

Consent Decree in United States et al. v. Arkansas Egg Company, Inc.

**Appendix A – Part 1**

Comprehensive Nutrient Management and Closure Plan Revision 2 for Arkansas Egg Farm  
(Closure Plan)

Dated April 25, 2013, and Finalized June 10, 2013

# Comprehensive Nutrient Management Closure Plan Revision 2

for

## Arkansas Egg Farm

**Owner:** Michael Cox

**Address:** 24185 Mill Road

**City:** Summers, Arkansas 72769

**Telephone:** (479) 824-3656

**Location(s):** Section 6, Township 15 North, Range 33 West

**Latitude:** 36°00'25" N **Longitude:** 94°31'55" W

Washington County, Arkansas

**Hydrologic Unit #:** 111101030604

**Watershed:** Upper Ballard Creek, Illinois River, Arkansas



**April 25, 2013**

Prepared by the USDA-Natural Resources Conservation Service in Cooperation with the Washington  
County Conservation District

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**Comprehensive Nutrient Management Closure Plan Approval Sheet  
Natural Resources Conservation Service – Arkansas**

Operation: Arkansas Egg Farm

County: Washington

Decision Maker: Michael Cox

Conservation District: Washington County Conservation District

This Comprehensive Nutrient Management Closure Plan (CNMP) has been developed with the assistance and approval of individuals certified in the following required components. This CNMP is not considered final until signed and dated by the producer/decision maker and the person certified to sign as the CNMP Approver.

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**Manure and Wastewater Handling and Storage Component**

I certify that this CNMP properly addresses manure and wastewater handling and storage relative to this operation.

Approved By: Stanley K. Rose

Title: NRCS NW Area Engineer

Signature: \_\_\_\_\_

Date: April 25, 2013

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**Land Treatment Component**

I certify that this CNMP properly addresses land treatment measures relative to this operation.

Approved By: Rhonda Foster

Title: NRCS District Conservationist, Fayetteville FSC

Signature: \_\_\_\_\_

Date: 6/10/13

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**Nutrient Management Component**

I certify that this CNMP properly addresses nutrient management issues relative to this operation.

Approved By: Casey Dunigan

Title: Washington County Conservation District Water Quality Technician

Signature: \_\_\_\_\_

Date: 4/10/13

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**Conservation District**

As a representative of the Conservation District, I concur that this CNMP meets the District's objectives.

Signature: \_\_\_\_\_

Date: 6-11-13

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**Decision Maker**

As the decision maker for the operation associated with this CNMP, I certify that I have been involved in the planning process and agree with the practices in each component. I understand I am responsible for keeping all necessary records associated with this CNMP. It is my intent to implement this CNMP in a timely manner.

Signature: \_\_\_\_\_

Date: 6/10/13

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**Final CNMP Approval**

As an individual certified to approve a CNMP, I certify that I have reviewed this CNMP and that all elements, including Other Utilization if used, are technically compatible and can reasonably be expected to be implemented.

Approved By: Walt Delp, P.E.

Title: NRCS Arkansas State Engineer

Signature: Walter M. Delp

Digitally signed by Walter M. Delp  
DN: cn=Walter M. Delp, o=NRCS, ou=USDA,  
email=walter.delp@ar.usda.gov, c=US  
Date: 2013.04.30 13:22:58 -05'00'

Date: \_\_\_\_\_

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## Section 1 BACKGROUND AND SITE INFORMATION

Purpose and Goals of Plan

General description of operation w/size and type of animals

Land Base Table

Location of production site: legal, latitude and longitude

Farmstead sketch (using arc map)

Operation and Maintenance





## **PURPOSE AND GOALS OF THIS PLAN**

### **Introduction**

This Comprehensive Nutrient Management Closure Plan (CNMP) is an overall conservation system for your animal feeding operation (AFO) and is site-specific for this farm. A CNMP is a conservation plan for animal feeding operations, consisting of a group of conservation practices and management activities which, when implemented as part of a conservation system will help to ensure both production and natural resources protection goals are achieved.

This Closure CNMP documents the Animal Feeding Operation Owner's consideration of the four elements.

- Land Treatment Practices
- Nutrient Management
- Record Keeping
- Monitoring, Testing and Evaluation

This CNMP contains actions that address water quality criteria for the system production area and land on which the manure and organic by-products will be applied. This includes soil erosion considerations to reduce the transport of nutrients within and off a field to which manure is applied.

This CNMP will meet all requirements of the NRCS Field Office Technical Guide (FOTG) conservation practices contained within this plan.

This CNMP will meet all applicable local, state and federal regulations, and will ensure that all applicable USEPA-NPDES or state permit requirements are met. This CNMP will comply with Arkansas ADEQ Regulation 5.

This CNMP is intended to be a working document with additions to the plan, such as records and agreements. It incorporates conservation practices and management activities, which will ensure that both agriculture production and environmental protection goals are achieved. The goal of manure and 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. An important part of this plan is the Nutrient Management Plan (NMP), which specifically addresses manure production and application recommendations. **See Section 4 – Nutrient Management.**

### **Nitrogen and Phosphorus vs. Water Quality**

The primary source of nutrients for this farm is feed supplied for the laying hen operation. A significant portion of these nutrients are retained in the manure. These nutrients are land applied and are utilized as a fertilizer for pasture and hay land. Phosphorous is typically the most critical nutrient and land application of wastes is limited by the phosphorous content of the manure. Additional sources of nitrogen may be required in order to balance the nutrient requirements of the grasses on the farm. Additional fertilizer recommendations are included in the soils analysis section of the Nutrient Management Plan.

Cattle ranging on pasture are not considered a significant additional source of nutrients unless a substantial amount of their diet is supplied by feed or hay from off the farm. Any significant outside sources of nutrients are addressed in the Nutrient Management Plan. Any increase in nutrient build-up in the soil due to cattle grazing will be slow and will be identified in routine soil tests. Corrective actions will be taken according to the recommendations of the latest soils analysis.

### **Water Quality**

Past scientific research has shown that improper animal waste applications may be a detriment to water quality. Nitrogen and phosphorus are the two nutrients most often identified as impairing the quality of our ground and surface water. Nitrogen leaching out of the root zone can be transported to surface water or leach to groundwater. Phosphorus runoff entering the surface water contributes to excessive algae growth causing low oxygen levels in rivers and lakes that impairs aquatic life and contributes to bad tasting drinking water. Long-term manure applications based on meeting the nitrogen needs of crops have resulted in excessive levels of phosphorus accumulating in the soil due to the ratio of N:P required by the plant being greater than the N:P ratio found in manure. Also of significant concern is the amount of soluble phosphorus that exists in manure itself. The soluble fraction of phosphorus is highly prone to transport in runoff water and is immediately available for uptake by algae and other aquatic plants. Following the recommendations of this CNMP will minimize the transport of nitrogen and phosphorus to surface and groundwater.

Due to the environmental quality concerns, land application of laying hen manure will be based upon the phosphorus content in the soil and in the manure to be applied. Specific planned rates of nitrogen and phosphorus application were determined based on the phosphorus index for Arkansas, "Phosphorus Index for Pastures", developed by the University of Arkansas.

Cattle access to streams and waterways should be limited in order to minimize wading and standing in water. Direct access to water by cattle ranging on pasture can be a significant source of nutrients to the stream and can degrade water quality.

### **Goals**

1. Apply manure and animal wastes to obtain maximum benefit while minimizing runoff of nutrients.
2. Operate the farm in a socially and environmentally acceptable manner.



## **PLANNED SYSTEM DESCRIPTION**

### **Location and General Information**

The Arkansas Egg Farm is located on Washington County Road 686, approximately 2 miles south of Cincinnati, Arkansas and 4 miles northwest of Summers, Arkansas, in Washington County.

The legal description for the facility location is in the Section 6, Township 15 North, Range 33 West in Washington County, Arkansas. The mailing address of this facility is 24185 Mill Road, Summers, AR 72769; telephone number is (479) 824-3656.

Latitude is 36° 00' 25" N, Longitude 94° 31' 55" W. on the Watts, Okla.-Ark. Quad Map.

### **Animal Numbers and Management**

This is an existing layer operation that was previously designed, permitted and operated as a liquid waste management system. In October 2008, the management of this system changed to a dry waste management system, and no longer produces nor stores liquid animal wastes. The liquid waste management system consisted of five laying houses with a total number of 300,000 laying hens on farm. Wastes and wash water from the five houses were piped into a series of two, earthen, holding ponds. These ponds were designed to provide a 180 day storage of waste accumulation, wash water, and rainfall onto the ponds, including a 25 year – 24 hour storm event. Following the management change, to a dry waste system, the holding ponds were not cleaned out, and are full of wastes at this time. This closure plan addresses the cleaning out, application of waste, and finally the closure of these ponds.

Liquid wastes from the holding ponds shall be applied to fields as shown in this report. Litter from the dry operation shall not be applied to the same fields within a 12 month period, and litter application shall be based upon a Nutrient Management Plan (NMP) developed by the Washington County Conservation District.

Holding pond 1 has the approximate waterline dimensions of 450' x 250' x 10' depth and 2:1 insides slopes. The storage capacity of holding pond 1 is approximately 990, 330 ft<sup>3</sup>, or 7,407,668 gallons.

Holding pond 2 has the approximate waterline dimensions of 450' x 120' x 10' depth and 2:1 insides slopes. The storage capacity of holding pond 1 is approximately 452, 833 ft<sup>3</sup>, or 3,387,191 gallons.

The combined holding capacity for the holding ponds is 1,443,163 ft<sup>3</sup>, or 10,794,859 gallons.

Attached is an aerial photo showing the location of farm, boundary lines, and the layer operation.

**The liquid laying hen operation is no longer in operation. This operation has been converted into a dry waste management system.**

### **Waste Management System**

All wastes from the liquid operation are currently stored in existing earthen holding ponds.

### **Closure Plan**

The existing holding ponds shall be emptied, with liquids and solids removed and land applied. Upon meeting the monitoring and testing goals shown in this report, the ponds shall be backfilled with soil material and vegetated. Upon completion of this closure, NRCS shall certify that these ponds have actually been backfilled and vegetated.

## Land Base

There are approximately 346.2 acres of pastureland available for waste application and utilization from this operation. These application areas are not included in any current nutrient management plans for dry waste application from this system. These application areas are included in the Arkansas Pollution Control and Ecology Commission Regulation 5 permit application, which identifies the areas for the purpose of carrying out the closure of the existing holding ponds. **More land application areas will be required to utilize all the accumulated animal wastes, and these areas will be added as they become available. This additional acreage will be added to the anticipated Regulation 5 permit through a minor modification.** While application rates on additional land areas will vary according to the P index of each respective site, if current application rate trends continue to hold as on the currently available land areas, approximately 2,960 additional acres will be required to completely apply the accumulated animal wastes. According to the current nutrient management plan (NMP) for the Arkansas Egg Dry waste system, currently in operation, all dry wastes are to be sold and will not be applied to the land areas indicated below, or on additional land areas to be added to this plan. The following table summarizes the application areas currently available, including acres available after removal of buffer zone areas:

Field No.	Owner Name	Section	Township	Range	Total Available Acres
NC1	Nita Calvert	6	15 N	33 W	10.7
NC2	Nita Calvert	6	15 N	33 W	13.3
NC3	Nita Calvert	6	15 N	33 W	1.3
NC4	Nita Calvert	6	15 N	33 W	2.4
NC5	Nita Calvert	6	15 N	33 W	8.3
NC6	Nita Calvert	6	15 N	33 W	0.9
MG1	Merle Gilbreath	5,6	15N	33W	21.6
MG2	Merle Gilbreath	5,6	15N	33W	5.7
MG3	Merle Gilbreath	5,6	15N	33W	10.2
MG4	Merle Gilbreath	5,6	15N	33W	77.6
MG5	Merle Gilbreath	5,6	15N	33W	0.9
MG6	Merle Gilbreath	5,6	15N	33W	3.0
DG1	Don Griscom	5,6	15N	33W	22.6
DG2	Don Griscom	5,6	15N	33W	20.2
DG3	Don Griscom	5,6	15N	33W	20.3
DG4	Don Griscom	5,6	15N	33W	14.0
JG1	Jerry Griscom	1	15N	34W	30.9
JG2	Jerry Griscom	1	15N	34W	36.4
JG3	Jerry Griscom	1	15N	34W	25.4
JG4	Jerry Griscom	1	15N	34W	11.0
JG5	Jerry Griscom	1	15N	34W	1.9
JG6	Jerry Griscom	1	15N	34W	7.6

**Total Acres      346.2**



Michael Cox/Summers Farm--East Side

Date: 7/24/2012

District: WASHINGTON COUNTY CONSERVATION DISTRICT

Legal Description: T 15N R 33W Section 6,7

Lat: 36 0.43 Lon: -94 32.01

HUC: 111101030604/Upper Ballard Cr., Illinois River

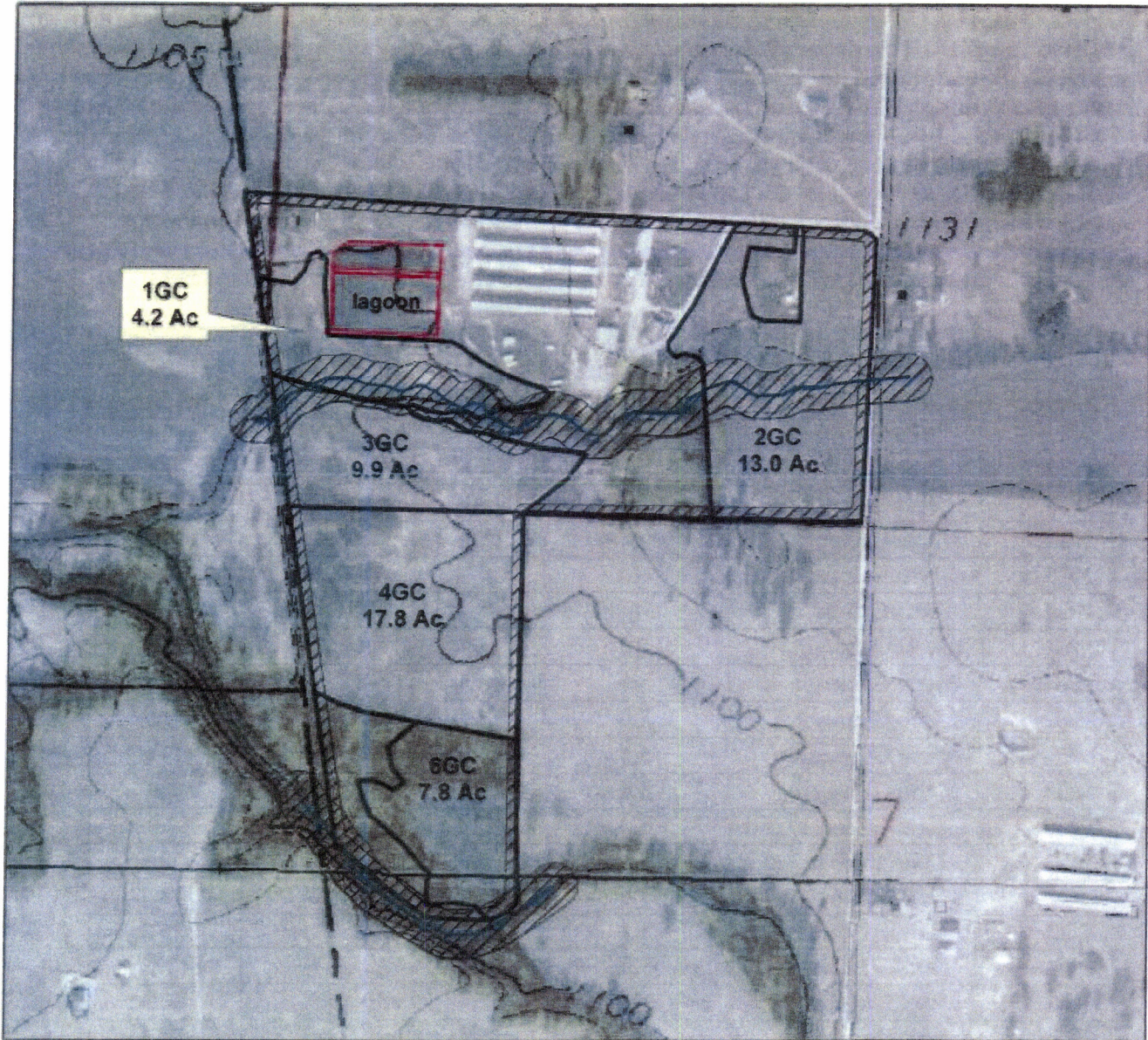
Assisted By: Casey D. Dunigan

24163 Mill Rd






T56

Farm# 4113

State and County: AR, WASHINGTON



Legend

-  Summer's Lagoon
-  Buffer\_Output\_east\_stream.shp
-  Buffer\_Output\_Cox\_east.shp
-  Streams
-  Cox\_East

