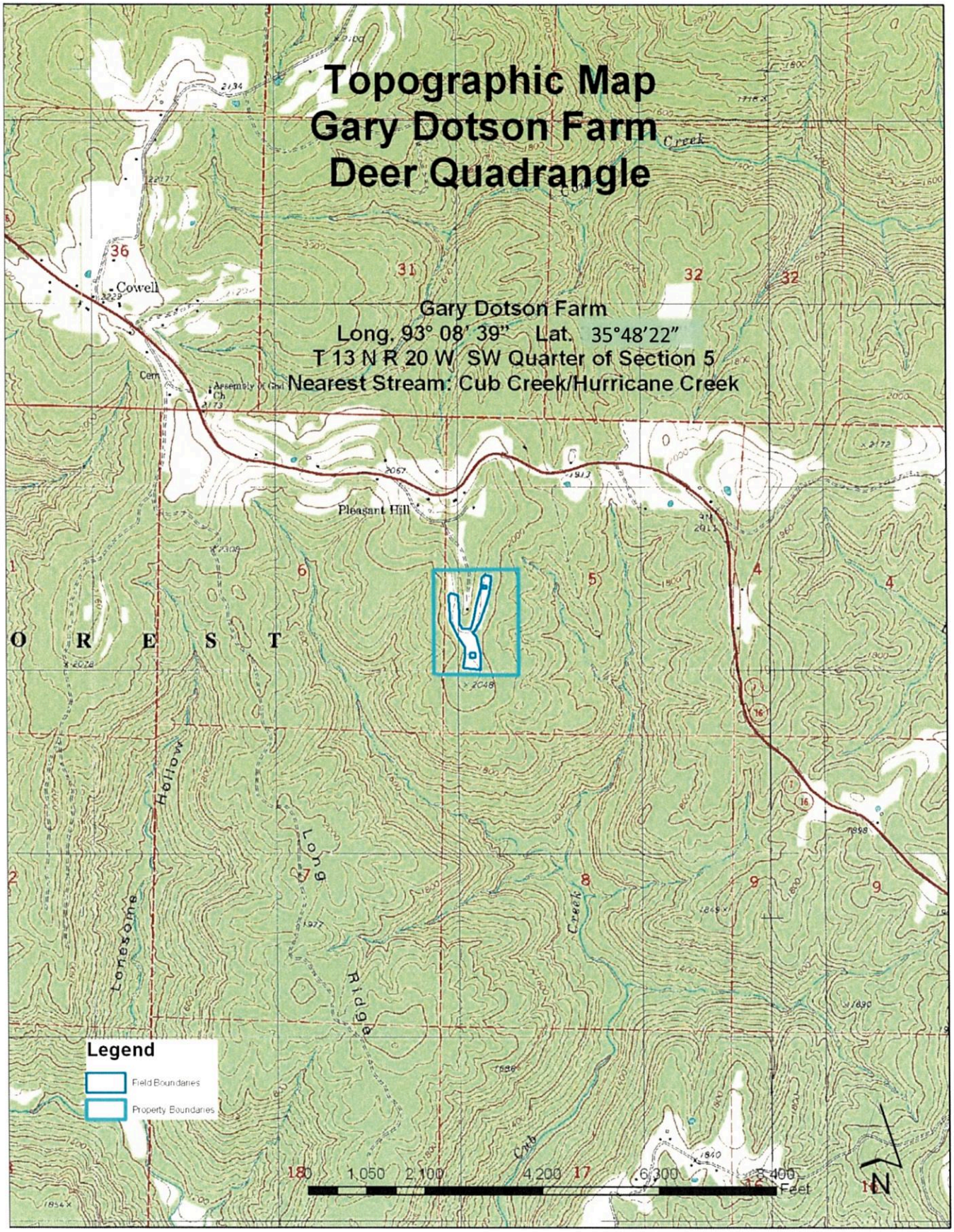
Mortality Management

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

Irrigation Water Management

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


Topographic Map
Parthenon Quadriangle
John Gunter Farm B(Field JGB)
Long. 93° 12' 05" Lat. 35° 54' 54"
T 15 N R 21 W
NW ¼ of Section 34
Shop Creek- Little Buffalo River
John Gunter Farm A (Field JGA)
Long 93°12'20" Lat. 35°54'43"
T 15 N R 21 W
Sections 33 and 34
Shop Creek – Little Buffalo River
Daryl Campbell Farm (Field DC)
Long. 93° 12' 01" Lat. 35° 54' 52"
T 15 N R 21 W
N 1/2 of Section 34
Shop Creek- Little Buffalo River
Richard Campbell (Fields CCGW & CC1)
Long. 93°12'13"W Lat. 35°54'44"N
T 15 N R 21 W
W ½ of Section 34
Shop Creek-Little Buffalo River
Eugene Casey Farm (Field EC-A)
Long. 93° 12' 26" Lat. 35° 54' 10"
T 14 N R 21 W
NE ¼ of Section 4
Shop Creek-Little Buffalo River
SMITH
MOUNTAIN
Meadows
Park
OZARK NATIONAL
Farmer
Legend
Property Boundaries
0 1,125 2,250 4,500 6,750 9,000
Feet
N


Topographic Map
Gary Dotson Farm
Deer Quadrangle
Gary Dotson Farm
Long. 93° 08' 39" Lat. 35°48'22"
T 13 N R 20 W SW Quarter of Section 5
Nearest Stream: Cub Creek/Hurricane Creek
Cowell
Pleasant Hill
Cem
Assembly of God Ch
Creek
Hollow
Long
Ridge
Lonesome
Cub
Creek
O R E S T
Legend
Field Boundaries
Property Boundaries
0 1,050 2,100 4,200 6,300 8,400
Feet
N

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015		

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

County Information

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

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

Nutrient Source and Description Information

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

Nutrient Loss and Mineralization Factors

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

Estimated Plant Available Nutrients

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

Field P Index Calculations

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015		

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

Comments:

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

Planner:	Monica Hancock						Date:	5/7/2015	
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015								
Field	Field Area (ac)	Buffer Length (ft)	Buffer Width (ft)	Appl Area (ac)	Predominate Vegetation	Percent Ground Cover	Conservation Support Practices (P)	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)
CCGW	20.00			20.00	Grass	95-100	None in place	0.17	0.17
CC1	5.20			5.20	Grass	95-100	None in place	0.21	0.21
JG-A	14.00			14.00	Grass	95-100	None in place	0.21	0.21
JG-B	3.00			3.00	Grass	95-100	None in place	0.17	0.17
EC-A	4.80			4.80	Grass	95-100	None in place	0.09	0.09
DC	15.70			15.70	Grass	95-100	None in place	0.17	0.17
HB1	11.10			11.10	Grass	95-100	None in place	0.21	0.21
HB2	13.10			13.10	Grass	95-100	None in place	0.21	0.21
LCM1	18.50			18.50	Grass	95-100	None in place	0.17	0.17
LCM2	16.20			16.20	Grass	95-100	None in place	0.21	0.21
LCM3	19.10			19.10	Grass	95-100	None in place	0.08	0.08
RM1	82.20			82.20	Grass	95-100	None in place	0.28	0.28
RM2	21.40			21.40	Grass	95-100	None in place	0.05	0.05
MM1	13.80			13.80	Grass	95-100	None in place	0.05	0.05
MM2	29.80			29.80	Grass	95-100	None in place	0.05	0.05
MM3	10.90			10.90	Grass	95-100	None in place	0.05	0.05
RC3	12.00			12.00	Grass	95-100	None in place	0.05	0.05
RC4	18.40			18.40	Grass	95-100	None in place	0.28	0.28
PC1	18.30			18.30	Grass	95-100	None in place	0.21	0.21
CB1	12.50			12.50	Grass	95-100	None in place	0.28	0.28
CB2	37.50			37.50	Grass	95-100	None in place	0.28	0.28
CB3	3.80			3.80	Grass	95-100	None in place	0.28	0.28
CB4	16.10			16.10	Grass	95-100	None in place	0.05	0.05
CB5	1.80			1.80	Grass	95-100	None in place	0.05	0.05
CB6	13.30			13.30	Grass	95-100	None in place	0.05	0.05
CB7	44.00			44.00	Grass	95-100	None in place	0.28	0.28
CB8	6.50			6.50	Grass	95-100	None in place	0.17	0.17
CB9	19.70			19.70	Grass	95-100	None in place	0.21	0.21
CB10	22.50			22.50	Grass	95-100	None in place	0.28	0.28
CB11	8.50			8.50	Grass	95-100	None in place	0.28	0.28
CB12	4.40			4.40	Grass	95-100	None in place	0.28	0.28
CB13	8.50			8.50	Grass	95-100	None in place	0.21	0.21
EM1	6.60			6.60	Grass	95-100	None in place	0.21	0.21
GD1	10.20			10.20	Grass	95-100	None in place	0.21	0.21
VIV1	22.90			22.90	Grass	95-100	None in place	0.17	0.17
VIV1A	10.20			10.20	Grass	95-100	None in place	0.17	0.17
	596.50			596.50					

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015		

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

Best Management Practices

Comments:

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

Planner:	Monica Hancock								Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015									

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

Field Nutrient Application Planning

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015		

Per Acre Basis

Field	Nutrient Source	Application			Nutrient Recommendation (lb/ac)			Nutrients Applied (lb/ac)			Surpluses / Deficits (lb/ac)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 1	0.00	0.00	1000 gal/ac	120	0	40	0	0	0	-120	0	-40
CC1	HP 1	6.00	6.00	1000 gal/ac	160	0	180	90	29	82	-70	29	-98
JG-A	HP 1	7.50	7.50	1000 gal/ac	160	0	220	113	36	102	-47	36	-118
JG-B	HP 1	0.00	0.00	1000 gal/ac	120	0	0	0	0	0	-120	0	0
EC-A	HP 1	7.50	7.50	1000 gal/ac	120	0	100	113	36	102	-7	36	2
DC	HP 1	0.00	0.00	1000 gal/ac	160	0	150	0	0	0	-160	0	-150
HB1	HP 1	7.50	7.50	1000 gal/ac	120	120	60	113	36	102	-7	-84	42
HB2	HP 1	7.50	7.50	1000 gal/ac	120	80	40	113	36	102	-7	-44	62
LCM1	HP 1	10.50	10.50	1000 gal/ac	160	80	220	158	50	143	-2	-30	-77
LCM2	HP 1	10.50	10.50	1000 gal/ac	160	120	270	158	50	143	-2	-70	-127
LCM3	HP 1	10.50	10.50	1000 gal/ac	160	80	220	158	50	143	-2	-30	-77
RM1	HP 1	7.50	7.50	1000 gal/ac	120	120	160	113	36	102	-7	-84	-58
RM2	HP 1	10.50	10.50	1000 gal/ac	160	0	220	158	50	143	-2	50	-77
MM1	HP 1	10.50	10.50	1000 gal/ac	160	0	220	158	50	143	-2	50	-77
MM2	HP 1	10.50	10.50	1000 gal/ac	160	0	180	158	50	143	-2	50	-37
MM3	HP 1	10.50	10.50	1000 gal/ac	160	0	150	158	50	143	-2	50	-7
RC3	HP 1	10.50	10.50	1000 gal/ac	160	0	270	158	50	143	-2	50	-127
RC4	HP 1	7.50	7.50	1000 gal/ac	120	80	0	113	36	102	-7	-44	102
PC1	HP 1	7.50	7.50	1000 gal/ac	120	40	0	113	36	102	-7	-4	102
CB1	HP 1	10.50	10.50	1000 gal/ac	160	0	180	158	50	143	-2	50	-37
CB2	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB3	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB4	HP 1	10.50	10.50	1000 gal/ac	160	0	270	158	50	143	-2	50	-127
CB5	HP 1	7.50	7.50	1000 gal/ac	120	0	40	113	36	102	-7	36	62
CB6	HP 1	7.50	7.50	1000 gal/ac	160	0	270	113	36	102	-47	36	-168
CB7	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB8	HP 1	7.50	7.50	1000 gal/ac	120	0	0	113	36	102	-7	36	102
CB9	HP 1	7.50	7.50	1000 gal/ac	120	0	40	113	36	102	-7	36	62
CB10	HP 1	7.50	7.50	1000 gal/ac	120	0	60	113	36	102	-7	36	42
CB11	HP 1	5.50	5.50	1000 gal/ac	120	0	0	83	26	75	-37	26	75
CB12	HP 1	7.50	7.50	1000 gal/ac	120	40	0	113	36	102	-7	-4	102
CB13	HP 1	7.50	7.50	1000 gal/ac	120	0	60	113	36	102	-7	36	42
EM1	HP 1	7.50	7.50	1000 gal/ac	120	80	160	113	36	102	-7	-44	-58
GD1	HP 1	10.50	10.50	1000 gal/ac	160	120	180	158	50	143	-2	-70	-37
VIV1	HP 1	10.50	10.50	1000 gal/ac	160	100	270	158	50	143	-2	-50	-127
VIV1A	HP 1	10.50	10.50	1000 gal/ac	160	100	270	158	50	143	-2	-50	-127

Per Field Basis

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015		

Field	Nutrient Source	Application			Nutrient Recommendation (lbs)			Nutrients Applied (lbs)			Surpluses / Deficits (lb)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 1	0.00	0.00	1000 gal	2,400	0	800	0	0	0	-2,400	0	-800
CC1	HP 1	31.20	31.20	1000 gal	832	0	936	470	150	424	-362	150	-512
JG-A	HP 1	105.00	105.00	1000 gal	2,240	0	3,080	1,583	504	1,428	-657	504	-1,652
JG-B	HP 1	0.00	0.00	1000 gal	360	0	0	0	0	0	-360	0	0
EC-A	HP 1	36.00	36.00	1000 gal	576	0	480	543	173	490	-33	173	10
DC	HP 1	0.00	0.00	1000 gal	2,512	0	2,355	0	0	0	-2,512	0	-2,355
HB1	HP 1	83.25	83.25	1000 gal	1,332	1,332	666	1,255	400	1,132	-77	-932	466
HB2	HP 1	98.25	98.25	1000 gal	1,572	1,048	524	1,481	472	1,336	-91	-576	812
LCM1	HP 1	194.25	194.25	1000 gal	2,960	1,480	4,070	2,928	932	2,642	-32	-548	-1,428
LCM2	HP 1	170.10	170.10	1000 gal	2,592	1,944	4,374	2,564	816	2,313	-28	-1,128	-2,061
LCM3	HP 1	200.55	200.55	1000 gal	3,056	1,528	4,202	3,023	963	2,727	-33	-565	-1,475
RM1	HP 1	616.50	616.50	1000 gal	9,864	9,864	13,152	9,294	2,959	8,384	-570	-6,905	-4,768
RM2	HP 1	224.70	224.70	1000 gal	3,424	0	4,708	3,387	1,079	3,056	-37	1,079	-1,652
MM1	HP 1	144.90	144.90	1000 gal	2,208	0	3,036	2,184	696	1,971	-24	696	-1,065
MM2	HP 1	312.90	312.90	1000 gal	4,768	0	5,364	4,717	1,502	4,255	-51	1,502	-1,109
MM3	HP 1	114.45	114.45	1000 gal	1,744	0	1,635	1,725	549	1,557	-19	549	-78
RC3	HP 1	126.00	126.00	1000 gal	1,920	0	3,240	1,899	605	1,714	-21	605	-1,526
RC4	HP 1	138.00	138.00	1000 gal	2,208	1,472	0	2,080	662	1,877	-128	-810	1,877
PC1	HP 1	137.25	137.25	1000 gal	2,196	732	0	2,069	659	1,867	-127	-73	1,867
CB1	HP 1	131.25	131.25	1000 gal	2,000	0	2,250	1,979	630	1,785	-21	630	-465
CB2	HP 1	281.25	281.25	1000 gal	4,500	0	0	4,240	1,350	3,825	-260	1,350	3,825
CB3	HP 1	28.50	28.50	1000 gal	456	0	0	430	137	388	-26	137	388
CB4	HP 1	169.05	169.05	1000 gal	2,576	0	4,347	2,548	811	2,299	-28	811	-2,048
CB5	HP 1	13.50	13.50	1000 gal	216	0	72	204	65	184	-12	65	112
CB6	HP 1	99.75	99.75	1000 gal	2,128	0	3,591	1,504	479	1,357	-624	479	-2,234
CB7	HP 1	330.00	330.00	1000 gal	5,280	0	0	4,975	1,584	4,488	-305	1,584	4,488
CB8	HP 1	48.75	48.75	1000 gal	780	0	0	735	234	663	-45	234	663
CB9	HP 1	147.75	147.75	1000 gal	2,364	0	788	2,227	709	2,009	-137	709	1,221
CB10	HP 1	168.75	168.75	1000 gal	2,700	0	1,350	2,544	810	2,295	-156	810	945
CB11	HP 1	46.75	46.75	1000 gal	1,020	0	0	705	224	636	-315	224	636
CB12	HP 1	33.00	33.00	1000 gal	528	176	0	497	158	449	-31	-18	449
CB13	HP 1	63.75	63.75	1000 gal	1,020	0	510	961	306	867	-59	306	357
EM1	HP 1	49.50	49.50	1000 gal	792	528	1,056	746	238	673	-46	-290	-383
GD1	HP 1	107.10	107.10	1000 gal	1,632	1,224	1,836	1,615	514	1,457	-17	-710	-379
VIV1	HP 1	240.45	240.45	1000 gal	3,664	2,290	6,183	3,625	1,154	3,270	-39	-1,136	-2,913
VIV1A	HP 1	107.10	107.10	1000 gal	1,632	1,020	2,754	1,615	514	1,457	-17	-506	-1,297
				Totals	82,052	24,638	77,359	72,352	23,038	65,273	-9,700	-1,600	-12,086

Manure Distribution Summary

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015		

Units Applied by Field and Source

Field	Source				
	HP 1 (1000 gal)				
CCGW	0.00				
CC1	31.20				
JG-A	105.00				
JG-B	0.00				
EC-A	36.00				
DC	0.00				
HB1	83.25				
HB2	98.25				
LCM1	194.25				
LCM2	170.10				
LCM3	200.55				
RM1	616.50				
RM2	224.70				
MM1	144.90				
MM2	312.90				
MM3	114.45				
RC3	126.00				
RC4	138.00				
PC1	137.25				
CB1	131.25				
CB2	281.25				
CB3	28.50				
CB4	169.05				
CB5	13.50				
CB6	99.75				
CB7	330.00				
CB8	48.75				
CB9	147.75				
CB10	168.75				
CB11	46.75				
CB12	33.00				
CB13	63.75				
EM1	49.50				
GD1	107.10				
VIV1	240.45				
VIV1A	107.10				
Total Applied	4,800				

Comments:

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

Planner:	Monica Hancock				Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 1 Revised 12/1/2015					
Available						
Deficit/Surplus						

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015		

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

County Information

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

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

Nutrient Source and Description Information

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

Nutrient Loss and Mineralization Factors

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

Estimated Plant Available Nutrients

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

Field P Index Calculations

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015		

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

Comments:

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

Planner:	Monica Hancock						Date:	5/7/2015	
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015								
Field	Field Area (ac)	Buffer Length (ft)	Buffer Width (ft)	Appl Area (ac)	Predominate Vegetation	Percent Ground Cover	Conservation Support Practices (P)	RUSLE 1 (ton/ac)	RUSLE 2 (ton/ac)
CCGW	20.00			20.00	Grass	95-100	None in place	0.17	0.17
CC1	5.20			5.20	Grass	95-100	None in place	0.21	0.21
JG-A	14.00			14.00	Grass	95-100	None in place	0.21	0.21
JG-B	3.00			3.00	Grass	95-100	None in place	0.17	0.17
EC-A	4.80			4.80	Grass	95-100	None in place	0.09	0.09
DC	15.70			15.70	Grass	95-100	None in place	0.17	0.17
HB1	11.10			11.10	Grass	95-100	None in place	0.21	0.21
HB2	13.10			13.10	Grass	95-100	None in place	0.21	0.21
LCM1	18.50			18.50	Grass	95-100	None in place	0.17	0.17
LCM2	16.20			16.20	Grass	95-100	None in place	0.21	0.21
LCM3	19.10			19.10	Grass	95-100	None in place	0.08	0.08
RM1	82.20			82.20	Grass	95-100	None in place	0.28	0.28
RM2	21.40			21.40	Grass	95-100	None in place	0.05	0.05
MM1	13.80			13.80	Grass	95-100	None in place	0.05	0.05
MM2	29.80			29.80	Grass	95-100	None in place	0.05	0.05
MM3	10.90			10.90	Grass	95-100	None in place	0.05	0.05
RC3	12.00			12.00	Grass	95-100	None in place	0.05	0.05
RC4	18.40			18.40	Grass	95-100	None in place	0.28	0.28
PC1	18.30			18.30	Grass	95-100	None in place	0.21	0.21
CB1	12.50			12.50	Grass	95-100	None in place	0.28	0.28
CB2	37.50			37.50	Grass	95-100	None in place	0.28	0.28
CB3	3.80			3.80	Grass	95-100	None in place	0.28	0.28
CB4	16.10			16.10	Grass	95-100	None in place	0.05	0.05
CB5	1.80			1.80	Grass	95-100	None in place	0.05	0.05
CB6	13.30			13.30	Grass	95-100	None in place	0.05	0.05
CB7	44.00			44.00	Grass	95-100	None in place	0.28	0.28
CB8	6.50			6.50	Grass	95-100	None in place	0.17	0.17
CB9	19.70			19.70	Grass	95-100	None in place	0.21	0.21
CB10	22.50			22.50	Grass	95-100	None in place	0.28	0.28
CB11	8.50			8.50	Grass	95-100	None in place	0.28	0.28
CB12	4.40			4.40	Grass	95-100	None in place	0.28	0.28
CB13	8.50			8.50	Grass	95-100	None in place	0.21	0.21
EM1	6.60			6.60	Grass	95-100	None in place	0.21	0.21
GD1	10.20			10.20	Grass	95-100	None in place	0.21	0.21
VIV1	22.90			22.90	Grass	95-100	None in place	0.17	0.17
VIV1A	10.20			10.20	Grass	95-100	None in place	0.17	0.17
	596.50			596.50					

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015		

Field	Pasture Use	Application Method	Application Timing	Nutrient Source	Application Rate		Pre BMP PI Value	P Index Range	Target Post BMPs PI Values
CCGW	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	0.00	1000 gal/ac	66	Medium	66
CC1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	11.00	1000 gal/ac	66	Medium	66
JG-A	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	13.00	1000 gal/ac	66	Medium	66
JG-B	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	0.00	1000 gal/ac	120	Very High	120
EC-A	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	26	Low	66
DC	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	0.00	1000 gal/ac	73	High	73
HB1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	30	Low	66
HB2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	17	Low	66
LCM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	31	Low	66
LCM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	22	Low	66
LCM3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	32	Low	66
RM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	16	Low	66
RM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	46	Medium	66
MM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	41	Medium	66
MM2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	49	Medium	66
MM3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	42	Medium	66
RC3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	46	Medium	66
RC4	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	18	Low	66
PC1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	19	Low	66
CB1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	37	Medium	66
CB2	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	41	Medium	66
CB3	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	34	Medium	66
CB4	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	53	Medium	66
CB5	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	43	Medium	66
CB6	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	12.00	1000 gal/ac	65	Medium	66
CB7	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	33	Medium	66
CB8	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	43	Medium	66
CB9	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	24	Low	66
CB10	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	25	Low	66
CB11	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	9.50	1000 gal/ac	65	Medium	66
CB12	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	34	Medium	66
CB13	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	24	Low	66
EM1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	10.50	1000 gal/ac	17	Low	66
GD1	Rotational Grazing	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	22	Low	66
VIV1	Hayland	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	42	Medium	66
VIV1A	Hayland	Surface Applied	Nov-Feb	HP 2	14.00	1000 gal/ac	42	Medium	66

Best Management Practices

Comments:

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

Planner:	Monica Hancock								Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015									

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

Field Nutrient Application Planning

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015		

Per Acre Basis

Field	Nutrient Source	Application			Nutrient Recommendation (lb/ac)			Nutrients Applied (lb/ac)			Surpluses / Deficits (lb/ac)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 2	0.00	0.00	1000 gal/ac	120	0	40	0	0	0	-120	0	-40
CC1	HP 2	11.00	11.00	1000 gal/ac	160	0	180	125	87	114	-35	87	-66
JG-A	HP 2	13.00	13.00	1000 gal/ac	160	0	220	148	103	135	-12	103	-85
JG-B	HP 2	0.00	0.00	1000 gal/ac	120	0	0	0	0	0	-120	0	0
EC-A	HP 2	10.50	10.50	1000 gal/ac	120	0	100	120	83	109	0	83	9
DC	HP 2	0.00	0.00	1000 gal/ac	160	0	150	0	0	0	-160	0	-150
HB1	HP 2	10.50	10.50	1000 gal/ac	120	120	60	120	83	109	0	-37	49
HB2	HP 2	10.50	10.50	1000 gal/ac	120	80	40	120	83	109	0	3	69
LCM1	HP 2	14.00	14.00	1000 gal/ac	160	80	220	160	111	146	0	31	-74
LCM2	HP 2	14.00	14.00	1000 gal/ac	160	120	270	160	111	146	0	-9	-124
LCM3	HP 2	14.00	14.00	1000 gal/ac	160	80	220	160	111	146	0	31	-74
RM1	HP 2	10.50	10.50	1000 gal/ac	120	120	160	120	83	109	0	-37	-51
RM2	HP 2	14.00	14.00	1000 gal/ac	160	0	220	160	111	146	0	111	-74
MM1	HP 2	14.00	14.00	1000 gal/ac	160	0	220	160	111	146	0	111	-74
MM2	HP 2	14.00	14.00	1000 gal/ac	160	0	180	160	111	146	0	111	-34
MM3	HP 2	14.00	14.00	1000 gal/ac	160	0	150	160	111	146	0	111	-4
RC3	HP 2	14.00	14.00	1000 gal/ac	160	0	270	160	111	146	0	111	-124
RC4	HP 2	10.50	10.50	1000 gal/ac	120	80	0	120	83	109	0	3	109
PC1	HP 2	10.50	10.50	1000 gal/ac	120	40	0	120	83	109	0	43	109
CB1	HP 2	14.00	14.00	1000 gal/ac	160	0	180	160	111	146	0	111	-34
CB2	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB3	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB4	HP 2	14.00	14.00	1000 gal/ac	160	0	270	160	111	146	0	111	-124
CB5	HP 2	10.50	10.50	1000 gal/ac	120	0	40	120	83	109	0	83	69
CB6	HP 2	12.00	12.00	1000 gal/ac	160	0	270	137	95	125	-23	95	-145
CB7	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB8	HP 2	10.50	10.50	1000 gal/ac	120	0	0	120	83	109	0	83	109
CB9	HP 2	10.50	10.50	1000 gal/ac	120	0	40	120	83	109	0	83	69
CB10	HP 2	10.50	10.50	1000 gal/ac	120	0	60	120	83	109	0	83	49
CB11	HP 2	9.50	9.50	1000 gal/ac	120	0	0	108	75	99	-12	75	99
CB12	HP 2	10.50	10.50	1000 gal/ac	120	40	0	120	83	109	0	43	109
CB13	HP 2	10.50	10.50	1000 gal/ac	120	0	60	120	83	109	0	83	49
EM1	HP 2	10.50	10.50	1000 gal/ac	120	80	160	120	83	109	0	3	-51
GD1	HP 2	14.00	14.00	1000 gal/ac	160	120	180	160	111	146	0	-9	-34
VIV1	HP 2	14.00	14.00	1000 gal/ac	160	100	270	160	111	146	0	11	-124
VIV1A	HP 2	14.00	14.00	1000 gal/ac	160	100	270	160	111	146	0	11	-124

Per Field Basis

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015		

Field	Nutrient Source	Application			Nutrient Recommendation (lbs)			Nutrients Applied (lbs)			Surpluses / Deficits (lb)		
		PI Max	Planned		N	P2O5	K2O	N	P2O5	K2O	N	P2O5	K2O
CCGW	HP 2	0.00	0.00	1000 gal	2,400	0	800	0	0	0	-2,400	0	-800
CC1	HP 2	57.20	57.20	1000 gal	832	0	936	652	452	595	-180	452	-341
JG-A	HP 2	182.00	182.00	1000 gal	2,240	0	3,080	2,075	1,438	1,893	-165	1,438	-1,187
JG-B	HP 2	0.00	0.00	1000 gal	360	0	0	0	0	0	-360	0	0
EC-A	HP 2	50.40	50.40	1000 gal	576	0	480	575	398	524	-1	398	44
DC	HP 2	0.00	0.00	1000 gal	2,512	0	2,355	0	0	0	-2,512	0	-2,355
HB1	HP 2	116.55	116.55	1000 gal	1,332	1,332	666	1,329	921	1,212	-3	-411	546
HB2	HP 2	137.55	137.55	1000 gal	1,572	1,048	524	1,568	1,087	1,431	-4	39	907
LCM1	HP 2	259.00	259.00	1000 gal	2,960	1,480	4,070	2,953	2,046	2,694	-7	566	-1,376
LCM2	HP 2	226.80	226.80	1000 gal	2,592	1,944	4,374	2,586	1,792	2,359	-6	-152	-2,015
LCM3	HP 2	267.40	267.40	1000 gal	3,056	1,528	4,202	3,048	2,112	2,781	-8	584	-1,421
RM1	HP 2	863.10	863.10	1000 gal	9,864	9,864	13,152	9,839	6,818	8,976	-25	-3,046	-4,176
RM2	HP 2	299.60	299.60	1000 gal	3,424	0	4,708	3,415	2,367	3,116	-9	2,367	-1,592
MM1	HP 2	193.20	193.20	1000 gal	2,208	0	3,036	2,202	1,526	2,009	-6	1,526	-1,027
MM2	HP 2	417.20	417.20	1000 gal	4,768	0	5,364	4,756	3,296	4,339	-12	3,296	-1,025
MM3	HP 2	152.60	152.60	1000 gal	1,744	0	1,635	1,740	1,206	1,587	-4	1,206	-48
RC3	HP 2	168.00	168.00	1000 gal	1,920	0	3,240	1,915	1,327	1,747	-5	1,327	-1,493
RC4	HP 2	193.20	193.20	1000 gal	2,208	1,472	0	2,202	1,526	2,009	-6	54	2,009
PC1	HP 2	192.15	192.15	1000 gal	2,196	732	0	2,191	1,518	1,998	-5	786	1,998
CB1	HP 2	175.00	175.00	1000 gal	2,000	0	2,250	1,995	1,383	1,820	-5	1,383	-430
CB2	HP 2	393.75	393.75	1000 gal	4,500	0	0	4,489	3,111	4,095	-11	3,111	4,095
CB3	HP 2	39.90	39.90	1000 gal	456	0	0	455	315	415	-1	315	415
CB4	HP 2	225.40	225.40	1000 gal	2,576	0	4,347	2,570	1,781	2,344	-6	1,781	-2,003
CB5	HP 2	18.90	18.90	1000 gal	216	0	72	215	149	197	-1	149	125
CB6	HP 2	159.60	159.60	1000 gal	2,128	0	3,591	1,819	1,261	1,660	-309	1,261	-1,931
CB7	HP 2	462.00	462.00	1000 gal	5,280	0	0	5,267	3,650	4,805	-13	3,650	4,805
CB8	HP 2	68.25	68.25	1000 gal	780	0	0	778	539	710	-2	539	710
CB9	HP 2	206.85	206.85	1000 gal	2,364	0	788	2,358	1,634	2,151	-6	1,634	1,363
CB10	HP 2	236.25	236.25	1000 gal	2,700	0	1,350	2,693	1,866	2,457	-7	1,866	1,107
CB11	HP 2	80.75	80.75	1000 gal	1,020	0	0	921	638	840	-99	638	840
CB12	HP 2	46.20	46.20	1000 gal	528	176	0	527	365	480	-1	189	480
CB13	HP 2	89.25	89.25	1000 gal	1,020	0	510	1,017	705	928	-3	705	418
EM1	HP 2	69.30	69.30	1000 gal	792	528	1,056	790	547	721	-2	19	-335
GD1	HP 2	142.80	142.80	1000 gal	1,632	1,224	1,836	1,628	1,128	1,485	-4	-96	-351
VIV1	HP 2	320.60	320.60	1000 gal	3,664	2,290	6,183	3,655	2,533	3,334	-9	243	-2,849
VIV1A	HP 2	142.80	142.80	1000 gal	1,632	1,020	2,754	1,628	1,128	1,485	-4	108	-1,269
				Totals	82,052	24,638	77,359	75,850	52,563	69,197	-6,202	27,925	-8,162

Manure Distribution Summary

Comments:

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

Planner:	Monica Hancock	Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015		

Units Applied by Field and Source

Field	Source				
	HP 2 (1000 gal)				
CCGW	0.00				
CC1	57.20				
JG-A	182.00				
JG-B	0.00				
EC-A	50.40				
DC	0.00				
HB1	116.55				
HB2	137.55				
LCM1	259.00				
LCM2	226.80				
LCM3	267.40				
RM1	863.10				
RM2	299.60				
MM1	193.20				
MM2	417.20				
MM3	152.60				
RC3	168.00				
RC4	193.20				
PC1	192.15				
CB1	175.00				
CB2	393.75				
CB3	39.90				
CB4	225.40				
CB5	18.90				
CB6	159.60				
CB7	462.00				
CB8	68.25				
CB9	206.85				
CB10	236.25				
CB11	80.75				
CB12	46.20				
CB13	89.25				
EM1	69.30				
GD1	142.80				
VIV1	320.60				
VIV1A	142.80				
Total Applied	6,654				

Comments:

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

Planner:	Monica Hancock				Date:	5/7/2015
Plan Description:	EC Campbell Farm - Receiving Litter - Pond 2 Revised 12/1/2015					
Available						
Deficit/Surplus						

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

Field	Acres	Source	Time	Application Rate (1,000 gal/ac.)	Total Application (gallons)	P Index Value
CCGW	20.0	HP 1	Jan.-Dec.	0.0	0.00	66
CC1	5.2	HP 1	Jan.-Dec.	6.0	31,200	65
JG-A	14.0	HP 1	Jan.-Dec.	7.5	105,000	65
JG-B	3.0	HP 1	Jan.-Dec.	0.0	0.00	120
EC-A	4.8	HP 1	Jan.-Dec.	7.5	36,000	29
DC	15.7	HP 1	Jan.-Dec.	0.0	0.00	73
HB1	11.1	HP 1	Jan.-Dec.	7.5	83,250	36
HB2	13.1	HP 1	Jan.-Dec.	7.5	98,250	21
LCM1	18.5	HP 1	Jan.-Dec.	10.5	194,250	39
LCM2	16.2	HP 1	Jan.-Dec.	10.5	170,100	28
LCM3	19.1	HP 1	Jan.-Dec.	10.5	200,550	40
RM1	82.2	HP 1	Jan.-Dec.	7.5	616,500	20
RM2	21.4	HP 1	Jan.-Dec.	10.5	224,700	54
MM1	13.8	HP 1	Jan.-Dec.	10.5	144,900	49
MM2	29.8	HP 1	Jan.-Dec.	10.5	312,900	57
MM3	10.9	HP 1	Jan.-Dec.	10.5	114,450	50
RC3	12.0	HP 1	Jan.-Dec.	10.5	126,000	54
RC4	18.4	HP 1	Jan.-Dec.	7.5	138,000	21
PC1	18.3	HP 1	Jan.-Dec.	7.5	137,250	23
CB1	12.5	HP 1	Jan.-Dec.	10.5	131,250	43
CB2	37.5	HP 1	Jan.-Dec.	7.5	281,250	44
CB3	3.8	HP 1	Jan.-Dec.	7.5	28,500	37
CB4	16.1	HP 1	Jan.-Dec.	10.5	169,050	61
CB5	1.8	HP 1	Jan.-Dec.	7.5	13,500	48
CB6	13.3	HP 1	Jan.-Dec.	7.5	99,750	66
CB7	44.0	HP 1	Jan.-Dec.	7.5	330,000	37
CB8	6.5	HP 1	Jan.-Dec.	7.5	48,750	47
CB9	19.7	HP 1	Jan.-Dec.	7.5	147,750	27
CB10	22.5	HP 1	Jan.-Dec.	7.5	168,750	29
CB11	8.5	HP 1	Jan.-Dec.	5.5	46,750	65
CB12	4.4	HP 1	Jan.-Dec.	7.5	33,000	40
CB13	8.5	HP 1	Jan.-Dec.	7.5	63,750	27
EM1	6.6	HP 1	Jan.-Dec.	7.5	49,500	21
GD1	10.2	HP 1	Jan.-Dec.	10.5	107,100	28
VIV1	22.9	HP 1	Jan.-Dec.	10.5	240,450	53
VIV1A	10.2	HP 1	Jan.-Dec.	10.5	107,10	52

OR

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

Field	Acres	Source	Time	Application Rate (1,000 gal/ac.)	Total Application (gallons)	P Index Value
CCGW	20.0	HP 2	Jan.-Dec.	0.00	0.00	66
CC1	5.2	HP 2	Jan.-Dec.	11.0	57,200	66
JG-A	14.0	HP 2	Jan.-Dec.	13.0	182,000	66
JG-B	3.0	HP 2	Jan.-Dec.	0.0	0.00	120
EC-A	4.8	HP 2	Jan.-Dec.	10.5	50,400	26
DC	15.7	HP 2	Jan.-Dec.	0.0	0.00	73
HB1	11.1	HP 2	Jan.-Dec.	10.5	116,550	30
HB2	13.1	HP 2	Jan.-Dec.	10.5	137,550	17
LCM1	18.5	HP 2	Jan.-Dec.	14.0	259,000	31
LCM2	16.2	HP 2	Jan.-Dec.	14.0	226,800	22
LCM3	19.1	HP 2	Jan.-Dec.	14.0	267,400	32
RM1	82.2	HP 2	Jan.-Dec.	10.5	863,100	16
RM2	21.4	HP 2	Jan.-Dec.	14.0	299,600	46
MM1	13.8	HP 2	Jan.-Dec.	14.0	193,200	41
MM2	29.8	HP 2	Jan.-Dec.	14.0	417,200	49
MM3	10.9	HP 2	Jan.-Dec.	14.0	152,600	42
RC3	12.0	HP 2	Jan.-Dec.	14.0	168,000	46
RC4	18.4	HP 2	Jan.-Dec.	10.5	193,200	18
PC1	18.3	HP 2	Jan.-Dec.	10.5	192,150	19
CB1	12.5	HP 2	Jan.-Dec.	14.0	175,000	37
CB2	37.5	HP 2	Jan.-Dec.	10.5	393,750	41
CB3	3.8	HP 2	Jan.-Dec.	10.5	39,900	34
CB4	16.1	HP 2	Jan.-Dec.	14.0	225,400	53
CB5	1.8	HP 2	Jan.-Dec.	10.5	18,900	43
CB6	13.3	HP 2	Jan.-Dec.	12.0	159,600	65
CB7	44.0	HP 2	Jan.-Dec.	10.5	462,000	33
CB8	6.5	HP 2	Jan.-Dec.	10.5	68,250	43
CB9	19.7	HP 2	Jan.-Dec.	10.5	206,850	24
CB10	22.5	HP 2	Jan.-Dec.	10.5	236,250	25
CB11	8.5	HP 2	Jan.-Dec.	9.5	80,750	65
CB12	4.4	HP 2	Jan.-Dec.	10.5	46,200	34
CB13	8.5	HP 2	Jan.-Dec.	10.5	89,250	24
EM1	6.6	HP 2	Jan.-Dec.	10.5	69,300	17
GD1	10.2	HP 2	Jan.-Dec.	14.0	142,800	22
VIV1	22.9	HP 2	Jan.-Dec.	14.0	320,600	42
VIV1A	10.2	HP 2	Jan.-Dec.	14.0	142,80	42

From:	C H Hog Farms, Inc.
To:	Water Permit Application; McWilliams, Katherine
Subject:	EC Farms - Response to Incompleteness Letter
Date:	Thursday, December 10, 2015 2:38:21 PM
Attachments:	12-10-15 Letter to ADEQ re Major Modification - Incompleteness Response.pdf Ellis Campbell (3540-WR-7) Revisions 1-4.pdf Richard Campbell Land Use Contract.pdf Ellis Campbell (3540-WR-7) Revisions 5-6.pdf P Index and Max Rate Tables.pdf Harl Bohannon Topo Map Revision.pdf

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Ms. McWilliams,

Please see the attached in response to your Incompleteness Letter dated 11-30-15.

Thank you,
Ellis Campbell