

**U.S. DEPARTMENT OF AGRICULTURE
Farm Service Agency**

DRAFT ENVIRONMENTAL ASSESSMENT



Logan County Arkansas

**Prepared By
Adam Kaufman, USDA, Farm Service Agency
State Environmental Coordinator**

07/10/2019

COVER SHEET

Proposed Action:	The Farm Service Agency of the United States Department of Agriculture proposes to provide Farm Loan Program assistance to finance the construction of (4) organic turkey houses, containment fences, load out pad, incinerator, 30' x 50' office building, a generator shed, utilities, a 2,000 square foot dwelling, and related infrastructure. This proposal would result in the establishment of a large CAFO. The legal description of the proposed site is Section 1, Township 6 North, Range 28 West in Logan County Arkansas.
Type of Document:	This is a site-specific Environmental Assessment
Lead Agency:	United States Department of Agriculture (USDA) Farm Service Agency (FSA)
Cooperating Agencies:	None
Further Information:	Adam Kaufman, USDA, Farm Service Agency, 419 West Gaines Street, Monticello, AR 71655.

TABLE OF CONTENTS

1. Introduction	7
1.1 Background	7
1.2 Purpose and Need for the Proposed Action	7
1.3 Decision To Be Made	8
1.4 Regulatory Compliance	8
1.5 Public Involvement and Consultation	8
1.5.1 Internal Scoping	8
1.5.2 External Scoping	8
1.5.3 Public Involvement	9
2. Description of Proposed Action and Alternatives	10
2.1 Alternative A - Proposed Action	10
2.2 Alternative B - No Action Alternative	12
2.3 Alternative C	12
2.4 Alternatives Considered but Eliminated From Analysis	13
3. Affected Environment and Impacts	14
3.1 Resources Eliminated from Detailed Analysis	14
3.2 Resources Considered with Detailed Analysis	16
3.2.1 Wildlife and Habitat	16
3.2.2 Cultural Resources	17
4. Water Quality	18
5. Air Quality	21
6. Noise	22
7. Cumulative Impacts	24
7.1 Past, Present and Reasonably Foreseeable Actions	25
7.2 Cumulative Analysis	25
7.2.1 Wildlife and Habitat	26
7.2.2 Cultural Resources	26
7.2.4 Water Quality	26
7.2.5 Air Quality	26
7.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES	27
9. References	29
10. EA Determination and Signatures	31

APPENDIX A PROJECT AREA MAPS

APPENDIX B Site Photos and FSA site Visit Report

B-1 FSA Site Visit Report and Photographs

APPENDIX C Required Permits and Plans

C-1 Storm water Pollution Prevention Plan (SWPPP)

C-2 ADEQ Permit ARR150000 Notice of Coverage

APPENDIX D Threatened and Endangered Species Documentation

D-1 IPaC USFWS Endangered/Threatened Species List

D-2 FSA Programmatic Decision Key and USFWS Correspondence

D-3 NLEB 4(d) Rule Letter

APPENDIX E Agency Correspondence Cultural Resources Documentation

E-1 SHPO and THPO Consultation Letters and Tribes With an Interest in Logan County

E-2 SHPO and THPO Responses and Correspondence

APPENDIX F Wilderness Areas Supporting Documentation

F-1 Dry Creek Wilderness Area Location Map

APPENDIX G-1 Mulberry River, Wild and Scenic River and Lee Creek and Piney Creek Nationwide Rivers Inventory

APPENDIX H National Natural Landmark Supporting Documentation

H-1 National Natural Landmarks of Arkansas Map

H-2 Roaring Branch Research Natural Area

APPENDIX I Wetlands Supporting Documentation

I-1 AD-1026

I-2 FSA 858 "Determining if a Wetland May be Present"

APPENDIX J Floodplain Supporting Documentation

J-1 Floodplain Map

APPENDIX K National Agricultural Statistics Service (NASS) and Census info

APPENDIX L Notice of Availability (NOA)

L-1 NOA

ACRONYMS AND ABBREVIATIONS

ADEQ	Arkansas Department of Environmental
ANRC	Arkansas Natural Resource Commission
AOG	Arkansas Oklahoma Gas Corp
AR	Arkansas
ATV	All-terrain vehicle
BMP's	Best Management Practices
CAFO	Concentrated Animal Feeding Operation
CEQ	Council on Environmental Quality
CNMP	Comprehensive Nutrient Management Plan
CFR	Code of Federal Regulations
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FSA	Farm Service Agency
GHG	Green House Gases
GPM	Gallons per minute
HUC	Hydrologic unit code
IPaC	Information for Planning and Conservation
MA/NLAA	May Affect, Not Likely to Adversely Affect
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMP	Nutrient Management Plan
NOA	Notice of Availability
NPDES	National Pollutant Discharge Elimination
NRCS	Natural Resources Conservation Service
SHPO	State Historic Preservation Officer
SPPP	Stormwater Pollution Prevention Plan
THPO	Tribal Historic Preservation Officers
TSP	Technical Service Provider
TMDL	Total Maximum Daily Load
WMA	Wildlife Management Area
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service

1. INTRODUCTION

1.1 Background

- The United States Department of Agriculture (USDA) Farm Service Agency (FSA) proposes to provide assistance for the applicant to establish a (4) house integrated turkey facility on a 142 acre tract of land the applicants are currently under contract to buy in Logan County. This proposal would include the construction of (4) 54' x 500' turkey houses. The proposed facility would have 108,000 square feet of growing space which would be capable of housing 63,100 birds per flock with a target weight of 14 pounds. The proposed facility would receive approximately 3.5 flocks annually including (1) organic flock prior to the holiday season. This proposed facility would meet FSA's definition of a large Confined Animal Feeding Operation (CAFO). Flock placement would be dependent on bird variety, needs of the integrator, supply and demand, and several other factors.
- This farm is located in Logan County and is not located in the Nutrient Surplus Area. Appendices A and B contain maps and photos of the proposed project area. A detailed description of the components of the proposed project, the project site and related surrounding area of potential effect is further described in Section 2.1 of this document.

1.2 Purpose and Need for the Proposed Action

The purpose of the proposed project/action is to implement USDA, Farm Service Agency programs, to make available economic opportunity to help rural America thrive, and to promote agriculture production that better nourishes Americans and help feed others throughout the world. FSA is tasked with this mission as provided for by the Food and Security Act of 1985 as amended, the Consolidated Farm and Rural Development Act as amended, and related implementing regulations found in 7 CFR Parts 762 and 764.

The need for the proposed action is to fulfill FSA's responsibility to provide access to credit, and to help improve the stability and strength of the agricultural economy, including to start, improve, expand, transition, market, and strengthen family farming and ranching operations, and to provide viable farming opportunities for family and beginning farmers and meet the needs of small and beginning farmers, women and minorities. Specifically, in the case of this loan request, FSA's need is to respond to the applicant's request for funding to support the proposed action.

FSA Farm Loan Program Assistance is not available for commercial operations or facilities that are not family farms, or to those having the ability to qualify for commercial credit without the benefit of FSA assistance. The applicants have been determined to be a family farm as defined by 7 CFR 761.2. The proposed action would allow them the opportunity to establish their family farming operation and provide the economic stability to meet the needs of the family.

In addition, poultry integrators have a demand for new facilities such as these to provide an adequate supply for processing plants and keep them operating at an economically feasible capacity. Specialized livestock facilities such as those proposed, have a limited useful life as they become functionally obsolete as technology advances. Accordingly, a pipeline of new facilities is necessary to insure an adequate and economical supply of low cost protein food for the nation.

1.3 Decision To Be Made

FSA's decision is whether to:

- Approve the applicant's loan request;
- Approve the request with additional mitigations; or
- Deny the loan request.

1.4 Regulatory Compliance

This Environmental Assessment is prepared to satisfy the requirements of NEPA (Public Law 91-190, 42 United States Code 4321 et seq.); its implementing regulations (40 CFR 1500-1508); and FSA implementing regulations, *Environmental Quality and Related Environmental Concerns – Compliance with the National Environmental Policy Act* (7 CFR 799). The intent of NEPA is to protect, restore, and enhance the human environment through well informed Federal decisions. A variety of laws, regulations, and Executive Orders (EO) apply to actions undertaken by Federal agencies and form the basis of the analysis.

All fifty states have enacted right-to-farm laws that seek to protect qualifying farmers and ranchers from nuisance lawsuits filed by individuals who move into a rural area where normal farming operations exist, and who later use nuisance actions to attempt to stop those ongoing operations. The Right to Farm law for Arkansas (Ark. Code Ann. § 24101) protects farming operations from nuisance claims when farms were established prior to the use of the area surrounding the agricultural operation for nonagricultural activities and those farms employ methods or practices commonly or reasonably associated with agricultural production.

1.5 Public Involvement and Consultation

Scoping is an early and open process to involve agencies, organizations, and the public in determining the issues to be addressed in the environmental document. Among other tasks, scoping determines important issues and eliminates issues determined not to be important; identifies other permits, surveys and consultations required with other agencies; and creates a schedule that allows adequate time to prepare and distribute the environmental document for public review and comment before a final decision is made. Scoping is a process that seeks opinions and consultation from the interested public, affected parties, and any agency with interests or legal jurisdiction.

1.5.1 Internal Scoping

USDA staff of various specialties have been consulted regarding the purpose and need, issues and impact topics appropriate for consideration for the proposed activity. A site visit and pedestrian review was completed by Adam Kaufman, State Environmental Coordinator, USDA, Farm Service Agency on 04/03/2019. Site visit notes and photographs are included in APPENDIX B.

1.5.2 External Scoping

USDA FSA has completed research and the following tasks and efforts:

- Research of U.S. Fish and Wildlife Service (USFWS) - Information, Planning, and Conservation System (IPaC) about the project's potential to affect federally listed species as required by the Endangered Species Act of 1973. SEE APPENDIX D-1.
- Consultation with the State Historic Preservation Officer (SHPO) to ensure that compliance with the requirements of Section 106 of the National Historic Preservation Act (NHPA) are met and that significant impacts to historic properties would not result from the project SEE APPENDIX E-1.
- Consultation with the Apache Tribe of Oklahoma, Caddo Nation, Cherokee Nation, Chickasaw Nation, Choctaw Nation, The Delaware Nation of Oklahoma, Muscogee (Creek) Nation, Osage Nation, Quapaw Tribe of Indians, and Shawnee Tribe to comply with the requirements of Section 106 of the NHPA are met and that significant impacts to historic properties would not result from the project. SEE APPENDIX E.
- FSA staff completed Form FSA-858, "Determining if a Wetland May Be Present" to screen for wetland indicators where ground disturbance associated with project would take place SEE APPENDIX I-2.

1.5.3 Public Involvement

A notice of the availability of the Draft EA for public review and comment will be published in the local newspaper in closest proximity to the project site with the largest circulation, the Charleston Express on 07/10 /2019 and 07/17/2019. SEE APPENDIX L-1. The Draft EA will be made available at the following location: USDA, Farm Service Agency, 2720 W Commercial Street, Ozark, AR72949-3408 and posted at <https://www.fsa.usda.gov/state-offices/Arkansas/index> from 07/10/2019 thru 08/09/2019. Written comments will be accepted thru 08/09/2019 and given consideration in the final EA document.

2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 Alternative A - Proposed Action

The proposed action involves FSA making a guarantee to a commercial lender for a loan that would be used to purchase a 142 acre tract of land and establish a new integrated turkey operation in Logan County Arkansas. The proposal would be built approximately 1 mile southeast of the Chismville Community and 350' north of highway 23, the most traveled highway in this area. SEE APPENDIX A-1. The applicants would enter into a contract with a poultry integrator, who would place flocks of turkeys on the farm, where they would be grown to market size. As growers, the applicants would be responsible for providing the equipment, utilities, and labor required to house and manage the flock including feeding, watering, brooding, waste disposal, maintaining the houses, and providing for animal welfare, sanitation, and biosecurity as they are currently doing with their existing operation. The integrator would supply the bids, feed, labor to deliver and remove the birds from the farm, veterinary services, and technical support to the grower.

This proposed action would take place within the Arkansas Valley Plains ecoregion of Arkansas on a 142 acre tract of land. The proposed poultry houses would go on a relatively flat area on a hill side that slopes downward from north to south. Slopes where the majority of the proposed ground disturbance would take place range from 3 to 8 percent, although web soil survey indicates slopes on the northern half of the site, which is steeper range from 8 to 20 percent. SEE APPENDIX I-2. The 142 acre tract is currently leased by a natural gas company. There are (4) natural gas wells on the 142 acre tract of land. SEE APPENDIX A-1. The proposed site is predominantly established in grasslands, although there are approximately 4 acres of the site established in trees that would need to be removed. Tree removal associated with this proposal would take place in the northeastern corner of the site, some along the eastern border of the site, the middle of the proposed turkey house site, and where the applicant plans on putting the proposed 2,000 square foot farm dwelling. The proposed site is currently well maintained and currently utilized for hay production, hunting, and recreational purposes. SEE APPENDIX B-1.

The proposed site is currently accessed via highway 23, which runs north and south in between Caulksville and Booneville. SEE APPENDIX A-1. There is an existing gravel access road to the proposed site that extends approximately 1,100' running northeast and southwest from highway 23 along the west side of where the applicant is proposing to construct the (4) turkey houses. Existing improvements on this farm consist of the (4) gas wells, an old dwelling in the northeast corner of the 142 acre property and an old hay barn on the eastern border of where the proposed turkey houses would be placed. The dwelling and barn are dilapidated and would eventually be torn down. There are no existing improvements where ground disturbance associated with this proposal would take place. There is an existing power line that runs east and west along the southern border of the 142 acre tract.

The nearest neighboring dwelling in relation to the proposal is approximately 850' to the west and 950' to the east. SEE APPENDIX A-7. Mature timber stands lie in between the proposal and the nearest dwellings. The nearest church, Walnut Grove Cumberland Presbyterian Church is located 1.3 miles southeast of the proposed site. The nearest school, White oak School is located 2 miles southeast of the proposal. SEE APPENDIX A-8. The proposal would take place in rural Arkansas, where agriculture has a strong presence. There are several cattle and hay operations in this area. According to the Logan

County Conservation District, 137 poultry farms registered with the ANRC in 2019 for the 2018 production year. The USDA NASS Cattle Inventory Report indicates there were 64,000 head of cattle, including calves in Logan County in 2019. SEE APPENDIX K-2.

Proposed improvements, would consist of (4) 54' x 500' organic turkey houses, (4) 60' x 120' containment fences, an 80' x 540' load out pad, a 15' x 30' generator shed, 30' x 50' office building/water room, with a 20,000 gallon water storage capacity, utilities, an incinerator, a 2,000 square foot dwelling, and related infrastructure. The proposed turkey houses would be stacked north and south and would run east and west. SEE APPENDIX A-5 and A-4 . These structures would be built on top of earthen pads, which would be slightly larger than the dimensions of the houses themselves. Each house would have the potential to typically accommodate approximately 15,775 birds at maximum capacity, which would be equivalent to 63,100 birds per flock. A load out pad would be placed on the west side of the (4) proposed turkey houses. The load out pad would need to be wide enough for feed and live haul trucks to turn, and would be approximately 80' wide. A 500 pound capacity incinerator would be utilized for mortality disposal for the proposed turkey operation. The incinerator would sit on top of a concrete pad, which would be placed 300' east of the existing natural gas pad that lies to the east of the existing access road. The incinerator would be fueled by low sulfur diesel, stored in a 300 gallon above ground storage tank. The incinerator would be equipped with an afterburner which would help reduce odors and emissions. A 15' x 30'' generator shed would be placed in the very center of this proposed facility in between proposed poultry house number 2 and 3. This generator shed would have a wood frame, and a metal roof and sides and would house (1) 150 kW diesel generator which would be controlled by a (2) 400 Amp transfer switches. Underground wiring would be run from the generator and plumbed into each house. The generator would serve as a backup power supply for this proposed turkey facility and utilize low sulfur diesel as a fuel source, stored in a 300 gallon above ground tank. The proposed 30' x 50' office building would be attached to the west side of the generator shed. The office space would provide an area to keep farm records and would also serve as an area to store water for an emergency supply. The water room would have (4) 5,000 gallon plastic tanks, which would be plumbed into each house. Water would be supplied by (4) wells that would be drilled to an unknown depth around the perimeter of the proposed turkey operation. Each proposed turkey house would have a 60' x 120' containment fence placed to the north side of each proposed house. The fence would be chain link, 5' high and would provide an area for the turkeys to graze out in the pasture when they are not confined to the proposed houses. SEE APPENDIX A-5. The applicants are also proposing to construct a 2,000 square foot farm dwelling, which would be placed in a wooded area to the northwest of the proposed turkey operation. A proposed access road to the dwelling would be running northwest and southeast from the proposed dwelling site to the existing access road. Utilities would be ran on the west side of the proposed access road to the dwelling. A septic system would be installed to the southwestern corner of the dwelling. SEE APPENDIX A-4.

Related infrastructure will include an extension of the existing access road all the way to the proposed site, access roads in between the (4) turkey houses themselves, utility lines for water and electricity and above ground storage tanks for propane to heat these facilities as well as an access road to the proposed dwelling, septic tank, and utilities to the proposed dwelling. The proposed layout of this facility would be located as specified on the attached site plan found in APPENDIX C-2.

Electricity to proposed poultry house facilities would run north from the service connection currently in place along the southern border of the 142 acre tract. Propane would be utilized as a heat source for

the proposed turkey facility. The fuel would be stored in 1000 gallon above ground storage tanks placed in between the turkey houses. Propane would be supplied by River Valley Propane.

According to the SWPPP developed by the applicant, this proposal would involve 7.2 acres of ground disturbance. The proposed site is currently established in grasslands for the most part, which the current owner uses for hay production. Approximately 4 acre of trees along the eastern border, middle of the proposed site, and along the southern border of the proposed site would need to be removed as well where the applicant is proposing to construct the 2,000 square foot dwelling. In addition, a 1 acre pond to the north of the proposed turkey houses would need to be filled in. Fill material to fill in this pond would come from the area where the proposed turkey houses would go. A new pond would be placed to the east of the proposed turkey facility. SEE APPENDIX A-4. No other tree removal or ground disturbance would be necessary to implement this proposal.

There are no connected actions associated with this proposal at this time, however it would be possible to expand this operation in the future if the applicants were presented the opportunity to do so. Any future expansion financed with FSA funds would require a subsequent environmental review that meets the requirements of 1-EQ (revision3).

2.2 Alternative B - No Action Alternative

The No Action Alternative means the loan would not be made and the farm described in Section 2.1 above (Proposed Action) would not be built. The applicants would continue with their non farm employment, cancel their real state contract to purchase the 142 acres, and the proposed action would not go forward. The proposed site would continue to be utilized for hay production.

2.3 Alternative C

An alternative location would not be feasible, as the proposed project would take place on property that the applicant is currently under contract to purchase. Integrators typically require a farm manager to live on site. The applicant's are also proposing to construct a 2,000 square foot dwelling on the farm. Having the applicants on site would minimize traffic and allow them to devote more time towards management of the proposed operation.

Alternative arrangements and locations to implement the proposal on this farm would not be feasible. The proposed action would allow the applicants to purchase a 142 acre tract of land, 47 of which is in open grasslands and relatively flat. SEE APPENDIX A. The remainder of the 142 acre tract is established predominantly in timber and located on a greater slope. SEE APPENDIX I-2. Ground disturbance on a greater slope could potentially accelerate erosion, increasing runoff and would present a greater threat to water quality, therefore the proposal could not be moved any farther to the north. An existing gravel access road is already in place, which runs north and south along where the proposed turkey houses would be placed as well as a natural gas pad that lies in between the access road and proposed turkey houses. Moving the proposal farther to the west would not be an option. Electing to move the proposal farther east would be an option, however this alternative would involve more tree removal, and would also place the turkey houses closer to the nearest dwelling to the east. The proposal could not be moved any farther south without encroaching onto highway 23.

The proposed site configuration was designed to create the least amount of ground disturbance, and tree and vegetation removal while trying to maximize the amount of grassland that would remain, therefore having the smallest impact on the environment and its surroundings during the construction phase of the proposal. Alternative configurations were not considered due to the possibility of having a greater impact on the affected environment. Integrated poultry producers must comply with very specific logistical and design requirements provided by the integrators.

2.4 Alternatives Considered but Eliminated From Analysis

Other locations for the farm or other uses for the land in question are not considered here because such options do not meet the purpose and need for the proposed action. The applicant has applied for FSA-guaranteed loans to fund the construction of a new large CAFO. FSA's decision to be made is to approve the loan for the proposed farm as designed, to deny the loan, or to approve the loan with additional mitigations, practices or methods that would be needed to minimize or eliminate impacts to protected resources.

Similarly, alternative designs of farm components are not considered as the producer's agreement with a poultry integrator requires adherence to the integrator's construction and equipment specifications, which are in place to ensure consistency, maximize production, and reduce loss. Design alternatives that would involve modification of features and infrastructure put in place by an integrator would jeopardize the availability of bird placement, be grounds for a potential loss of the contract with the integrator, and therefore the viability of the farm. Accordingly, this alternative would not warrant further consideration.

3. AFFECTED ENVIRONMENT AND IMPACTS

The impacts to a number of protected resources, as defined in FSA Handbook 1-EQ (Revision 3) Environmental Quality Programs for State and County Offices, are considered in this EA. Some resources are eliminated from detailed analysis following CEQ regulations (40 CFR 1501.7), which state that the lead agency shall identify and eliminate from detailed study the issues that are not significant or that have been covered by prior environmental review, narrowing the discussion of these issues in the document to a brief presentation of why they would not have a significant effect on the human or natural environment. Resources that are not eliminated are carried forward for detailed analysis. The table below shows the resources that are eliminated from detailed analysis and those carried forward. Section 3.1 contains discussions of those resources eliminated from detailed analysis. Section 3.2 describes the existing conditions for resources carried forward for detailed analysis and the anticipated impacts to those resources resulting from the Proposed Action.

Resource	Eliminated	Carried Forward
Wildlife and Habitat		X
Cultural Resources		X
Coastal Barriers	X	
Coastal Zones	X	
Wilderness Areas	X	
Wild and Scenic Rivers, NRI	X	
National Natural Landmarks	X	
Sole Source Aquifers	X	
Floodplains	X	
Wetlands	X	
Soils	X	
Water Quality		X
Air Quality		X
Noise		X
Important Land Resources	X	
Socioeconomics and Environmental Justice	X	

3.1 Resources Eliminated from Detailed Analysis

Coastal Barrier Resources System

Coastal barriers are eliminated from detailed analysis as there are no designated Coastal Barriers in Arkansas.

Coastal Zone Management Areas

Coastal Zone Management Areas are eliminated from detailed analysis because there are no Coastal Zone Management Areas in Arkansas.

Wilderness Areas

Wilderness areas were eliminated from detailed analysis in this EA. There are 12 designated Wilderness areas in Arkansas. The closest Wilderness Area would be Dry Creek Wilderness Area, which is located 14.4 miles south east of this proposed project. SEE APPENDIX F-1. This proposal should have no adverse impacts to the Dry Creek Wilderness Area.

Wild and Scenic Rivers and Nationwide Rivers Inventory (NRI)

Wild and Scenic Rivers and NRI have been eliminated from detailed analysis in this EA. The Mulberry River is located 25.9 miles to the northwest, which is the closest river in relation to the proposal with a Wild and Scenic Designation. Lee Creek in Oklahoma, and Piney Creek are both 35 miles from the proposal. SEE APPENDIX G-1. The proposal should have no effect on these three rivers.

National Natural Landmarks

There are five National Natural Landmarks in Arkansas. SEE APPENDIX H-1. The site of the Proposed Action is not located in close proximity to any of these nor would the proposal threaten to alter or impair them. The closest, Roaring Branch is located approximately 69 miles to the south of the proposed site, therefore National Natural Landmarks are eliminated from detailed analysis. SEE APPENDIX H-2.

Sole Source Aquifers

Sole source aquifers are eliminated from detailed analysis because there are no sole source aquifers in Arkansas.

Floodplains

Floodplains were eliminated from further detailed analysis. According to FEMA's National Flood Hazard Layer, Panel 05083C indicates that the proposed project would lie outside of a flood plain. SEE APPENDIX J-1.

Wetlands

Wetlands have been eliminated from further detailed analysis. According to FSA Form-858 "Determining if a Wetland May Be Present," wetland indicators were not present where the proposal would be located, therefore no additional screening is necessary. SEE APPENDIX I-2. The 1 acre pond to the north of the proposed turkey operation site would need to be removed. This pond would be replaced on the other side of a tree line to the east side of the proposed turkey operation to comply with executive order 11990 and the "no net loss of wetlands" policy.

Soils

Soils are eliminated from detailed analysis because no land on this farm would not be cropped and is therefore not subject to the Highly Erodible Land provisions of the Food Security Act. Furthermore, there would be no annual tillage of the soil associated with this proposed project. The applicants have both signed AD-1026 "Highly Erodible Land Conservation and Wetland Conservation Certification." SEE APPENDIX I-1.

Important Land Resources

Prime and unique farmland, forestland and rangeland resources are eliminated from detailed analysis because the proposed action would not result in prime and/or important farmland being converted to a nonagricultural use.

Socioeconomics and Environmental Justice

No impact to population, housing, income, or employment in the region are anticipated to result from the Proposed Action, nor are disproportionate adverse impacts to minority or low income populations anticipated. Therefore, socioeconomics and environmental justice are not carried forward for detailed analysis.

3.2 Resources Considered with Detailed Analysis

This section describes the environment that would be affected by implementation of the alternatives described in Chapter 2. Aspects of the affected environment described in this section focus on the relevant major resources or issues. Under the no action alternative, the proposed action would not be implemented. The no action alternative would result in the continuation of the current land and resource uses in the project area. This alternative will not be evaluated further in this EA.

3.2.1 Wildlife and Habitat

Existing Conditions

The proposed project site where the poultry houses would be built is currently established primarily in grasslands. There are also some trees in the northeastern corner, southern part of the site and in the middle of the site, which would need to be removed. Tree removal associated with the proposal would total an estimated 4 acres. The proposed dwelling site is also established in mixed hardwoods. The open areas of the proposed site are currently utilized for hay production.

Wildlife typical of such areas include whitetail deer, squirrels, rabbits, raccoons, various other mammals, birds, and reptile species. A site visit was conducted by FSA on 04/03/2019. SEE APPENDIX B.

An official list of threatened and endangered species and designated critical habitat for this area of Logan County was obtained from the US Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) system. SEE APPENDIX D-1. The following threatened and endangered species are known to occur in this area of Logan County: Northern Long Eared Bat *myotis septentrionalis* (threatened), Ozark Big-eared Bat *Corynorhinus (=Plecotus)* (endangered), Piping Plover *Charadrius melodus* (threatened), American Burying Beetle *Nicrophorus americanus* (endangered), Rattlesnake-master Borer Moth *Papaipema eryngii* (candidate species).

FSA entered a programmatic consultation agreement with the USFWS on 05/02/2019. The FSA programmatic decision key was utilized to determine what affect the proposal might have on the threatened and endangered species listed above. SEE APPENDIX D-2. According to the programmatic decision key, the proposal is not likely to adversely affect the piping plover due to a lack of suitable habitat for this threatened species. There are no cave or karst features located on the proposed site for

turkey houses or the dwelling, therefore the decision key yields a no effect determination for the Ozark Big Eared Bat.

FSA contacted USFWS on 06/14/2019 for the rest of the determinations on the threatened and endangered species. According to the USFWS, suitable habitat for the American Burying Beetle does not exist on this proposed site as it is maintained and cut for hay, therefore the proposal may affect, but is not likely to adversely, affect this endangered species. It should be noted that the area surrounding the proposed site does not appear to be unfavorable habitat for the American burying beetle. USFWS has confirmed that the proposal would comply with the 4(d) rule for the Northern long eared bat and a presence-absence survey for this species would not be necessary for the proposal to continue. SEE APPENDIX D-2 and D-3. The proposal is not likely to adversely affect the northern long eared bat. The Rattlesnake Master borer moth is a candidate species, and not included in FSA's Programmatic Consultation Agreement with USFWS. An affect determination for this species was not provided, nor necessary to complete the Section 7 consultation process.

The Bald Eagle has been known to occur in this area, however the Bald Eagle is not covered by the Endangered Species Act. No Bald Eagles, or Bald Eagle nests were observed on this proposed site during the site visit. SEE APPENDIX B-1.

Impacts of Proposed Action

According to the SWPPP that was developed to obtain a construction permit for this proposed facility, an estimated acres of ground disturbance would occur, resulting in a long term loss of 7.2 acres of grasslands and trees. The proposal would result in a long term loss of wildlife habitat that this 7.25 acres of vegetation provided. No significant impacts to Wildlife and Habitat would be expected to result from the Proposed Action. The SWPPP would implement BMP's during the construction phase of this proposal that would help protect water quality for water sources utilized by wildlife in the surrounding area.

3.2.2 Cultural Resources

Existing Conditions

The Proposed Action involves some ground disturbing activities in areas not previously evaluated or previously disturbed to the depth required for the Proposed Action, therefore cultural resources require detailed analysis. A site visit was conducted by USDA, Farm Service Agency on 4/03/2019. There are no existing structures located within the proposed action. The nearest structure to the proposal listed on the National Register of Historic Places is Chism, Dr. Stephen N., House. This historic site is located approximately .93 miles northwest of the proposed project SEE APPENDIX A-6. The proposal should have no affect on this historic structure. The 142 acre tract of land has (4) natural gas pads, which were constructed shortly after 2006. The 1 acre pond north of the proposed site was also dug at this time to have soil to build the (4) gas pads. Some additional ground disturbance took place on the proposed site when the pads were built, and the majority of the proposed site was terraced to smooth the area out, prevent erosion and make the area more suitable for hay production. SEE APPENDIX B.

FSA consulted with the Arkansas State Historic Preservation Office (SHPO) on 04/29/2019 providing the location and details of the Proposed Action. SEE APPENDIX E-1. Arkansas SHPO provided a response on

05/28/2019. SEE APPENDIX E-2. SHPO's response indicates that tree removal, natural gas well pad construction, and previous agricultural activities that have taken place on the proposed site resulted in significant ground disturbing activities encompassing much of the proposed site. Due to the previous disturbance that has taken place on the site, SHPO concurred with FSA's findings that no historic properties should be affected as a result of this proposal.

In addition to Arkansas SHPO, FSA consulted with the following federally recognized Tribes: the Apache Tribe of Oklahoma, Caddo Nation, Cherokee Nation, Chickasaw Nation, Choctaw Nation, The Delaware Nation of Oklahoma, Muscogee (Creek) Nation, Osage Nation, Quapaw Tribe of Indians, and Shawnee Tribe. Letters describing the location and details of the Proposed Action were sent to these Tribes on 04/29/2019. FSA received an email response from the Muscogee (Creek) Nation on 04/30/2019. The email response indicates they are unaware of any cultural or sacred sites located within the immediate project area and concurred there should be no effects to cultural resources. FSA received a response from the Osage Nation on 06/10/2019. The Osage Nation's response indicates concurrence that the proposal most likely will not adversely affect any sacred properties of cultural significance to the Osage Nation. A response was also received from the Cherokee Nation on 05/22/2019. The Cherokee Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time. SEE APPENDIX E-2. FSA did not receive responses from any of the other Tribes listed above.

Impacts of Proposed Action

Based on the proximity to the Chism, Dr. Stephen N., House in relation to the proposed action, the consultation with SHPO and the Tribes listed above, no impacts to known cultural resources would be anticipated to result from the Proposed Action. SEE APPENDIX E-2. Impacts to previously unidentified historic properties, including archaeological and historic resources, could occur during land clearing and construction activities. If such resources were encountered during construction, all activities would cease, FSA state and national office personnel would be notified, along with Arkansas SHPO and Tribes with an interest in this area, and the resources would be professionally evaluated for eligibility for listing on the National Register of Historic Places.

4. Water Quality

Existing Conditions

In Arkansas, the Arkansas Department of Environmental Quality (ADEQ) has the authority to enforce provisions of the Clean Water Act that are protective of water quality and to issue permits that are protective of water quality standards. This authority is delegated to ADEQ by the Environmental Protection Agency. The ADEQ Water Division issues Stormwater National Pollutant Discharge Elimination System (NPDES) Permits to protect surface waters from contamination from runoff associated with construction. Coverage under General Permit AR1500000 is required for construction that causes ground disturbance in excess of 1 acre. Permit AR1500000 for small sites is for disturbance between 1 and 5 acres and requires operators to post required forms and documents, including a stormwater pollution prevention plan (SWPPP), on the site rather than coordinate directly with ADEQ.

Permit AR 1500000 for large sites including disturbance in excess of 5 acres, required documents are submitted to ADEQ. SPPPs are documents that describe construction activities to prevent stormwater contamination, control sedimentation and erosion, in order to prevent significant harm to surface waters and comply with the requirements of the Clean Water Act. ADEQ is also responsible for issuing Non-stormwater NPDES Permits issued to facilities that discharge water. Animal Feeding Operations and Confined Animal Feeding Operations that do not discharge into waters of the state do not require NPDES permits for ongoing operations. SEE ADEQ REFERENCE

The Arkansas Natural Resource Commission (ANRC) Water Division is responsible for developing and implementing the Arkansas Water Plan, the state's policy for long-term water management, and for the State's Non-point Source Pollution Management Program. The Arkansas Water Plan describes each of the state's river basins. The ANRC Conservation Division supports development, management and conservation of the state's land and water resources, in part through nutrient management planning. A nutrient management plan (NMP) is a document approved by a conservation district board that assists landowners and operators in the proper management and utilization of nutrient sources for maximum soil fertility and protection of state waters. ANRC requires NMPs for farms that plan to land apply litter, sewage sludge, or commercial fertilizer within an area designated as the Nutrient Surplus Area (which includes parts of Baxter, Benton, Boone, Carrol, Crawford, Madison, Marion, Polk, Scott, Sebastian, and Washington Counties. For land application outside this area, usage of a nutrient management plan is voluntary. REFERENCE ANRC REGS. Logan County is located within a nutrient surplus area. SEE APPENDIX A-9. The applicants would have the option to voluntarily have a Nutrient Management Plan (NMP) developed for this proposed operation if they choose to do so.

This proposal is located within Rattlesnake Creek-Sixmile Creek water shed (HUC 12 ID: 111102020101) SEE APPENDIX G-2, which lies within the Arkansas River Valley Basin. The Arkansas River Basin encompasses 10,409 square miles and 6,660,680 acres from the Arkansas-Oklahoma state line southeast to Lock and Dam #4 in Pine Bluff, AR. According to the Arkansas water plan, the largest land use in the Arkansas River Basin is forest land, followed by grassland, cropland, urban build up, then other land uses. Hydroelectric power generation on the Arkansas River accounts for the majority of water use in the area, followed by irrigation. Surface Water quality within the basin can vary and is generally the best around forested perimeter areas then can decline as water flows thru pastures and crop fields. Point and non-point sources of pollution include soil erosion, agricultural activities, and other human activities. Reference Arkansas Water Plan. Logan county covers 732 square miles. REFERENCE NASS. The nearest impaired Category 5 stream listed on ADEQ's 303(d) list in relation to the proposal is the Petit Jean River, which is in non-attainment for silt turbidity which is believed to be caused from surface erosion and located south of Booneville and 6.4 miles south of this proposal. The stream has a priority listing of "L" meaning lowest risk to public health or welfare; secondary impact on aquatic life. REFERENCE ADEQ 303 (d). According to the 2016 ADEQ Integrated Water Quality Monitoring Assessment Report, waters within the segment this proposed action would take place are designated as suitable for the propagation of fish and wildlife; primary and secondary contact recreation; and public, industrial, and agricultural water supply. REFERENCE ADEQ ASSESSMENT REPORT

Fishing, hunting, and boating activities are common on all of the waterbodies in this segment throughout the year. The tributary streams are utilized for kayaking and canoeing activities as well as primary contact recreation

Impacts of Proposed Action

According to the SWPPP prepared by Frank Walker, the Proposed Action would disturb 7.2 acres of land. The applicant has submitted the requisite paperwork and application to ADEQ and has been granted coverage under Storm water NPDES General Permit AR1500000 SEE APPENDIX C-1 and C-2. With adherence to the best management practices described in the SWPPP, minimal impacts to surface water from the proposed construction are anticipated. The farm does not discharge into waters of the state and therefore no impacts to state surface waters are anticipated. Any land application of litter produced on the farm would be in compliance with ANRC requirements in order to be protective of surface water quality. REFERENCE ANRC

The applicant's SWPPP would implement several BMP's into the design of this proposed project including a brush dam, straw, stabilized entrance/exit, culverts, riprap, and a concrete washout area. SEE APPENDIX C-2. The area surrounding the proposed site is primarily established in grasslands. Non disturbed areas surrounding the site will act as a natural buffer to help filter out sediment in storm water runoff during the construction phase of the proposal and would also act as a natural buffer for any proposed poultry litter applications.

The applicants would utilize a 500lb capacity incinerator as a means of mortality disposal on this farm, which is an approved method. According to the Arkansas Livestock and Poultry Commission, ADEQ, and ANRC, a permit is not necessary to operate this type of incinerator. This would be an ANRC approved method of mortality disposal. The incinerator would be located in the northwest corner of this proposed turkey operation. A litter shed is not required for integrated poultry operations in accordance with ANRC regulations. Integrators typically require their growers to "cake out" in between flocks, which consist removing the top few inches of litter. Depending on integrator requirements and management practices utilized by the grower, a full house clean out is typically conducted annually, where all the litter is removed from the houses. The applicants would have the option to sell this litter and have it transported off site to another location, although they intend to spread some of this litter on their pastures as fertilizer to help to help maximize production in their pastures and hay meadows. If this proposal is approved, all litter would be stored inside the poultry houses, or on site and tarped in an elevated location on the farm, out of the elements, until an opportune time presented itself for land application in accordance with ANRC regulations.

The applicants would be responsible for record keeping and adherence to the NPDES permit and for implementing BMP's outlined in the SWPPP to help protect water quality during the construction phase of this proposal. NMP's are optional as this proposed turkey operation lies outside of a nutrient surplus area. SEE APPENDIX A-9.

In summary, the applicants have obtained a NPDES permit thru ADEQ for proposed construction activities to take place and have a SWPPP, which was approved by ADEQ for the permit. Adherence to the permit and implementation of the BMP's in the SWPPP would help protect water quality on site and for the surrounding areas during the construction phase of this proposal. These proposed measures should be adequate to help prevent contamination of stormwater off site during the construction phase of this proposal. A NMP would be optional for this proposed operation. The applicants would be required to register their poultry operation with ANRC. No significant impacts to water quality are anticipated to result from the Proposed Action.

5. Air Quality

Existing Conditions

As of February 1, 2018, all of Arkansas is in attainment for all criteria pollutants established by the Environmental Protection Agency in compliance with the Clean Air Act. The proposed farm would not be required to obtain an air permit in accordance with Arkansas Air Pollution Control Regulation 18.301 since air emissions for defined criteria pollutants at the facility do not exceed the permitting thresholds considered protective of air quality. Potential air quality effects considered here include odor and dust production, which may be associated with construction activities and the ongoing operations of the farm. SEE REFERENCES

The site of the Proposed Action lies in Logan County in a rural area where agriculture, including livestock feeding operations, are common. There are numerous cattle and hay operations in close proximity to this existing cattle farm, as well as integrated poultry farms in this vicinity. According to the Logan County Conservation District, 137 poultry farms registered with ANRC for the 2018 production year. According to NASS, Logan County has 64,000 head of cattle, including calves in 2019. The nearest neighboring dwellings in relation to the proposal are located approximately 850' to the west and 950' to the east. SEE APPENDIX A-7. Mature timber stands exist in between the proposal and the nearest dwellings. These trees would act as a natural buffer that would help filter out odors, dust, and other particulate matter emitted by the proposed poultry houses. The nearest church, Walnut Grove Cumberland Presbyterian Church is located 1.3 miles southeast of the proposed site. The nearest school, White oak School is located 2 miles southeast of the proposal. SEE APPENDIX A-8.

Arkansas Water and Air Pollution Control Act, Subchapter 3 Air Pollution exempts "Agricultural operations in the growing or harvesting of crops and the raising of fowls or animals" and the "use of equipment in agricultural operations in the growth of crops or the raising of fowls or animals." There are no local ordinances regulating odor in this area.

Impacts of Proposed Action

Construction activities that disturb the soil surface could generate dust. Such impacts would be minor, temporary and localized, generally confined to the farm property and ongoing only during construction activities. An existing driveway would be extended, covered with gravel and utilized as the entrance and exit to the proposed construction site as well as an access road to the proposed dwelling. Exposed soils could be wet down to control fugitive dust. Similarly, during construction, minor and localized emissions associated with heavy machinery could be expected. None of these construction related impacts would have a significant or long-term adverse impact to surrounding air quality.

During operation of the farm, roads used by delivery trucks in between the proposed broiler houses would also be covered with gravel to minimize dust associated with travel. Dust generated while the poultry facility is in operation would occur mostly during feeding. Humidity and misting systems inside poultry houses would keep down dust, within the barns.

Odor would be controlled through management of the poultry barns' ventilation systems, as is required by integrators for flock health. The applicants would utilize an incinerator as a means for mortality

disposal for their proposed turkey operation, which is an approved method of disposal by the Arkansas Poultry and Livestock Commission. The incinerator would be located in the northwest corner of the proposed operation, in between the natural gas pad and the northernmost turkey house. The incinerator would be equipped with an afterburner that would help to reduce any air emissions. A permit is not required to operate this type of incinerator. Poultry litter produced on this proposed turkey farm would be stored in the (4) turkey houses. In the event of a cake out, or full clean out of the turkey houses, all litter would either be exported off the farm to another location or kept on an elevated area and tarped to keep it dry, which would reduce the impacts of odor emitted by the litter. The poultry houses would be cleaned per integrator specifications between flocks as appropriate on an as-needed basis. Litter would be stored in accordance with ANRC regulations.

Dilution of odors is caused through the mixing of odors with ambient air and is a function of distance, topography, and meteorological conditions. Prevailing winds are from the west and would serve to facilitate the dispersion of odors. Based on the climate of the southeastern United States, there would be a few days in the year when weather conditions and humidity may cause odor to linger in the vicinity.

According to the EPA, total GHG emissions in the US in 2014 were 6,870 million metric tons of carbon dioxide equivalent (CO₂e), a metric measure used compare the emissions from various greenhouses gases based upon their global warming potential. Agriculture accounted for approximately 9 percent of the total or 625.4 million metric tons. The contribution of agriculture to GHG emissions is comprised of livestock (242.96 million metric tons CO₂e), crops (330.68 million metric tons CO₂e), and fuel combustion (51.79 million metric tons CO₂e).

Agricultural activities contribute to GHG in several ways:

Management of agricultural soils accounts for over half of agriculture emissions. Activities including fertilizer application, irrigation and tillage, can lead to production and emission of nitrous oxide. Livestock, particularly cattle, produce methane as part of their digestion accounting for almost one third of the agricultural emissions. Manure storage and management also contribute methane and nitrous oxide, accounting for about 14 percent of the agricultural GHG emissions. Smaller agricultural sources include methane produced by rice cultivation and the burning of crop residue, which produces methane and nitrous oxide. Odor impacts would not be expected to be significant.

6. Noise

Existing Conditions

Existing noise at the site of the proposed action exists from the oil and gas company who has a lease on (4) existing natural gas wells on the 142 acre tract of land as well as noise from hay production and other recreational activities that may take place on this tract of land. Existing conditions on site are generally quiet, although maintenance crews frequent the site routinely to monitor the gas wells, so truck traffic in this area is common. Hay in Arkansas can typically be harvested 2-3 annually on this area, so tractor and truck traffic is also common in this area during the spring and summer months. There are also nearby hay and beef cattle operations. Highway 23 borders the 142 acre tract to the south, which is the most travelled highway in this vicinity. Noise exists from traffic, farming, and other human activities in this area does exist, but is temporary in nature. This is not a very densely populated area. Logan County has a population of 22,000. The nearest neighboring dwelling in relation to the proposal is

approximately 850' to the west and 950' to the east. SEE APPENDIX A-7 Mature timber stands lie in between the proposal and the nearest dwellings. The nearest church, Walnut Grove Cumberland Presbyterian Church is located 1.3 miles southeast of the proposed site. The nearest school, White oak School is located 2 miles southeast of the proposal. SEE APPENDIX A-8. The nearest school and church should experience no significant increases in noise levels as a result of the proposal, due to the distances between and the trees that would be surrounding the proposal. There are no non-farm businesses in close proximity to this proposed facility.

Impacts of the Proposed Action

The Proposed Action would establish a new, four house, integrated turkey operation. Noise levels would increase during normal, daylight working hours during the construction phase of this project, which typically lasts about 6 months. Upon completion, noise from the Proposed Action would permanently increase noise levels in this area; however, noise from birds would be insignificant as they are contained within the poultry houses which are set back from property lines and further muffled by insulation in between the roofs, and walls within these structures and vegetative buffers to the east, northeast, and west. These measures would also aid in mitigating periodic equipment usage and truck noise associated with the movement of birds, feed, supplies and materials. Such activities would rarely take place other than during daylight hours, be infrequent in nature, of brief duration and low intensity. Similarly, noise from generators would be limited to a few minutes of periodic testing and they would only operate on a temporary basis in the event of emergencies should power be lost. As such noise would be of irregular and infrequent duration it would not be significant. Additionally, Arkansas's Right to Farm Law protects operation of farms that were established prior to the use of the area surrounding the agricultural operation for nonagricultural activities and those farms which employ methods or practices commonly or reasonably associated with agricultural production. As integrated poultry production is a mainstay of the state's economy the related production methods have long been the accepted prevailing practice for widespread production both in Arkansas and throughout the country. SEE ARKANSAS RIGHT TO FARM REFERENCE

The proposed action is not expected to significantly affect ambient noise levels in the area or the nearest dwelling.

7. CUMULATIVE IMPACTS

The cumulative impacts analysis is important to understanding how multiple actions in a particular time and space (e.g., geographic area) impact the environment. The CEQ regulations define cumulative effects as “the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions” (40 CFR § 1508.7). Whereas the individual impact of one project in a particular area or region may not be considered significant, numerous projects in the same area or region may cumulatively result in significant impacts.

Cumulative impacts most likely arise when a relationship exists between a proposed action and other actions occurring in a similar location or time period. Actions overlapping with or in proximity to the proposed action would be expected to have more potential for a relationship than those more geographically separated. Similarly, actions that coincide in time, may have the potential for cumulative impacts.

Establishing an appropriate scope for cumulative impacts analysis is important for producing meaningful analysis that appropriately informs agency decision making. This involves identifying geographic or temporal boundaries within which to identify other activities that could contribute to cumulative impacts to resources. Boundaries should consider ecologically and geographically relevant boundaries which sustain resources of concern. Temporal boundaries will be dependent on the length of time the effects of the proposed action are estimated to last and analysis commensurate with the project’s impact on relevant past, present, and reasonably foreseeable activities within those boundaries. For example, small scale projects with minimal impacts of short duration would not likely contribute significantly to cumulative impacts. CEQ guidance (2005) reinforces this, stating:

“The scope of the cumulative impact analysis is related to the magnitude of the environmental impacts of the proposed action. Proposed actions of limited scope typically do not require as comprehensive an assessment of cumulative impacts as proposed actions that have significant environmental impacts over a large area. Proposed actions that are typically finalized with a Finding of No Significant Impact usually involve only a limited cumulative impact assessment to confirm that the effects of the proposed action do not reach a point of significant environmental impacts”

This cumulative impacts analysis focuses on the potentially affected resource (identified in section 3.2 of this document) and uses natural local boundaries to establish the geographic scope within which cumulative impacts could occur. Relevant past, present and reasonably foreseeable activities identified in Section 5.1 are based on potential geographic and temporal relationships with the proposed action within those identified boundaries. Cumulative effects on those resources are described in Section 4.2.

7.1 Past, Present and Reasonably Foreseeable Actions

Analysis of cumulative analysis is forward looking and focuses on Marion County where the proposed action would be implemented and the related area which includes the resources of concern. The purpose is to assess if the reasonably foreseeable effects of the proposed action would have an additive relationship to other past effects that would be significant, and to examine its relationship other actions (e.g. Federal, State, local, and private activities) that are currently taking place or are expected to take place in the reasonably foreseeable future.

Federal, State, local, and private activities that are currently taking place, have occurred in the past, or may reasonably be assumed to take place in the future in the cumulative effects area include the following: Logan County encompasses approximately 732 square miles and has a population of roughly 22,000. Pastureland accounts for 47.1% of the ground cover in the county, followed by cropland at 33.8%, followed by woodland at 15.4%, then other land uses at 3.7%. SEE APPENDIX K-2. The 2012 Census of Agriculture indicates there were 969 farms in Logan County, which covers 197,652 acres. SEE APPENDIX K-2. Timber is a renewable resource and paper products and lumber are in great demand, as is food. It is unlikely that these land uses will change with an ever growing population.

Poultry integrators have a finite processing capacity and have a need for new facilities, such as the proposed project, as older facilities are routinely retired due to functional obsolescence or otherwise phased out of production. As there is no foreseeable expectation that integrators would be having a significant expansion in processing capacity in the area, the quantity of bird produced in the area would remain relatively stable, even if the number of farms fluctuates.

7.2 Cumulative Analysis

Some resources considered for detailed analysis above (in Section 3.2) could be directly or indirectly affected by the Proposed Action and therefore the Proposed Action could contribute to additive or interactive cumulative effects to these resources. For other resources, no such contributions to cumulative effects are anticipated because no direct or indirect impacts would occur based on program requirements.

The significance of cumulative effects is dependent on how impacts compare with relevant thresholds, such as regulatory standards. Regulatory standards can restrict development by establishing thresholds of cumulative resource degradation (CEQ 1997):

“Government regulations and administrative standards...often influence developmental activity and the resultant cumulative stress on resources, ecosystems, and human communities. They also shape the manner in which a project may be operated, the amount of air or water emissions that can be released, and the limits on resource harvesting or extraction.”

Cumulative effects in this analysis are described relative to regulatory standards and thresholds in accordance with CEQ guidance. FSA relies on the authority and expertise of regulatory agencies, which have broad knowledge of regional activities that could affect the sensitive resources they are responsible for protecting, and to ensure through their permitting and consultation processes that its activities are not likely to contribute to significant negative cumulative resource impacts.

7.2.1 Wildlife and Habitat

Contributions of the Proposed Action to cumulative impacts include removal of existing vegetation and the loss and fragmentation of wildlife habitat. No impacts to Threatened and Endangered Species are anticipated based on program requirements. The site has been established in mixed warm and cool pasture grasses and forbs native to this area which could provide some value as wildlife habitat. Such impacts would add to vegetation and habitat lost as a result of past, present and reasonably foreseeable activities in the region of the Proposed Action including loss of native vegetation communities to agriculture, residential and commercial development and road building, recreation and other human activities. The Proposed Action would not be anticipated to result in long term or adverse impacts or to endangered species or their habitat. No cumulative impacts are anticipated based on coordination and consultation with USFWS and program requirements

7.2.2 Cultural Resources

Based on program requirements, which call for coordination and consultation with State and Tribal Historic Preservation Offices, no impacts to known cultural resources are expected to result from the Proposed Action. There is the potential for encountering unknown cultural resources during construction. Though unlikely, potential loss and damage to unknown cultural resources could occur, adding to similar potential impacts from other past, ongoing, and future developments that have the potential to degrade and destroy cultural resources.

7.2.4 Water Quality

During construction of the Proposed Action there is the potential for mobilization of exposed soil; however those impacts would be temporary and minor, and minimized by adherence to terms of the SWPPP. Such impacts would add to impacts to water quality resulting from residential, municipal, industrial, and commercial development, particularly the use of septic systems, as well as runoff from roads and development, and agricultural production. Once the disturbed areas are revegetated or otherwise stabilized, no impacts to water quality would be expected. Since there are no long-terms effected to water quality, the proposed action would not be expected to contribute significantly to cumulative effects to water quality.

7.2.5 Air Quality

The Council on Environmental Quality Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change In National Environmental Policy Act Reviews states:

This proposed operation Arkansas Water and Air Pollution Control Act, Subchapter 3 Air Pollution exempts "Agricultural operations in the growing or harvesting of crops and the raising of fowls or animals" and the "use of equipment in agricultural operations in the growth of crops or the raising of fowls or animals." There are no local ordinances regulating odor in existence in this area.

Arkansas's Right to Farm Law protects operation of farms that were established prior to the use of the area surrounding the agricultural operation for nonagricultural activities and those farms employ methods or practices commonly or reasonably associated with agricultural production. Management of agricultural soils accounts for over half of agriculture emissions. Activities including fertilizer application, irrigation and tillage, can lead to production and emission of nitrous oxide.

- Livestock, particularly cattle, produce methane as part of their digestion accounting for almost one third of the agricultural emissions.
- Manure storage and management also contribute methane and nitrous oxide, accounting for about 14 percent of the agriculture GHG emissions.
- Smaller agricultural sources include methane produced by rice cultivation and the burning of crop residue, which produces methane and nitrous oxide.

Dust would be generated from soil disturbance and equipment usage during construction and during operation as a result of equipment use, delivery trucks, and feeding systems. Such impacts would be minor, intermittent, and localized. Though such impacts are not expected to be significant, they would add to dust generated by other activities in the immediate vicinity of the farm.

Odor impacts from the proposed action including from the barns, litter storage facility, land application of litter on the farm, though not significant, would add to other sources of odor in the area including existing cattle and poultry farms nearby.

7.2.6 Noise

Increases in noise levels would be minimal compared to existing conditions. There are no local or state noise ordinances, based on Program Requirements.

7.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

NEPA requires that environmental analysis include identification of any irreversible and irretrievable commitments of resources which would be involved should an action be implemented. The term irreversible refers to the loss of future options and commitments of resources that cannot be renewed or recovered, or can only be recovered over a long period. Irreversible commitments apply primarily to the use of nonrenewable resources, such as minerals or cultural resources, or to factors such as soil productivity, that are renewable only over a long period. Irretrievable refers to the loss of production or use of natural resources. For example, when a road is built through a forest, some, or all of the timber production from an area is lost irretrievably while an area is serving as a road. The production lost is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume timber production. No irreversible resource commitments would occur as a result of the Proposed Action. Irretrievable resources include those raw materials and fuels used during construction. List of Preparers and Persons and Agencies Contacted

8. List of Preparers	
Name and Title	Education and Experience
Adam Kaufman, State Environmental Coordinator, FSA, Arkansas	BS, Crop, Soil, and Environmental Sciences Years of Experience: 11

Persons and Agencies Contacted	
Name and Title	Affiliation
██████████	Applicant
██████████	Applicant
██████████	Lender
Stacy Hurst	Arkansas SHPO
Bob Komardley	Apache Tribe of Oklahoma
Derek Hill	Caddo Nation
Elizabeth Toombs	Cherokee Nation
Autumn Gorrell	Chickasaw Nation
Corain Lowe-Zepeda	Muscogee (Creek) Nation
Lindsey Bilyeu	Choctaw Nation of Oklahoma
Everett Bandy	Quapaw Tribe of Indians
Kim Penrod	Delaware Nation
Tonya Tipton	Shawnee Tribe of Oklahoma
Dr. Andrea Hunter	Osage Nation
Melissa Lombardi	USFWS
Pedro Ardapple-Kindberg	USFWS
Frank Walker	SWPPP Preparer

9. REFERENCES

CEQ 1997. Council on Environmental Quality (CEQ). 1997. Guidance under the National Environmental Policy Act. December.

TCEQ 2016. Texas Commission on Environmental Quality (TCEQ). 2016. Economic Values and Impacts of Poultry Production Activities in East Texas. <http://www.tceq.state.tx.us/> Accessed on 19 September 19, 2016.

Arkansas Water Plan:

https://arwaterplan.arkansas.gov/basin%20reports/awp_arkansas_river_basin.pdf

National Agricultural Statistics Service (NASS):

https://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Arkansas/cp05083.pdf:

Web Soil Survey (WSS): <https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

IPAC (Information: <https://ecos.fws.gov/ipac/>

FEMA: <https://msc.fema.gov/portal>

NEPASSIST: <https://www.epa.gov/nepa/nepassist>

National Agricultural Statistics Service (NASS):

https://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Arkansas/st05_2_001_001.pdf

Arkansas Department of Environmental Quality (ADEQ), Impaired Streams/TMDL Lists:

<https://www.adeq.state.ar.us/water/>

Arkansas Department of Environmental Quality (ADEQ), Rules and Regulations:

<https://www.adeq.state.ar.us/regs/>

ADEQ 303 (d): <https://www.adeq.state.ar.us/water/planning/integrated/303d/pdfs/2016/final-2016-303d-list.pdf>

Arkansas Natural Resource Commission (ANRC) Regs: <http://www.anrc.arkansas.gov/rules/current-rules/>

Arkansas Air Pollution Control Regulations:

https://www.adeq.state.ar.us/regs/files/reg18_final_160314.pdf

Burns, R.T., H. Li, H. Xin, R.S. Gates, D.G. Overhults, J. Earnest, and L. Moody. 2008. Greenhouse Gas (GHG) Emissions from Broiler Houses in the Southeastern United States. Published in Proceedings of the American Society of Agricultural and Biological Engineers Agricultural and Biosystems Engineering Conference.

EPA 2016a. US Environmental Protection Agency Sources of Greenhouse Gas Emissions. Available at:
<https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#agriculture>. Accessed
March 1, 2017.

EPA 2016b. US Environmental Protection Agency Greenhouse Gas Data Explorer. Available at:
<https://www3.epa.gov/climatechange/ghgemissions/inventoryexplorer/>. Accessed March 1,
2017.

University of Arkansas Research and Extension: Logan County:

<https://www.uaex.edu/counties/Logan/>

Arkansas Air Pollution Control Regulations:

https://www.adeq.state.ar.us/regs/files/reg18_final_160314.pdf

Arkansas Right to Farm:

http://www.farmlandinfo.org/sites/default/files/Arkansas_RTF_law_1.htm

10. EA DETERMINATION AND SIGNATURES

ENVIRONMENTAL DETERMINATION – The FSA preparer of the EA determines:

1. Based on an examination and review of the foregoing information and supplemental documentation attached hereto, I find that this proposed action
 - would have a significant effect on the quality of the human environment and an Environmental Impact Statement (EIS) must be prepared;
 - would not have a significant effect on the quality of the human environment and, therefore, an EIS will not be prepared.

2. I recommend that the Project Approval Official for this action make the following compliance determinations for the below-listed environmental requirements.

Not in compliance	In compliance	Not applicable	
			National Environmental Policy Act
			Clean Air Act
			Clean Water Act
			Safe Drinking Water Act
			Endangered Species Act
			Coastal Barrier Resources Act
			Coastal Zone Management Act
			Wild and Scenic Rivers Act/National Rivers Inventory
			National Historic Preservation Act
			Subtitle B, Highly Erodible Land Conservation, and Subtitle C, Wetland Conservation, of the Food Security Act
			Executive Order 11988 and 13690, Floodplain Management
			Executive Order 11990, Protection of Wetlands
			Farmland Protection Policy Act
			Department Regulation 9500-3, Land Use Policy
			E.O. 12898, Environmental Justice

3. I have reviewed and considered the types and degrees (context and intensity) of adverse environmental impacts identified by this assessment. I have also analyzed the proposal for its consistency with FSA environmental policies, particularly those related to important farmland protection, and have considered the potential benefits of the proposed action. Based upon a consideration of these factors, from an environmental standpoint, this project may:
 - Be approved without further environmental analysis and a Finding of No Significant Impact (FONSI) prepared.
 - Not be approved because of the reasons identified under item b.

Signature of Preparer	Date
Adam Kaufman, State Environmental Coordinator	
Name and Title of Preparer (print)	

Environmental Determination – FSA State Environmental Coordinator determines:

Based on my review of the foregoing Environmental Assessment and related supporting documentation, I have determined:

- The appropriate level of environmental review and assessment has been completed, and substantiates a Finding of No Significant Impact (FONSI); therefore, an EIS will not be prepared and processing of the requested action may continue without further environmental analysis. A FONSI will be prepared.

- The Environmental Assessment is not adequate and further analysis or action is necessary for the following reason(s):

- The Environmental Assessment has established the proposed action cannot be approved for the following reason(s):

Additional SEC Comments:

Signature of SEC	Date
Printed Name Adam Kaufman	

