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Petitioners,

Filed With:

**UNITED STATES DEPARTMENT OF
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**UNITED STATES SMALL BUSINESS
ADMINISTRATION**
Maria Contreras-Sweet, Administrator
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**CITIZEN PETITION
SEEKING A PROGRAMMATIC
ENVIRONMENTAL IMPACT
STATEMENT FOR
NORTHEASTERN ARKANSAS
POULTRY FACILITIES**

Submitted January 17, 2017

INTRODUCTION

Northeastern Arkansas is a unique, ecologically diverse region, renowned for its recreational opportunities, unspoiled waterways, small family farms, rich cultural heritage, and species diversity. It is also currently experiencing unprecedented growth in its poultry production sector. That growth is expected to include the construction of approximately 1,000 new industrial poultry confinement houses, and is a direct result of the development and expansion of two slaughtering and processing companies, Ozark Mountain Poultry (OMP) and PECO, Inc. (Peco).

The U.S. Department of Agriculture Farm Service Administration (FSA) and the Small Business Administration (SBA) are facilitating this growth by offering industrial poultry producers a variety of direct and guaranteed federal loans. This is big business for the federal government, and for participating private banks. Nationally, in fiscal year 2016 alone, FSA guaranteed loan assistance "reached an all-time high, totaling nearly \$4 billion dollars."¹

¹ **Exhibit 1** - Letter from Val Dolcini, Administrator, USDA FSA, to Steve Apodaca, Senior Vice President, American Bankers Association (Oct. 11, 2016) and Letter from Steve Apodaca to Val Dolcini (Oct. 6, 2016).

Petitioners estimate that the growth in the poultry sector in Northeastern Arkansas alone could produce a demand for over \$230 million dollars of federal financial assistance.

Maintaining the character of this region depends on safeguarding the health and safety of the area's natural environment. Doing so requires the meaningful environmental review of federal government actions to ensure against preventable environmental degradation, to protect communities, and to guarantee present and future land use compatibility. Here, the proposed influx of approximately 1,000 poultry houses risks destroying Northeastern Arkansas. Despite the chicken houses' arrival sharing similar timing, geography, motivation, and other factors, the environmental reviews conducted by FSA and SBA to date fail to adequately address cumulative impacts for each facility, and ignore the expansion across the region.

Congress affirmed the need for comprehensive planning and environmental reviews when it enacted the National Environmental Policy Act (NEPA). *See* 42 U.S.C. § 4321 *et seq.*; *see also* Council on Environmental Quality Regulations 40 C.F.R. § 1500 *et seq.*, CEQ Guidance Documents on Cumulative Effects (1997), Programmatic Reviews (2014), Greenhouse Gas Emissions (2016), SBA Standard Operating Procedure 90 57 National Environmental Policy Act (1980), and FSA Handbook (2016).² The purpose of NEPA is to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; [and] to enrich the understanding of the ecological systems and natural resources important to the Nation." 42 U.S.C. § 4321. Yet, as it relates to poultry production in Northeastern Arkansas - an industry that proposes to rely on hundreds of millions of dollars worth of federal direct loans and loan guarantees to develop and expand in a region now relatively untouched by industrial animal production - such comprehensive review is absent. Petitioners, therefore, respectfully request that prior to approving any additional federal funding applications, including direct loans or loan guarantees, to any industrial poultry confinement operations or operators or their representatives (hereinafter "poultry operators" or "poultry facilities" or "operations") in the Northeastern Arkansas region, FSA and SBA take a hard look at the cumulative and related impacts of its actions through a single, comprehensive, programmatic area-wide environmental impact statement (PEIS) informed by the required scoping process, and require EISs for the individual facilities tiering to the PEIS. Such a review is required under NEPA, and under the APA (5 U.S.C. § 702 *et seq.*), as further discussed herein.

PETITIONERS

The Arkansas Rights Coalition (ARK) is a nonprofit organization based in Northeastern Arkansas. ARK's mission is to empower rural Arkansas farmers and citizens to protect themselves from devastating health, environmental, and economic impacts of all confined animal feeding operations (CAFO) or industrial farming operations. States with "Right to Farm" laws, special interest groups like industrial animal feeding operations, and state or federal government agencies are powerful, well-funded groups that do not always look at the environment,

² *See Exhibit 2* - Combined record containing the following guidance documents: CEQ Guidance Documents "Considering Cumulative Effects under the National Environmental Policy Act" (Jan. 1997), "Effective Use of Programmatic NEPA Reviews" (Dec. 18, 2014), "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" (Aug. 1, 2016), SBA Standard Operating Procedure 90 57 National Environmental Policy Act (1980), and FSA Handbook (2016).

communities, citizens and animal rights in a global way. ARK's intent is to educate and provide guidance/support to rural citizens that feel they do have the same rights as people who live in cities or more affluent areas of the country; that they do have a voice regardless of education or social status and that they can play a vital role in the preservation of the social fabric of the communities in which they live and most importantly, preserve the "Natural State".

The Animal Legal Defense Fund (ALDF) is a nonprofit 501(c)(3) organization located at 525 East Cotati Avenue, Cotati, CA 94931. Established in 1979, ALDF works to promote stronger enforcement of animal anti-cruelty laws and more humane treatment of animals in every corner of American life. ALDF protects animals through litigation, legal assistance to prosecutors, strengthening legislation, and student education.

The Center for Biological Diversity (Center) is a nonprofit 501(c)(3) organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center maintains offices across the United States. The Center and its more than one million members and supporters are concerned about the fate of imperiled species and the increasing rate of extinction and loss of biological diversity in the United States. The Center has programs and campaigns addressing the plight of imperiled species in this country, including from the impacts of agriculture – and animal agriculture in particular – on biodiversity, human health, and sustainable food systems. Through its efforts, the Center has developed outreach, education, and policy materials on the negative effects of industrial agricultural systems on our environment, including as a result of pesticide use, greenhouse gas emissions, pollution from animal waste, and overuse of water resources.

In general support of the Petition, **Friends of the North Fork and White Rivers**, and **Ozark River Stewards** endorse the Petitioners' efforts. *See* page 28 for a description of the organizations.

PETITIONED ACTIONS

Public records indicate that since 2014, FSA and SBA (hereinafter the "Agencies") have used individual, isolated environmental assessments to approve approximately 100 poultry facilities' applications for direct and guaranteed loans. Petitioners believe that there are several hundred more applications pending or about to be filed with the Agencies. Based on information in public records received to date, Petitioners are deeply concerned that (1) each application to the Agencies for federal loans to construct or expand industrial poultry confinement facilities in Northeastern Arkansas is being analyzed on an individual basis, without adequate analysis of cumulative impacts, or connected, and/or similar actions; (2) that such individual analyses of these interdependent actions are inconsistent with NEPA, which requires that the federal government meaningfully consider all cumulatively significant impacts and discuss those impacts in one comprehensive impact statement; and, as a result, (3) that the true impacts of these connected actions are being ignored and hundreds of millions of dollars of federal taxpayer monies will be illegally released.

Therefore, pursuant to the right to petition the government clause contained in the First Amendment of the United States Constitution, the Administrative Procedure Act (APA), NEPA and CEQ implementing regulations, and FSA and SBA regulations, guidance documents, and procedures, Petitioners respectfully request that prior to approving the use additional federal

funds to facilitate the growth in industrial poultry confinement facilities in Northeastern Arkansas,³ the Agencies take a hard look at the cumulative, connected, and/or similar impacts of its actions on this region through a single, comprehensive, PEIS under NEPA. The PEIS should consider environmental and health impacts of the various approved, pending, and projected poultry facilities that are cumulative, connected, and/or similar. This extends not just to the *application* of the loan, but to the *operation* of the poultry facility that the loans enable. Matters that should be analyzed in the PEIS include, but are not limited to: (1) impacts to water quality; (2) impacts to air quality; (3) effects on local and regional wildlife, including species listed as endangered and threatened, and their designated critical habitat, under the Endangered Species Act; (4) production of greenhouse gases and associated climate change impacts; (5) impacts to animal welfare; (6) impacts to human health and welfare; and (7) impacts to the quality of rural life, traditional agriculture and livestock rearing, and rural values. The precise contours of this review should be determined through a full scoping process that includes public hearings and public comment periods. *See* 40 C.F.R. § 1501.7.

Specifically, Petitioners request for FSA and SBA to:

1. Immediately issue a moratorium on any pending approval or issuance of federal direct loans, loan guarantees, or financial assistance for poultry facilities operating or proposing to operate in Northeastern Arkansas;
2. Undertake an area-wide programmatic Environmental Impact Statement for all poultry facilities proposing to operate in Northeastern Arkansas that are seeking federal direct loans or loan guarantees (including for any and all pending applications before FSA and SBA);
3. Immediately halt poultry facilities' further access to federal direct loan funds, federally-backed guaranteed funds, or financial assistance for any and all environmental analyses conducted since January 1, 2014 until the programmatic Environmental Impact Statement process is completed and all poultry facilities' compliance with NEPA and the APA can be determined;
4. Within 20 working days, post all environmental screening worksheets (ESWs), environmental assessments (EAs) and environmental impact statements (EISs) prepared by FSA or SBA for Northeastern Arkansas poultry facilities from 2014 to the present online at the U.S. government's Federal Register Public Inspection Document Search website, and continue to post all prospective environmental review documents on the same website simultaneously with each document being made available for public inspection.⁴

³ For purposes of this Petition, Petitioners refer to "Northeastern Arkansas", or the "Region" as the twenty-six county area consisting of the following counties: Marion, Searcy, Van Buren, Cleburn, White, Prairie, Monroe, Lee, Baxter, Stone, Woodruff, St. Francis, Fulton, Izard, Independence, Jackson, Cross, Crittenden, Sharp, Lawrence, Randolph, Clay, Greene, Craighead, Poinsett, and Mississippi.

⁴ Since May 2016, Petitioner ARK has had Freedom of Information Act (FOIA) requests pending with FSA and SBA for these types of environmental assessments records, but to date has only received a fraction of the requested materials. Moreover, during 2016 ARK members attempted to obtain EAs that were publicly noticed in newspapers, but were instructed to drive several hours to inspect the physical EAs, and upon arrival ARK was denied access to the EAs by the parties giving public notice. Such opacity is not only a direct contravention of FOIA, but also

An area-wide programmatic review is important because it will support the Agencies' compliance with federal law while simultaneously streamlining the individual environmental reviews. It will do this by creating a comprehensive area-wide environmental review to which site-specific approvals can tier. This supports administrative economy within the Agencies. The requested actions are also necessary because they will address ongoing and immediate government actions that pose significant threats to the very purposes of NEPA, the APA, and other relevant federal laws such as the Endangered Species Act (ESA) and the National Historic Preservation Act. *See* 40 C.F.R. § 1502.4(b) (Agencies should consider, as early as practicable, the benefits of making initial broad decisions so they are timed to coincide with meaningful points in agency planning and decision-making); 42 U.S.C. § 4321 (Congress stating that its purpose in enacting NEPA was “[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation...”); 16 U.S.C. § 1531(b) (Congress stating that the ESA’s policy is that “all Federal departments and agencies shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter.”); 40 C.F.R. § 1508.25(a) (connected, cumulative, and similar actions subject to programmatic environmental review); 7 C.F.R. § 799.2(a)(5) (FSA will “[e]nsure that, if an FSA proposed action represents one of several phases of a larger action, the entire action is the subject of an environmental review independent of the phases of funding. If the FSA proposed action is one segment of a larger action, the entire action will be used in determining the appropriate level of FSA environmental review.”).

Because loan applications must be approved or disapproved within sixty (60) days of the submission of a complete application under FSA's operating statute, 7 U.S.C. § 1983a, and then funds are to be issued within fifteen (15) days of approval, and because several loan applications are currently pending before the Agencies, immediate attention to this Petition is required to address Petitioners’ concerns. 7 C.F.R. § 1.28. Consequently, Petitioners request that the Agencies respond to this Petition on or before March 1, 2017.

BACKGROUND

I. Industrial Poultry Production

It is well-documented that industrial-scale animal agriculture, including those facilities following accepted industry production standards, produce pollution that presents a significant threat to public health and the environment. Industrial poultry facilities⁵ are not “agriculture enterprises” ... of a kind the Founding Fathers likely would have envisioned populating

undermines NEPA by failing to provide an adequate mechanism for public involvement in the NEPA review process. Petitioners' suggested action will work to swiftly redress this problem, and is expressly contemplated by FSA’s own regulations. 7 C.F.R. § 799.2(a)(4).

⁵ For purposes of this Petition, unless otherwise specified “poultry CAFOs” or “poultry operations” or “poultry facilities” include broilers, breeders, hatchery, and egg operations in the Northeastern Arkansas region seeking federal financial assistance. In August 2016 FSA clarified that it intended the ESW apply to small and medium CAFOs, and that large CAFOs would undergo the EA process. *See* 7 C.F.R. § 799.41(a)(9), (b); **Exhibit 3** - 81 Fed. Reg. 51274 at 51281 (Aug. 3, 2016).

America's 'yeoman republic,'⁶ but are, instead, large-scale facilities that raise an extraordinary number of animals in confinement, normally through controlled feeding methods and without supporting any crops in the area where the animals are raised.^{7 8} The most common threats to the environment and public health from these facilities include contamination of air, water, and land resources by pollution from nutrients, ammonia, heavy metals including arsenic, and pharmaceuticals; high consumption of freshwater resources; by encroaching and converting indispensable species habitat; and the release of climate change augmenting greenhouse gases.

Industrial poultry facilities can pollute from their confinement buildings, waste storage and management areas, and waste application areas. Pollution can include carbon dioxide, ammonia, hydrogen sulfide, and dust originating from chicken feathers, bedding, and chicken manure. Ventilation fans and spreading of manure can cause pollutants from the chicken houses and fields to transport to waterways, critical habitat areas, and local community houses, churches, and schools. Poultry waste - a biological material- can contain large amounts of organic matter and solids; nutrients, including nitrogen and phosphorus; pesticide residues; pharmaceutical residues; disease causing agents, including bacteria, viruses, pathogens, parasites, protozoa, fungi; and heavy metals and other trace elements.⁹ Despite this, poultry waste is not typically "treated," but is merely stored and land-applied. According to USDA's Natural Resource Conservation Service (NRCS), areas with high rates of poultry waste production and land application have elevated rates of fecal coliform and fecal streptococcus concentrations.¹⁰

EPA estimates that pollution from animal feeding operations and attendant activities are a source of impairment for at least 21,000 river and stream miles in the United States.¹¹ Nutrients such as phosphorus can lead to eutrophication, fish kills, reduction of biodiversity, and promote the growth of toxic organisms.¹² Sediments, suspended solids, biodegradable organic compounds and matter can enter waters from poultry facilities, eroding waterbodies, increasing biological

⁶ *Waterkeeper Alliance, Inc. v. U.S. Envtl. Prot. Agency*, 399 F.3d 486, 492 (2d Cir. 2005) (citation omitted).

⁷ See **Exhibit 4** - 68 Fed. Reg. 7176 at 88 (Feb. 12, 2003) (National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations) (hereinafter "EPA 2003 Final Rule"); 40 C.F.R. §§ 122.23(b)(1)(i-ii) & (b)(2).

⁸ U.S. EPA regulates CAFOs' siting, permitting, and operation, and EPA has enforcement authority. USDA's goal is for CAFOs and AFOs (999 animal units or less) "to take voluntary actions to minimize potential air and water pollutants from storage facilities, confinement areas, and land application areas." See **Exhibit 5** - USDA NRCS "Animal Feeding Operations". As a result, many of the sources cited herein discussing the problems of CAFOs are from EPA. Despite their separate functions, USDA and EPA have issued **Exhibit 6** - "Unified National Strategy for Animal Feeding Operations" (March 9, 1999).

⁹ **Exhibit 7** - EPA, Detecting and Mitigating the Environmental Impacts of Fecal Pathogens Originating from Confined Animal Feeding operations: Review, EPA/600/R-06/021, 1-3 (Sept. 2005) (citations omitted) ("Animal wastes contain zoonotic pathogens, which are viruses, bacteria, and parasites of animal origin that cause disease in humans. Diseases that can be caused by zoonotic pathogens include Salmonellosis, Tuberculosis, Leptospirosis, infantile diarrheal disease, Q-Fever, Trichinosis, Cryptosporidiosis, and Giardiasis to name a few. These diseases typically present as mild diarrhea, fever, headaches, vomiting, and muscle cramps. In more severe cases, however, these diseases may cause meningitis, hepatitis, reactive arthritis, mental retardation, miscarriages, and even death, particularly in the immunocompromised.") (emphasis added); see also **Exhibit 4** - 68 Fed. Reg. at 7235-36.

¹⁰ See **Exhibit 8** - USDA Natural Resource Conservation Service ("NRCS"), Agricultural Waste Management Field Handbook ("AWMFH") (210-AWMFH, 4/92) Ch. 3 "Agricultural Wastes and Water, Air, and Animal Resources" at Table 3-5, 3-14, 3-16 (1992).

¹¹ **Exhibit 9** - EPA, State Specific Probable Sources.

¹² **Exhibit 10** - World Health Organization, *Toxic Cyanobacteria in Water: A Guide to Their Public Health Consequences, Monitoring and Management* at 1.1 (1999) (hereafter "WHO 1999").

oxygen demand and decreasing dissolved oxygen levels.¹³ These conditions decrease the habitability of waterbodies for local species by changing the composition and turbidity of the waters, and physically hindering aquatic plant and animal functions.¹⁴

Furthermore, excess nitrogen in drinking water can cause numerous health issues, including methemoglobinemia, thyroid, and cardiac problems.¹⁵ The World Health Organization International Agency for Research on Cancer classified nitrate as “probably carcinogenic” to humans.¹⁶ EPA has set a Maximum Contaminant Level (MCL) for nitrate in drinking water of 10 mg/L. 40 C.F.R. § 141.62(b)(7). Many people in Northeastern Arkansas rely on groundwater wells for their drinking and household water needs.¹⁷ Runoff from industrial animal facilities can and often does contaminate groundwater. As discussed below, this has already occurred in northwestern Arkansas. In drinking water, nutrients can also cause objectionable taste and odor. They can also increase drinking water treatment costs.¹⁸

Exposure to biological contaminants from industrial poultry facilities, including pathogens and fecal materials, can also present a significant risk to human health.¹⁹ Food and water borne diseases in humans associated with exposure to industrial farm animal waste include *Campylobacter spp.*, *Salmonella spp.*, *Listeria monocytogenes*, *Escherichia coli (E. coli)*, *Cryptosporidium parvum*, and *Giardia lamblia*, many of which are rapidly transmissible and can cause abdominal discomfort, vomiting, or other acute gastrointestinal distress, and even death.²⁰ Exposure to air pollutants such as ammonia, for example, can cause a range of adverse health effects including nasal, throat, and eye irritation; chemical burns of the respiratory tract, skin, and eyes; scarring; hemorrhaging of the gastrointestinal tract; and even lethal airway blockage and respiratory insufficiency.²¹ Further, as it relates to antimicrobial and other pharmaceutical use, “[t]he dosing of livestock animals with ... antimicrobial agents for growth promotion and prophylaxis may promote antimicrobial resistance in pathogens, increasing the severity of disease and limiting treatment options for sickened individuals.”²²

¹³ **Exhibit 11** - U.S. EPA National Risk Management Laboratory, Risk Assessment Evaluation for Concentrated Animal Feeding Operations at 24 (2004) (hereafter “EPA 2004 CAFO Risk Management”).

¹⁴ See, e.g., **Exhibit 4** EPA 2003 Final Rule at 7235.

¹⁵ **Exhibit 12** - ATSDR, Toxicological Profile for Nitrate and Nitrite (Draft) Ch. 3 Health Effects.

¹⁶ **Exhibit 13** – Excerpt from International Agency for Research on Cancer of the World Health Organization, Monographs on the Evaluations of Carcinogenic Risks to Humans, Vol. 94, Ingested Nitrate and Nitrite, Cyanobacteria Peptide Toxins, § 6 (2010); see also **Exhibit 14** - Ward, M.H. et al. “Nitrate intake and the risk of thyroid cancer and thyroid disease.” EPIDEMIOLOGY. Vol. 21(3): 389-395 (May 2010); **Exhibit 15** - Weyer, P. et al. “Municipal Drinking Water Nitrate Level and Cancer Risk in Older Women: The Iowa Women’s Health Study.” EPIDEMIOLOGY. Vol. 11, No. 3 (May 2001).

¹⁷ **Exhibit 79** – Southern Climate Impacts Planning Program, Climate Change and Arkansas (undated).

¹⁸ See, e.g., **Exhibit 16** - Des Moines Water Works, “Des Moines Water Works’ Nitrate Removal Facility Sets Record Number of Days in Operation in a Single Year” (May 28, 2015).

¹⁹ See **Exhibit 17** - USDA NRCS “Nutrient Management Technical Note 9: Introduction to Waterborne Pathogens in Agricultural Watersheds” (September 2012); **Exhibit 11** at 24.

²⁰ See **Exhibit 17** - NRCS Waterborne Pathogens (2012). See also **Exhibit 18** - Centers for Disease Control and Prevention, Painter, J. et al. “Attribution of Foodborne Illnesses, Hospitalizations, and Deaths to Food Commodities by using Outbreak Data, United States, 1998-2008. Emerging Infectious Diseases. Vol. 19 No. 3 (March 2013) (poultry accounted for the most deaths, mostly from listeria and salmonella).

²¹ **Exhibit 19** - ATSDR, Toxicological Profile for Ammonia, at 15, 25 (2004).

²² **Exhibit 7** - EPA, Detecting and Mitigating the Environmental Impacts of Fecal Pathogens Originating from Confined Animal Feeding operations: Review, EPA/600/R-06/021, 1-3 (Sept. 2005) (citations omitted).

In Arkansas, some sources have estimated that industrial poultry facilities produced the same amount of waste each day as eight million people - or almost three times the human population of the entire state.²³ Most of this waste is produced by facilities located in the northwest region of the state, now designated by Arkansas Natural Resources Commission as a Nutrient Surplus Area.²⁴ EPA considers the Arkansas-Oklahoma border to be a particular “area of concern.”²⁵ EPA officials have identified numerous water bodies in northwest Arkansas (and, as a result, northeast Oklahoma) as impaired by manure from animal feeding operations, and have expressed concern regarding the operations’ role in polluting groundwater in the area.²⁶ According to Arkansas’ 2004 Integrated Water Quality Monitoring and Assessment Report, due to the waste generated from animal production facilities in northwest Arkansas, “[t]he nutrient levels measured from this region are atypically high and are trending upward,”²⁷ with animal feedlots listed as not just a source of impairment for surface waters in the state, but as one of the “[t]en highest priority sources” for groundwater contamination.²⁸ As a result, farm animal waste contamination of groundwater, with discharges into surface water is a realistic concern here.²⁹

Petitioners do not want to see the same devastating history play out in Northeastern Arkansas. Unlike northwest Arkansas, Petitioners believe that Northeastern Arkansas currently has less than 100 poultry facilities permitted by the state for operation and/or for stormwater during construction.³⁰ As of the most recent U.S. Census of Agriculture (2012) Northeastern Arkansas’ twenty-six counties had: ten counties with chicken farms with less than 399 chickens, ten counties with chicken farms with less than 99 chickens, and five counties with chicken farms with less than 49 chickens.³¹ Only one county (White) had large chicken facilities, but they only number two (2) facilities and each has less than 3,199 chickens.³² Rather than being blanketed in industrial poultry facilities, the tapestry of Northeastern Arkansas is still rich with small farms, forests, rivers, and reliably clean groundwater. Indeed, the southeast United States contains most of the aquatic reptiles in the country, the greatest diversity of freshwater turtles.³³

²³ See, e.g., **Exhibit 20** - Suzi Parker, How Poultry Producers are Ravaging the Rural South, *Grist* (Feb. 22, 2006), (“In Arkansas alone, chicken farms produce an amount of manure each day equal to that produced by 8 million people.”).

²⁴ See, e.g., **Exhibit 21** - ANRC Nutrient Surplus Area Map.

²⁵ **Exhibit 22** - U.S. Government Accountability Office Report GAO-08-944, “Concentrated Animal Feeding Operations: EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern” at 22 (Sept. 2008).

²⁶ *Id.*

²⁷ **Exhibit 23** - Arkansas Dept. of Environmental Quality, 2004 Integrated Water Quality Monitoring and Assessment Report at 5 (2005).

²⁸ *Id.* at 139.

²⁹ **Exhibit 24** - Haggard, B. et al. “Nutrient and B 17-estradiol loss runoff water from poultry litters.” *Journal of the American Water Resources Association* (April 2005); **Exhibit 25** – Peterson, E. et al. “Persistence of 17 B-Estradiol in Water and Sediment-Pore Water from Cave Streams in Central Missouri.” *Environmental & Engineering Geoscience*. Vol. XI, No. 3, pp. 221-228 (2005).

³⁰ See also, e.g., **Exhibit 26** - USDA National Agricultural Statistics Service (NASS), *Census of Agriculture Map* (2012) (showing the lowest number of poultry operations in the state in Northeastern Arkansas, with less than 5,000 broilers and chickens per 100 acres of land).

³¹ **Exhibit 27** - USDA, NASS, *Census of Agriculture, 2012 Census, Volume 1, Arkansas, Table 19* (2014).

³² *Id.*

³³ **Exhibit 28** - Buhlmann, K.A. and J.W. Gibbons. *Imperiled aquatic reptiles of the Southeastern United States: Historical Review and Current Status* p. 201-203 (1997) *as reprinted in* Benz, G.W. and D.E. Collins (ed.) *AQUATIC FAUNA IN PERIL: THE SOUTHEASTERN PERSPECTIVE*. Southeast Aquatic Research Institute Special Publication 1, Lenz Design and Communications, Decatur, GA (1997); **Exhibit 29** - Taylor, C. A., et al., “Conservation status of crayfishes of the United States and Canada.” *FISHERIES* 21(4):25–38 (1996); **Exhibit 30** - Camp, C.D., et al. “A new

It is a place of unparalleled aquatic biodiversity with has some of the richest aquatic fauna of any temperate area in the world. This unique bioregion rivals the tropics in its diversity.

II. Explosion of poultry facilities in Northeastern Arkansas

By its own estimates, PECO's expansion of its facilities in Pocahontas, Arkansas requires at least 588 new poultry confinement buildings to be located, constructed, and operated in Northeastern Arkansas in order to support its processing, feed, and hatchery facilities.³⁴ OMP has likewise recently expanded its operations in Northeastern Arkansas. It opened a new facility in Batesville where it expects to process approximately 1.5 million pounds of poultry per week.³⁵ Like the PECO expansion, OMP's Batesville facility will rely on local broiler confinement facilities to raise poultry to OMP's specifications. Each poultry operator will produce between 4 and 9 flocks per year, and Petitioners estimate that annually these new facilities will produce anywhere between 114 million and 256.5 million chickens for OMP and PECO.

Bringing in approximately 1,000 new industrial poultry confinement buildings will generate an estimated 7.5 to 15 billion cubic feet of waste annually,³⁶ untold amounts of air pollution, including ammonia and hydrogen sulfide; thousands of trucks transporting chicks, feed, and litter across small (unpaved) roads weekly; and more than 1 million metric tons of climate change-driving carbon dioxide equivalent greenhouse gases per year.³⁷ Further, because poultry production contracts tend to contain specific requirements for facility design, construction, operation, and bird management, these facilities are likely to share common operational design and construction, and, therefore, common environmental and public health impacts.³⁸ Relevant EAs reviewed by Petitioners support this conclusion.³⁹ It is unacceptable that these expected impacts are not being analyzed on a cumulative, area-wide scale and that their connections and/or similarities are wholly ignored.

III. Federal direct and guaranteed loans

FSA and SBA federal financial assistance is targeted for borrowers who cannot qualify for private loans. *See, e.g.*, 7 U.S.C. § 1922(a)(1) (FSA real estate loans); 15 U.S.C. § 636(a) (SBA 7(a) loans). The main loan programs at issue here are (1) FSA direct loans, (2) FSA

genus and species of lungless salamander (family Plethodontidae) from the Appalachian highlands of the southeastern United States." JOURNAL OF ZOOLOGY 279: 86-94 (2009).

³⁴ **Exhibit 31** - "Peco Foods Featured in Arkansas Business" (chart indicating additional needed Poultry Facilities) (Aug. 31, 2015).

³⁵ **Exhibit 33** - "Ozark Mountain Poultry Expands with Opening of Batesville Facility" (Nov. 11, 2013).

³⁶ **Exhibit 33** - NRCS AWMF (210-VI-AWMFH) Ch. 4 "Agricultural Waste Characteristics" (March 2008).

³⁷ **Exhibit 34** - ALDF Comments on the Tracy Operation (March 31, 2016) and supporting materials; **Exhibit 35** - Petitioners' Significant New Information Letters dated August 12, 2016 and September 28, 2016 and supporting materials for both letters.

³⁸ *See, e.g.*, **Exhibit 36** - Pew Commission Report on Industrial Farm Animal Production, "Putting Meat On the Table: Industrial Farm Animal Production in America" at 5, 6 (2010) (integrators control "all phases of production, including what and when the animals are fed.") (hereafter "Putting Meat On the Table").

³⁹ *See, e.g.*, **Exhibit 37** - Sample of Environmental Assessments for Northeastern Arkansas poultry facilities ("EA Samples") for Roby & Cori Perkey EA § 2.0 (April 2015) ("Alternative designs and alternative projects were not considered ... Alternative designs are not feasible in that every integrator has specific set of plans and specs that producers must use to ensure placement of birds..."); Charles & April Melton EA § 2.0 (Nov. 13, 2015) ("Alternative designs are not feasible in that every integrator has a specific set of plans and specs that producers must use to ensure placement of birds.").

guaranteed loans, (3) SBA 7(a) guaranteed loans for starting or expanding a small business, and (4) SBA 504 guaranteed loans for fixed asset purchases, construction/reconstruction, equipment, and professional fees (including appraisals and environmental investigations).

Just one operation proposed for construction in the Northeastern Arkansas region, for example, is seeking \$1.4 million in federally guaranteed funds for six broiler houses or about \$233,333 per broiler house. *See, e.g., Exhibit 37* – EA Samples for King (\$1,355,000) and Tracy Operation (\$1,399,000). Information indicates, however, that other proposed facilities are seeking more than that amount per broiler house. Hypothetically (and conservatively) if federal financial assistance is sought for 1,000 chicken houses at \$233,333 per house, Petitioners estimate that the Northeastern Arkansas region will seek *at least* \$116 million in federal financial assistance for this project. SBA information already indicates that by April 2016 at least \$136,317,556 had been approved.⁴⁰ Petitioners estimate that this project could involve \$233 million in federal financial assistance.⁴¹ Hypothetically, if every poultry operator were to seek the maximum amount allowable, this could skyrocket to a *\$1 billion to \$2 billion* federal lending project.

IV. Petitioners' Participation in Ongoing NEPA Review

Petitioners have made numerous attempts to participate in the NEPA review processes for individual direct loan and loan guarantee applications across Northeastern Arkansas, but the notice process for those facilities has been difficult to access, and in some cases prohibitive.⁴² For example, Petitioners have sought a consistent source for public information on environmental assessments of poultry facilities applying for loans in Northeastern Arkansas open for public comment, but have had difficulty ascertaining whether a public notice is available. Even when such notice is made available, efforts to access public information has been repressed.⁴³ During calls related to its outstanding FOIAs, FSA informed Petitioner ARK that each county handles federal funding applications and public notices separately, and SBA informed ARK that only approved applications were available to the public. However, not all public newspapers in Northeastern Arkansas are widely circulated or available online. This makes it extremely difficult to determine if and when such notice is disseminated, and yet another reason why a programmatic solution is necessary.

Petitioners have also requested meetings with the Agencies to discuss the matters contained in this Petition and the federal government's plans for addressing the environmental reviews for the hundreds of poultry facilities forecasted for Northeastern Arkansas. The Agencies have not substantively respond to these requests.

⁴⁰ *See Exhibit 38* - SBA FOIA Broiler Spreadsheet (Aug. 3, 2016).

⁴¹ *See records in Exhibit 39* - SBA can guarantee up to \$5 million to each borrower for 7(a) loans (15 U.S.C. § 636), and \$5 million for 504 loans (15 U.S.C. § 685). FSA can lend up to \$300,000 per borrower for direct loans. FSA can guarantee up to \$1,399,000 in guaranteed loans. 7 U.S.C. § 1925 (guaranteed loans increased for inflation). If Northeastern Arkansas sees the influx of 250 to 500 broiler operations, and hypothetically each operation seeks the maximum amount of federal financial assistance, this project becomes a *\$1 billion to \$2 billion* affair.

⁴² Petitioners ARK and ALDF submitted Comments on the Tracy Operation. **Exhibit 34** (ALDF Comments), **Exhibit 40** - ARK Comments (March 31, 2016). In their Comments, Petitioners raised concerns about the lack of cumulative review of the environmental and community impacts of the loans applications in this region. Petitioners incorporate by reference herewith the Comment letters, the Significant New Information letters, the ESA Notice of Intent to Sue (June 29, 2016) (**Exhibit 44**), and their supporting materials as **Exhibits 34, 35, 40, and 41**.

⁴³ *See n. 4 supra*.

SUPPORT FOR PETITIONED ACTIONS

I. NEPA and its Implementing Regulations strongly favor preparing a PEIS where, as here, multiple projects share cumulative impacts, and are connected and/or similar.

NEPA expressly affirms the utility of preparing a PEIS for projects that share connected, similar and/or cumulative actions. This is especially true for projects - such as the ones in question - where all federal actions originate from and are connected to a larger event. *See Kleppe v. Sierra Club*, 427 U.S. 390 (1976); *Native Ecosystems Council v. Dombeck*, 304 F.3d 886 (9th Cir. 2002) (“A single NEPA review document is required for distinct projects when ... the projects are ‘connected,’ ‘cumulative’ or ‘similar’ actions ...”); *See also National Wildlife Federation v. Appalachian Reg. Com’n.*, 677 F.2d 883 (D.C. Cir. 1981), 40 C.F.R. § 1508.25 (mandating single EIS for separate independent actions under some circumstances); 40 C.F.R. § 1502.4(a), (c) (requiring a single EIS where proposals are “related to each other closely”); CEQ 2014 Programmatic Guidance (CEQ recommends agencies give particular consideration to a programmatic approach “when (1) initiating or revising a national or regional rulemaking, policy, plan, or program; (2) adopting a plan for managing a range of resources; or (3) making decisions on common elements or aspects of a suite of closely related projects.”). According to CEQ:

[t]he preparation of an area-wide or overview EIS may be particularly useful when similar actions, viewed with other reasonably foreseeable or proposed agency actions, share common timing or geography. For example, when a variety of energy projects may be located in a single watershed, or when a series of new energy technologies may be developed through federal funding, the overview or area-wide EIS would serve as a valuable and necessary analysis of the affected environment and the potential cumulative impacts of the reasonably foreseeable actions under that program or within that geographical area.⁴⁴

Further, FSA regulations specifically provide for the use of a PEIS in relevant circumstances. *See* 7 C.F.R. § 799.43 (tiering to broad EA); 7 C.F.R. § 799.50(b); 7 C.F.R. § 799.51(a)(2) (broad federal assistance programs that may have significant cumulative impacts on the human environment normally requires an EIS); 7 C.F.R. § 799.57 (tiering to a broad PEIS); *see also* 81 Fed. Reg. at 51278 (discussing the economies and appropriateness of a programmatic approach). A PEIS is required for “proposed actions that are broad in scope or similar in nature and may cumulatively have significant environmental impacts, although the impact of the proposed individual proposed actions may be insignificant.” 7 C.F.R. § 799.50(b); *see also* SBA SOP 90 57 § 6 (“All SBA actions which individually or cumulatively have a significant effect on the quality of the human environment are to be reviewed for possible environmental impacts.”) In this instance, the Agencies’ approvals of direct and guaranteed loans to industrial poultry confinement facilities in Northeastern Arkansas ignore this threshold standard.

⁴⁴ **Exhibit 42** - Forty Most Asked Questions Concerning CEQs National Environmental Policy Act Regulations, 46 Fed. Reg. 18026 at 18 (1981) (hereafter “Forty Questions”).

A. Timing of events merits a PEIS

In approximately 2014-2015 OMP and PECO constructed and/or expanded poultry processing facilities in Batesville, Arkansas and Pocahontas, Arkansas, and have since been actively recruiting industrial poultry growers to operate in Northeastern Arkansas and provide them with the supply of birds needed to meet slaughter-line demands. For example, in August 2015, PECO announced that its industrial poultry grower arrangements were “about 80 percent complete on paper,” meaning it had identified contract growers.⁴⁵ Simultaneously, the Agencies have seen a significant increase in poultry facilities’ federal financial assistance applications.⁴⁶ This influx of applications is just the beginning.⁴⁷

In instances such as this where such a large number of similar actions share a common timing, geography, and underlying justification, a PEIS “would serve as a valuable and necessary analysis of the affected environment and the potential cumulative impacts of the reasonably foreseeable actions.”⁴⁸ Further, a PEIS in such reasonably foreseeable circumstances will enable the Agencies to meet NEPA’s underlying objective of ensuring that a government agencies evaluate the consequences of their actions at the earliest practicable stage of a project’s planning. *See* 40 C.F.R. § 1502.4(b) (Agencies should consider, as early as practicable, the benefits of making initial broad decisions so they are timed to coincide with meaningful points in agency planning and decision-making).

B. A PEIS will conserve government resources

A PEIS promotes efficiency by “eliminat[ing] repetitive discussions of the same issues” and “focus[ing] on the actual issues ripe for decision at each level of the environmental review.” 40 C.F.R. § 1502.20; *see, e.g., Friends of Yosemite Valley v. Norton*, 348 F.3d 789 (9th Cir. 2003). Utilizing a PEIS will streamline and enhance the Agencies’ efforts and resources by enabling a consistent and comprehensive environmental review of the great number of applications for loans in Northeastern Arkansas pursuant to the demands of NEPA. 42 U.S.C. § 4331(b) (“it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources...”). A PEIS will help the Agencies to make better informed decisions, and do so efficiently.

Further, a PEIS will not be duplicative, cause undue delay, or be speculative. While some of the industrial poultry facilities reasonably expected to provide Peco's and OMP's production supplies have already applied for and received approval for federal funding through FSA and/or SBA loan programs, many remain under the Agencies’ consideration or have not yet requested

⁴⁵ **Exhibit 31** – “Peco Foods Featured”; *see also* **Exhibit 32** - collection of OMP press releases confirming expansion.

⁴⁶ *See, e.g., Exhibit 43* at 6 - FWS FOIA record Randolph Co. TA-0364 Bontrager Broilers where FWS staff member writes during the course of consultation “So many chickens. So little time. ☺”

⁴⁷ FSA has informed ARK it has approximately 140 files for *completed* applications, but it has refused to identify how many *pending* applications are before the agency. The forecasted number of poultry operations for Northeastern Arkansas is likely closer to 500, with several hundred applications pending. *See, e.g. Exhibit 31* (referencing 588 broiler houses for Peco alone); **Exhibit 44** – *Politico* “Slow loans over green woes put CAFOs in limbo” (Oct. 20, 2016) (indicating FSA’s 2016 backlog in processing pending applications); **Exhibit 46** - Arkansas Natural Resources Commission emails referencing the 2015 “influx” of poultry operations in Northeastern Arkansas.

⁴⁸ **Exhibit 42** - Forty Questions.

funding but are reasonably expected to be based on OMP and Peco's expansion effort in the region.

C. Shared Subject Matter, Shared Design, Shared Technologies

The subject matter here is the same for each action: a request for financial assistance from the federal government to construct and expand large industrial poultry facilities to supply birds to meet OMP and PECO production demands.

Additionally, the similarity in the poultry houses' facility design, construction, and operation means that the poultry facilities likely fall into two camps: they either follow OMP's contractual requirements or Peco's contractual requirements. Since the facilities and their operation are standardized, it would be both easy and efficient (as well as more accurate) for the Agencies to analyze the direct, indirect, and cumulative impacts from all the poultry facilities. Technologies applied to a number of individual federal actions are good candidates for PEIS, and the role of technology is specifically contemplated by NEPA. 42 U.S.C. § 4331(a). Integrators like OMP and PECO typically have specific technological requirements for construction and operation of chicken houses that contract growers must adhere to in order to maintain the contract. Upon information and belief, PECO and OMP's operation and bird production standards will require the contract growers to abide by specific construction and operation practices, and that these practices are not dissimilar.⁴⁹ The EAs viewed by Petitioners contain language such as "Alternative designs are not feasible in that every integrator has a specific set of plans and specs that producers must use to ensure placement of birds." *See, e.g., Exhibit 37* - Sample EAs for Charles & April Melton EA § 2.0 (Nov. 13, 2015), Robby & Cori Perkey EA § 2.0 (April 13, 2015), Tracy EA § 2.0 (Feb. 16, 2016). A PEIS would enable the Agencies to incorporate the similar technologies employed by each integrator into their analyses of direct, indirect, and cumulative impacts thereby further streamlining the environmental analysis. Petitioners note that currently, none of the nearly 100 EAs obtained appear to address any of the specific technological requirements required by the Integrators, and, thus, to date, there has been no effort to describe the environmental consequences of the technologies.

D. Geographic area

Petitioners propose an approximately 26 county area in Northeastern Arkansas for review in the PEIS. The scope of this proposed area is, in large part, due to the fact that poultry processors like OMP and Peco do not travel far to obtain birds for slaughter or to distribute chicks or feed. According to the USDA, "In the 2011 ARMS, the mean distance from a grower to the integrator's processing plant was 34 miles, and 90 percent of all birds were produced on farms within 60 miles of the plant. Effectively, integrators seek to contract with growers within a limited geographic area near their feed mills, hatcheries, and processing plants."⁵⁰ Indeed, since approximately 2014 OMP and Peco have been actively recruiting for industrial poultry operators in Northeastern Arkansas to provide them with the supply the birds needed to meet their slaughter-line demands.⁵¹ OMP information suggests the geographic area may be 150 mile radius

⁴⁹ *See, e.g.*, n. 38 *supra* (citing **Exhibit 36** - Putting Meat On the Table at 5, 6 (integrators control "all phases of production, including what and when the animals are fed.")

⁵⁰ *See Exhibit 45* - USDA Economic Research Service (ERS), "Technology, Organization, and Financial Performance in U.S. Broiler Production", Economic Information Bulletin No. 126 at 29 (June 2014).

⁵¹ *See, e.g., Exhibit 31* (Peco regional expansion); **Exhibit 32** - OMP regional expansion.

from Batesville,⁵² and Peco information suggests the geographic area may be 35-40 miles away from a Peco processing operation.⁵³

At this point, Petitioners believe that since 2014 approximately (and perhaps conservatively) 100 poultry facilities' requests for funding have been approved on an individual, isolated basis, and that several hundred more applications are pending or about to be filed with the Agencies. Petitioners' review of the EAs made available to date through FOIA confirms that each operation is being considered separately and independently from each other, even though some are in very close proximity to each other. *See, e.g., Exhibit 37 - Robby & Cori Perkey EA § 2.0; Charles & April Melton EA § 2.0* (proposed facility "is located in close proximity to the [PECO or OMP] Complex and is in an area occupied by numerous other [PECO or OMP] [chicken] producers.") Each EA focuses only on the particular immediate area the poultry facility is to be sited in, and only considers the issuance of the loan, not the impacts of operation once a loan is issued. Arbitrarily cabining the geographical scope of the analysis as well as failing to examine the effects of operating the CAFOs, that these loans enable does not serve the purpose of NEPA.

Nor by looking at each CAFO individually do the Agencies address the required NEPA "Alternatives" analysis. 40 C.F.R. § 1502.14; CEQ 1997 Guidance on Cumulative Effects (cumulative effects analysis as part of alternatives and mitigation analyses is "critical"). Each EA simply dismisses the impacts of other CAFOs in the area even though the Agencies recognize other CAFOs are nearby.

II. Cumulative and common environmental, human health, and other impact considerations overwhelmingly suggest preparation of a PEIS.

Where federal agencies face multiple, discrete approval decisions that have connected, overlapping, shared, and cumulative effects, NEPA provides for preparation of a broad, or "programmatic" EIS, such as the PEIS requested herein. *See* 40 C.F.R. § 1502.20; 40 C.F.R. § 1508.25; *see also Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976) ("when several proposals...will have cumulative or synergistic environmental impact upon a region...their environmental consequences must be considered together"). Cumulative impacts "result[] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions," and "can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

Cumulative impact analyses must include private, state, and federal actions. 40 C.F.R. § 1508.7, § 1508.25(a), (c). Thus, the Agencies must consider not only poultry facilities obtaining federal financial assistance through direct loans and loan guarantees, they must *also* consider any poultry facilities that are *not* seeking federal financial assistance but that may be privately funded.

⁵² **Exhibit 32** at 2 (OMP regional expansion press releases).

⁵³ **Exhibit 46** – Arkansas Natural Resources Commission (ANRC) email from Jessie Green to Patrick Fisk (Oct. 6, 2015) and email between Patrick Fisk and Tate Wentz (July 1, 2015) (addressing "influx" of poultry operations in Northeastern Arkansas).

Substantively, much can be learned from a review of the EAs that have already been completed for industrial poultry facilities applying for loans in Northeastern Arkansas. For example, the wording in these EAs is nearly identical, and each is limited in scope to the geographic range of the individual operation under review. This myopic scope violates NEPA in failing to meaningfully take into account the similar and cumulative impacts that these facilities have on the environment individually and in combination with each other.⁵⁴

While not comprehensive, below is a discussion of some of the common and cumulative effects recognized as stemming from industrial poultry production individually and cumulatively, and that are reasonably foreseeable consequences of the federal government's involvement in concentrating and expanding the industrial poultry industry in Northeastern Arkansas in support of OMP and Peco's operational demands.

A. Ecosystem and Human Health impacts from discharge of contaminants from Poultry Facilities into Aquatic and Terrestrial Environments

Poultry waste products are generated in huge quantities at industrial poultry facilities, and can include a variety of harmful environmental contaminants, such as nutrients (ammonia, nitrogen, phosphorus, potassium, salts), veterinary pharmaceuticals (antibiotics, hormones, steroids),⁵⁵ endocrine disruptors, biodegradable organics, heavy metals,⁵⁶ pathogens, sediments, suspended solids.⁵⁷ Exposure to these contaminants can degrade the environment, reduce species biodiversity, and harm human health. Release of these pollutants into the environment may result from intentional discharge, operation, maintenance, management, and/or operation design problems.

For example, industrial poultry waste can reach surface or groundwater resources through surface runoff, erosion, direct discharges to surface water, spills and dry weather discharges (intentional or accidental), leaching into soil and groundwater, volatilization (e.g. of ammonia) and redeposition.⁵⁸ Waste management systems can have spills, leaks, overflows, accidental

⁵⁴ A legally adequate EA must assess both “direct” and “indirect” effects of the proposed action, 40 C.F.R. § 1508.8, and the “cumulative effects” of proposed actions on the environment. 40 C.F.R. § 1508.7.

⁵⁵ Petitioners note that while there are not FDA-approved uses for hormones or steroids in poultry, producers may administer such treatments on an over-the-counter basis, and are referenced as such in this Petition.

⁵⁶ Heavy metals like arsenic have been historically used in poultry operations. Arsenic is associated with multiple types of cancers even at low ambient levels, cardiovascular disease, diabetes, endocrine disruption, and decreased immunity. *See, e.g., Exhibit 47* - J.A. Stingone & S. Wing, *Poultry litter incineration as a source of energy: reviewing the potential for impacts on environmental health and justice*, 1(1) NEW SOLUTIONS 27-47, 33 (2011) (referencing International Agency for Research on Cancer, *Monographs on the Evaluation of Carcinogenic Risks to Humans: Some Drinking Water Disinfectants and Contaminants, Including Arsenic* (2004); **Exhibit 48** - M. Vahter, *Health effects of early life exposure to arsenic*, 102 BASIC & CLINICAL PHARMACOLOGY & TOXICOLOGY 204-211 (2008); **Exhibit 49** - C.D. Kozul et al., *Low-dose arsenic compromises the immune response to influenza A infection in vivo*, 117 ENVIRONMENTAL HEALTH PERSPECTIVES 1441-1447 (2009); **Exhibit 50** - J.C. Davey et al., *Arsenic as an endocrine disruptor: arsenic disrupts Retinoic Acid receptor- and thyroid hormone receptor-mediated gene regulation and thyroid hormone-mediated amphibian tail metamorphosis*, 116 ENVIRONMENTAL HEALTH PERSPECTIVES 165-172 (2008).

⁵⁷ **Exhibit 4** – EPA 2003 Final Rule at 7235-36.

⁵⁸ *See, e.g., Exhibit 51 to 54* - NRCS AWMFH Ch. 2 (Planning Considerations) (**Exhibit 51**); Ch. 7 (Geologic and Groundwater Considerations) (**Exhibit 52**); Ch. 8 (Siting Agricultural Waste Management Systems) (**Exhibit 53**); Ch. 9 (Agricultural Waste Management Systems) (**Exhibit 54**).

discharges and reach surface water and/or groundwater.⁵⁹ Discharges can be intentional, accidental, or reasonably foreseeable. EPA has noted that when dry poultry litter is left outside and uncovered, rain falling on manure is reasonably likely to transport pollutants from the waste pile onto neighboring soils, causing leaching and potential groundwater pollution, and possibly contaminating nearby surface waters.⁶⁰ Land applications can form pathways for waste to reach waters. Some estimates show that over 90% of poultry waste is disposed of through land applications.⁶¹ Erosion, non-agronomic waste applications, and rainfall can cause land-applied manure to reach surface and ground waters.⁶²

In Northeastern Arkansas, the EAs that have already been completed only reviewed Stormwater Pollution Prevention Plans' BMPs, which merely address the construction of an operation. The Agencies did not review any nutrient management plans (NMPs) or specific waste management analyses for these facilities. These NMPs do not need to be developed until approximately one year after the facility has operated. See **Exhibit 37** – Letters from County Conservation Districts to poultry operators. It appears the Agencies simply here “assumed” that the poultry operators would follow the applicable laws, and ignored any direct, indirect, or cumulative effect from discharges and waste management.

The discharge of nutrients into waterways can lead to eutrophication, fish kills, reduction of biodiversity, and promote the growth of toxic organisms.⁶³ Excess nutrients in waters can increase algae, clog water resources, reduce dissolved oxygen levels, degrade waters' ability to support aquatic life, and impair fisheries and ecosystems.⁶⁴ Sediments, suspended solids, biodegradable organic compounds and matter can enter waters from poultry facilities, eroding waterbodies, increasing biological oxygen demand and decreasing dissolved oxygen levels.⁶⁵ These conditions can decrease the habitability of waterbodies for local species by changing the composition and turbidity of the waters, and physically hindering aquatic plant and animal functions.⁶⁶

Other impacts include impairment of drinking water sources, human health risks from pathogen and fecal contamination,⁶⁷ exposure to harmful pesticides,⁶⁸ exposure to veterinary

⁵⁹ Id. NRCS AWMFs specifically suggest producers plan for such considerations.

⁶⁰ **Exhibit 4** – EPA 2003 Final Rule at 7192; see also **Exhibit 8** - AWMFH Ch. 3 (Agricultural Wastes and Water, Air, and Animal Resources) at 3-17 (discussing pathways to pollution); **Exhibit 56** - NRCS AWMFH Ch. 9 (Agricultural Waste Management Systems) at 9-23 (discussing poultry waste systems needing to be covered).

⁶¹ **Exhibit 55** - PEW COMMISSION ON FARM ANIMAL PRODUCTION, ANTIMICROBIAL RESISTANCE AND HUMAN HEALTH 31 (2008) (citations to USDA resources omitted.)

⁶² See, e.g., **Exhibit 8** - NRCS AWMFH Ch. 3 “Agricultural Wastes and Water, Air, and Animal Resource”; **Exhibit 56** - NRCS Conservation Practice Standard Code 590 “Nutrient Management” (Jan. 2012).

⁶³ **Exhibit 10** – WHO (1999).

⁶⁴ See, e.g., **Exhibit 8** - NRCS AWMFH Ch. 3 “Agricultural Wastes and Water, Air, and Animal Resource”; see also, e.g., **Exhibit 58** - S. Wing et al, *The potential impacts of flooding on confined animal feeding operations in eastern North Carolina*, 110(4) ENVIRONMENTAL HEALTH PERSPECTIVES 387-391, 387 (2002) (“Excessive nitrogen and phosphorus can lead to eutrophication of rivers and estuaries, where they can promote harmful algae blooms.”).

⁶⁵ **Exhibit 11** - EPA 2004 CAFO Risk Management at 24.

⁶⁶ See, e.g., **Exhibit 8** - NRCS AWMFH at Ch. 3; **Exhibit 57**.

⁶⁷ See **Exhibit 11** - EPA 2004 CAFO Risk Management at 24.

⁶⁸ **Exhibit 58** – United Nations Food and Agriculture Organization (FAO), FAO Plant Production and Protection Paper 197, *FAO Manual on the Submission and Evaluation of Pesticide Residue Data For the Estimation of Maximum Residue Levels in Food and Feed* (2009); **Exhibit 59** - EPA, *Pesticides: Human Health Issues Related to Pesticides* (stating that pesticides “such as the organophosphates and carbamates, affect the nervous system. Others

pharmaceutical residues in industrial poultry waste,⁶⁹ and endocrine disruption.⁷⁰ Exposure to veterinary pharmaceuticals can cause phytotoxicity, groundwater contamination, and surface water quality impairment. These pharmaceuticals can be lodged in river sediment deposition that may eventually be released.⁷¹ According to the United States Geological Survey (USGS), exposure to even “very low levels of hormonally active chemicals” may cause an “adverse health effect of concern.”⁷²

Further, antibiotic resistance is a recognized problem across the globe,⁷³ and can pass to humans through direct contact with animals, secondary contact (air, dust, water, soils), and through consumption of animal products with antibiotic-resistant bacteria.⁷⁴ The “superbug” antibiotic resistant bacteria such as MRSA has also appeared in wildlife populations.⁷⁵ A University of Arkansas study found that antibiotics used in broiler production included bamberycin, bacitracin, and virginiamycin.⁷⁶ Virginiamycin is a “highly important” class of antibiotics in human medicine.⁷⁷ According to the CDC, in humans, methicillin-resistant staphylococcus aureus (MRSA) can cause sepsis, pneumonia, and bloodstream infections, and MRSA is resistant to many different antibiotics.⁷⁸ The Agencies are aware of the issue and potential impacts of antibiotic resistance. For example, USDA has an Antimicrobial Resistance Action Plan, and the SBA and the Food & Drug Administration have been pursuing partnerships

may irritate the skin or eyes. Some pesticides may be carcinogens. Others may affect the hormone or endocrine system in the body”) and (stating that since pesticides are “designed to (in most cases) kill pests “[m]any pesticides can also pose risks to people.”).

⁶⁹ **Exhibit 11** - EPA 2004 CAFO Risk Management at 24; **Exhibit 60** - C.D. Church et al., *Occurrence of arsenic and phosphorus in ditch flow from litter-amended soils and barn areas*, 39 JOURNAL OF ENVIRONMENTAL QUALITY 2080-2088, 2080 (2010).

⁷⁰ **Exhibit 11**- EPA 2004 CAFO Risk Management at 38 (Hormones are often not fully metabolized during animal digestion, and if released into the environment can disturb natural hormone homeostasis in humans, fish, and wildlife by affecting mood, behavior, and reproduction).

⁷¹ *Id.* at 43.

⁷² **Exhibit 61** - R. Hirsch, Associate Director for Water, USGS, Statement before the Committee on Environment and Public Works Subcommittee on Transportation Safety, Infrastructure Security and Water Quality (Apr. 15, 2008).

⁷³ *See, e.g.*, **Exhibit 11** - EPA 2004 CAFO Risk Management at 37.

⁷⁴ *See, e.g.*, **Exhibit 62** - A. Batt et al., *Occurrence of sulfonamide antimicrobials in private water wells in Washington County, Idaho, USA*, 64(11) CHEMOSPHERE 1963-1971 (2006) (finding that even “low levels of antibiotics [in water resources] can favor the proliferation of antibiotic resistant bacteria.”). *See also* **Exhibit 63** - C.M. Lathers, *Clinical pharmacology of antimicrobial use in humans and animals*, 42 JOURNAL OF CLINICAL PHARMACOLOGY 587-600 (2002) (determining that, in addition to antibiotic resistance to antibiotics used in humans, “bacteria can develop cross-resistance between antibiotics used in veterinary medicine with those of similar structures that are used exclusively in human medicine.”); **Exhibit 64** - W. Witte, *Medical consequences of antibiotic use in agriculture*, 279 SCIENCE 996-997 (1998); **Exhibit 65** - USDA “Antimicrobial Resistance Action Plan” Figure B “Linked Human/Animal Interface” at 17 (June 2014) (USDA recognizing a link between the animal-human interface between antibiotic exposure levels and “[c]ontributions may consist of direct sources of resistant bacteria or resistance genes or indirect sources via vectors that serve to move resistant bacteria or deposit feces containing resistant bacteria in distant places.”).

⁷⁵ *See, e.g.*, **Exhibit 66** - Wardyn, S.E. “Methicillin-resistant *Staphylococcus aureus* in central Iowa wildlife.” JOURNAL OF WILDLIFE DISEASES. (Oct. 2012). 48(4):1069-73).

⁷⁶ **Exhibit 67** - U.S. Government Accounting Office Report GAO-04-490 “Antibiotic Resistance: Federal Agencies Need to Better Focus Efforts to Address Risk to Humans from Antibiotic Use in Animals” at 83 (Table 6) (April 2004).

⁷⁷ *Id.*

⁷⁸ **Exhibit 68**- Centers for Disease Control and Prevention, Methicillin-resistant *Staphylococcus aureus* (MRSA).

for small businesses working on antibiotic resistance issues for several years.⁷⁹ Even the poultry industry has recognized the issue and the need for action to minimize the development and transfer of antibiotic resistant bacteria.⁸⁰

FSA's parent agency, USDA, recognizes "[a]ntimicrobial resistance [as] one of the most serious health threats to both animals and humans;" that "the health of humans and animals is irrevocably linked and closely connected to the environment", and that "USDA is an important part of the solution" to develop surveillance, basic and applied research, education, outreach, mitigation strategies "and to assist animal producers to implement those strategies."⁸¹ USDA also recognizes that bacteria "can move from one setting to another, sometimes over large geographic distances and among different populations," and that "no place on Earth is excluded from [the people, animal, environment, bacteria cycle of interaction] as recent studies have demonstrated the presence of bacteria caught in wind streams at 30,000 feet, which likely moves bacteria across the globe."⁸²

The Agencies have not considered the cumulative environmental and human health impacts of greatly augmenting the quantity of poultry waste produced by facilities in this region, including its disposal and effects on the human environment. Nor have the Agencies considered *where* the waste will go. Using NRCS methodologies, Petitioners estimate that expansion of the poultry industry in Northeastern Arkansas to meet OMP and Peco's demands to approximately 1,000 broiler houses will produce between 7.5 and 15 billion cubic feet of broiler waste per year.⁸³

B. General Aerial Ecosystem impacts from Poultry Facilities

Industrial animal agriculture, including poultry facilities, emit several different types of toxic and conventional air pollutants, including greenhouse gasses methane and nitrous oxide, ammonia, hydrogen sulfide, particulate matter, ozone, and volatile organic compounds (VOCs), some of which are identified as hazardous air pollutants under the Clean Air Act. 42 U.S.C. § 7401 *et seq.* These air emissions have "direct" and "significant concerns" for human health and the environment.⁸⁴

For example, ammonia and hydrogen sulfide are pungent gasses that are emitted from animal waste and industrial animal waste management areas. Ammonia can travel hundreds of

⁷⁹ See, e.g., **Exhibit 65** - USDA Antimicrobial Resistance Action Plan; **Exhibit 69** - SBA ("Food & Drug Administration Safety and Innovation Act Small Business Report to Congress" under § 1128 of the Act at 16 (FDA and SBA exploring biomedical and medical device partnerships) (2013).

⁸⁰ See, e.g., **Exhibit 70** - The Poultry Site, "International Poultry Council to Work on Comprehensive Antibiotic Resistance Report." (Oct. 26, 2016).

⁸¹ **Exhibit 65** - USDA, "Antimicrobial Resistance Action Plan" at 1.

⁸² *Id.* at 3.

⁸³ If one OMP broiler house holds 30,400 birds, 1,000 broiler houses equal 30,400,000 birds in Northeastern Arkansas at any given time. Producers produce between four and eight flocks per year, meaning the region would see between 121.6 million and 243.2 million birds per year. According to NRCS AWMF Ch. 4 Table 4-11 a broiler produces 0.17 cubic feet of waste per day. This means the region could produce between 7.5 billion and 15 billion cubic feet of waste per year. See **Exhibit 33** - NRCS AWMFH Ch. 4 Table 4-11.

⁸⁴ **Exhibit 22** - U.S. GAO 2008 CAFO Report at 25 (listing studies directly linking AFO air pollutants to impacts on human health); **Exhibit 71** - National Research Council, "Final Report: Air Emissions from Animal Feeding Operations: Current Knowledge, Future Needs" at 59 Table 3-7 (Advance copy) (2002).

miles and impact the environment,⁸⁵ and is well known to threaten public health by increasing the risks of respiratory distress, eye and nose irritation, and other physical effects.⁸⁶ Combined with other CAFO gases, ammonia has also been linked with headaches, nausea, and increased incidence of infant mortality. Scientific studies have also shown that particulate matter pollution can cause and contribute to a variety of human health problems, including decreased lung function, asthma, chronic bronchitis, irregular heartbeat, heart attacks, and premature death.⁸⁷ Particulate matter is additionally responsible for haze and visibility impairment in many areas, and it contributes to acid rain.⁸⁸ Ozone is the primary constituent of smog.⁸⁹ It is a lung-searing chemical that can cause and contribute to a variety of health problems, including chest pain, breathing difficulty, bronchitis, emphysema, asthma, inflammation and scarring of lung tissue, and premature death.⁹⁰ Ozone also damages vegetation, leading to decreased agricultural yields and degradation of forested areas.⁹¹

Industrial animal operations also produce greenhouse gases, which FSA has a regulatory obligation to meaningfully analyze on a cumulative scale.⁹² Just one operation currently under review in Northeast Arkansas could generate in excess 15,000 metric tons of CO₂e per year.⁹³ If these estimates are correct, the nearly 1,000 broiler houses forecasted for the region may exceed 1,000,000 MT CO₂e per year.⁹⁴

Escalated greenhouse gas emissions in the region will increase the effects of climate change which will have significant effects on human health,⁹⁵ exacerbate land use changes,⁹⁶

⁸⁵ **Exhibit 19** – ATSDR Toxicological Profile for Ammonia at 2; **Exhibit 71** – National Research Council (2002) at 52.

⁸⁶ **Exhibit 19** - ATSDR Toxicological Profile for Ammonia.

⁸⁷ *See, e.g.,* **Exhibit 74** - U.S. EPA, POLICY ASSESSMENT FOR THE REVIEW OF THE PARTICULATE MATTER NATIONAL AMBIENT AIR QUALITY STANDARDS (April 2011) [hereinafter 2011 Policy Assessment for PM NAAQS]; **Exhibit 73** - National Ambient Air Quality Standards for Particulate Matter, Final Rule, 71 Fed. Reg. 61144 (Oct. 17, 2006) [hereinafter 2006 PM NAAQS]; **Exhibit 74** - Letter from Neil J. Carman, Sierra Club, to EPA Administrator Lisa Jackson, requesting that hydrogen sulfide be listed as a hazardous air pollutant under section 112 of the Clean Air Act, at 4 (Mar. 30, 2009).

⁸⁸ *See* **Exhibits 72, 73** - 2011 Policy Assessment for PM NAAQS and 2006 PM NAAQS.

⁸⁹ *See, e.g.,* **Exhibit 75** – National Ambient Air Quality Standards for Ozone, Proposed Rule 75 Fed. Reg. 2938 (Jan. 19, 2010); **Exhibit 76** - National Ambient Air Quality Standards for Ozone, Final Rule, 73 Fed. Reg. 16436 (Mar. 27, 2008) [hereinafter Ozone NAAQS].

⁹⁰ *See Id.*

⁹¹ *See Id.*

⁹² **Exhibit 2** - FSA’s 2016 Handbook at 2-9 (if a given action, being an individual farm/ranch “or aggregations of large CAFOs within a limited geographic proximity,” is expected to reach or surpass 25,000 metric tons of GHGs, a GHG emission evaluation should occur.)

⁹³ *See* **Exhibit 34** - ALDF Comments at 9-14.

⁹⁴ *See* **Exhibit 35** - Significant New Information Letter # 1 at 4-7.

⁹⁵ **Exhibit 77** – Carter, L. et al., Southeast and Caribbean: Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program. Ch. 17 at 403-404, n. 43-46 (2014) (“increasing temperatures have the potential to result in an expanded region with more favorable conditions for transmission” vector-borne and zoonotic diseases); **Exhibit 78** - EPA, “What Climate Change Means for Arkansas”, EPA-430-F-16-006 at 2 (August 2016) (higher temperatures put public at risk); **Exhibit 79** – Southern Climate Impacts Planning Program, “Climate Change in Arkansas” at 2 (undated) (heat deaths have tripled in last 20 years, waterborne illnesses expected to increase); **Exhibit 80** – EPA, “Climate Change Impacts in the Southeast” (ground-level ozone expected to increase and may increase likelihood of death, higher temperatures will increase heat stress, respiratory illnesses, heat-related deaths, warmer waters expected to increase waterborne bacteria).

⁹⁶ **Exhibit 77** – National Climate Assessment, Ch. 17 at 404, n. 54; **Exhibit 80** – EPA “Climate Change Impacts in the Southeast” at 8.

further habitat and biodiversity loss,⁹⁷ even to the point of extinction.⁹⁸ It can also cause significant economic impacts for poultry producers and other industries in Arkansas by way of extreme weather events by affecting livestock health, production cycles.⁹⁹ USDA recognizes that climate change is occurring, and that it “very likely” exacerbates these effects.¹⁰⁰ These and other impacts are common factors to the facilities in Northeastern Arkansas applying for loan guarantees from the FSA and SBA must be analyzed cumulatively.

C. *Environmental Factors Unique to Northeastern Arkansas*

Protected lands and landscape:¹⁰¹ Northeastern Arkansas is located predominantly in the Ozark Mountain and Plateau region, and includes a portion of the Ouchita Mountains. Northeastern Arkansas is a pristine and ecologically sensitive region that to date has been largely undisturbed by industrial animal agriculture and its environmental and human health effects. Northeastern Arkansas is home to numerous wildlife management areas, parks, and other protected public lands. It encompasses an impressive and diverse range of landscapes and ecosystems, including lowland forests, rolling forested hills, rugged mountainous areas, alluvial plains, deltas, and river-bottom, rich agricultural lands, and the Grand Prairie region. It is also known for some of the best trout and bass fishing in the U.S.

⁹⁷ **Exhibit 81** - USGS, “Assessing Climate-Sensitive Ecosystems in the Southeastern United States” Open File Report 2016-1073 at 71-72 (2016) (systems already at risk from human land-use change, unique ecosystems may make it difficult for species to escape or adapt to the effects of climate change).

⁹⁸ See, e.g., **Exhibit 82** - USGS, Professional Paper 1828 “Insular Ecosystems of the Southeastern United States: A Regional Synthesis to Support Biodiversity Conservation in a Changing Climate” at 119 (2016) (“Inadequate protection of terrestrial habitat for wetland-breeding amphibians is predicted to reduce amphibian biodiversity and to result in localized extinction for vulnerable species.”).

⁹⁹ See, e.g., **Exhibit 83** – National Assessment Synthesis Team, U.S. Global Change Research Program, “Climate Change Impacts On the United States, The Potential Consequences of Climate Variability and Change” at 205 (2001); **Exhibit 77** - National Climate Assessment Report, Ch.17 (Arkansas is expected to suffer from decreased water availability, land-use change, and increased weather events, which can make bird health more difficult and expensive to maintain) and 404 at n. 56-58 (livestock yields expected to decline due to higher temperatures); **Exhibit 84** - Chengsheng Jiang, et al., “Climate Change, Extreme Events, and Increased Risk of Salmonellosis in Maryland, USA: Evidence for Coastal Vulnerability,” *Environmental International* 83 (2015) 58-62 (Extreme heat and precipitation exacerbate salmonella and campylobacter contamination, transmission, and infection associated with broiler operations); **Exhibit 85** - Sutyajeet Soneja, et al., “Extreme Precipitation Events and Increased Risk of Campylobacteriosis in Maryland, U.S.A.,” *Environmental Research* 149 (2016) 216-221 (same); **Exhibit 86** - Kristi S. Shaw, et al., “Presence of Animal Feeding Operations and Community Socioeconomic Factors Impact Salmonellosis Incidence Rates: An Ecological Analysis Using Data from the Foodborne Diseases Activities Surveillance Network (FoodNet) (2004-2010),” *Environmental Research* 150 (2016) 166-172 (broiler house operators will bear the cost of controlling outbreaks); **Exhibit 87** - Rachel E. Rosenberg Goldstein, et al., “Association Between Community Socioeconomic Factors, Animal Feeding Operations, and Campylobacteriosis Incidence Rates: Foodborne Diseases Active Surveillance Network (FoodNet), (2004-2010)” (2015).

¹⁰⁰ See, e.g., **Exhibit 88** - USDA “The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States.” U.S. Climate Change Science Program Report to Congress at § 2 (May 2008) (concluding the following are “very likely”: (1) climate changes – temperature increases, increasing CO2 levels, and altered patterns of precipitation – are already affecting U.S. water resources, agriculture, land resources, and biodiversity, (2) climate change will continue to have significant effects on these resources over the next few decades and beyond, (3) many other stresses and disturbances are also affect these resources and interact with climate change, (4) climate change impacts on ecosystems will affect the services that ecosystems provide such as cleaning water and removing carbon from the atmosphere).

¹⁰¹ The lands and landscape discussed herein is for general descriptive purposes only and has been culled from a variety of resources from several county, Central Arkansas Library System (e.g. www.encyclopediaofarkansas.net), and U.S. Fish and Wildlife descriptions each of the 26 counties. Petitioners can provide weblinks upon request.

Karst topography and caves: Much of the region is typified by porous karst topography, which exacerbates the impacts of the discharge of land-based environmental pollutants into ground and surface waters, including as a result of poor poultry waste management and application practices.¹⁰² Natural erosion of karst geological features has led to a prominent distribution of sink holes and caves in this region, including Crystal River Cave, Blowing Cave, Blanchard Springs Caverns, Hurricane River Cave, and Bull Shoals Caverns.¹⁰³ The region also includes Hell Creek Cave, which is home to one of only two populations of Cave Crayfish in Arkansas. The Cave Crayfish is listed as endangered under the ESA.¹⁰⁴ Additionally, caves provide important habitat for several species of endangered bats found in the Northeastern Arkansas Region.¹⁰⁵

Waterways: Northeastern Arkansas is also home to a vast array of hydrologically connected and environmentally delicate riparian corridors and waterbodies that course throughout Northeastern Arkansas. The waterways provide incomparable wildlife habitat, recreational opportunities, and drinking water to the region. All of these waterways drain into the Mississippi River, which forms the region's eastern boundary. The Northeastern Arkansas region encompasses waterways including North Sylamore Creek, designated under the National Wild and Scenic Rivers Act, Buffalo National River and Park, the pristine Strawberry River, Blanchard Springs, South Sylamore Creek, the White River, the Black River, the Little Red River, the Arkansas River, the Cache River, the L'Anguille River, the St. Francis River, the Spring River, the Bland River, and the Little River, as well as Crooked Creek and Blanchard Springs, the DeView and Roc Bayous, Mallard Lake, Lake Frierson, Lake Hubble, Horeshoe Lake, Bull Shoals Lake, Norfolk Lake, and Greens Ferry Lake, diverse swamps, wetlands and rich alluvial plains. The Strawberry River Watershed, which crosses Fulton, Izard, Sharp, and Lawrence counties, is an "Extraordinary Resource Water" and a "Natural and Scenic Waterway" under Arkansas Pollution Control and Ecology Commission Regulation 2 Appendix D, and in 2008 the state listed the river as impaired on its 303(d) list for siltation / turbidity and pathogens due to agricultural activities in the watershed.¹⁰⁶ Arkansas DEQ has already set total maximum daily loads (TMDLs) for turbidity fecal coliform for several Northeastern Arkansas rivers.¹⁰⁷ Northeastern Arkansas' waterways are very important for wildlife. For example, the White and Cache river floodplains contain the most important breeding areas for mallard ducks in the world and as much as 10% of the continent's population winters in this area.¹⁰⁸ About 2/3

¹⁰² **Exhibit 89** – FWS, Karst Consultation Area Map, Arkansas Ecological Services Field Office; **Exhibit 24 - 25** (Haggard (2005), Peterson (2005) (discussing discharge of animal waste making its way through Karst into waters); **Exhibit 90** – USGS, Karst Interest Group Proceedings, Fayetteville, Arkansas (April 26-29, 2011), Scientific Investigations Report 2011-5031 at 75, Paper by Laincz, J. "Investigation of Nitrate Processing in the Interflow Zone of Mantled Karst, Northwestern Arkansas" ("unsurprising" that Arkansas poultry areas with karst report nitrate contamination).

¹⁰³ See e.g., **Exhibit 91**- Arkansas Geological Survey "Arkansas Geology: Karst and Caverns" (2014).

¹⁰⁴ **Exhibit 92** – FWS, Recovery Plan for the Cave Crayfish, (September 26, 1988); **Exhibit 93** - Final Rule "Determination of Endangered Status for the Cave Crayfish *Cambarus aculabrum*," 58 Fed. Reg. 25742 at 25745 (April 27, 1993); see also n. 101 supra (referring to Encyclopedia of Arkansas History & Culture, Stone County.

¹⁰⁵ See **Exhibit 94** - FWS, "Arkansas Federally Endangered, Threatened, and Candidate Species" (undated).

¹⁰⁶ See **Exhibit 96** - NRCS Arkansas, "2016 Middle Strawberry River MRBI Project" (2016).

¹⁰⁷ See, e.g., **Exhibit 95** - ADEQ Total Maximum Daily Load download.

¹⁰⁸ **Exhibit 97** - EPA, "Climate Change and Arkansas" EPA 236-F-98-007d at 4 (September 1998).

of the runoff from the state flows through the Mississippi River through the Arkansas, White, and St. Francis rivers.¹⁰⁹

Wildlife Management Areas: Northeastern Arkansas contains a plentitude of pristine lands and waters designated as wildlife management areas (WMAs) and refuges, as well as other public lands upon which sensitive species depend and upon which outdoor enthusiasts, hunters, and anglers rely for recreation and aesthetic enjoyment of wildlife and nature. These include the Jim Kress WMA, the St. Francis Sunken Lands WMA, the Bayou DeView State WMA, Henry Gray Hurricane Lake WMA, Rex Hancock-Black Swamp WMA, Steven N. Wilson Raft Creek Bottoms WMA, Dagmar State Wildlife Management Area, Gulf Mountain WMA, Mammoth Spring State Park, Blanchard Springs Recreation Complex, Bald Knob National Wildlife Refuge, Dale Bumpers White River National Wildlife Refuge, and St. Francis National Forest.

D. Impacts to Endangered and Threatened Species from Poultry Facilities

Industrial animal agricultural pollution can impact both aquatic and terrestrial health and biodiversity. Confinement facilities primarily impact aquatic biodiversity by degrading habitat, reducing species fertility, causing species mutation, increased mortality; changes in natural food resources; and expansion of nonnative species, often at the expense of native populations.¹¹⁰ Animal agricultural pollution and land use can also impact terrestrial biodiversity by restricting genetic diversity; limiting or eliminating habitat, including forest, grassland, and wetland habitat;¹¹¹ “increase[ing] vulnerability to large-scale damage by pests;”¹¹² and introducing invasive species, including the livestock themselves.¹¹³ Airborne emissions from these facilities can further impact both terrestrial and aquatic biodiversity by harming wildlife health and population numbers, and by changing species migration patterns, altering vegetative growth rates, and causing species extinction through climate change.¹¹⁴

The FWS has designated critical habitat for the Rabbitsfoot mussel in fourteen Northeastern Arkansas counties (80 Fed. Reg. 24692 (April 30, 2015)), and for the Yellowcheek Darter in four Northeastern Arkansas counties (77 Fed. Reg. 30988 (May 24, 2012)). Northeastern Arkansas is home to over twenty species federally listed as endangered or threatened under ESA, including:

- Four species of bats: The Indiana Bat, the Gray Bat, the Ozark Big-eared Bat, and the Northern Long-eared Bat;

¹⁰⁹ Id. at 3.

¹¹⁰ See **Exhibit 98** - Pew Commission, “Environmental Impact of Industrial Farm Animal Production” at 30 (2008) (“Typically, biodiversity loss is caused by a combination of various processes of environmental degradation.”); **Exhibit 99** – United Nations Food and Agriculture Organization, *Livestock’s Long Shadow: Environmental Issues and Options* at 273, 196 (2006) (“Invasive species can affect native species directly by eating them competing with them, and introducing pathogens or parasites that sicken or kill them or, indirectly, by destroying or degrading their habitat. Invasive alien species have altered evolutionary trajectories and disrupted many community and ecosystem processes.”); at 209 (“Over the past four decades, pollution has emerged as one of the most important drivers of ecosystem change in terrestrial, freshwater and coastal ecosystems.”).

¹¹¹ See Id. at 187 (“Habitat destruction, fragmentation and degradation are considered the major category of threat to global biodiversity.”).

¹¹² **Exhibit 98** - Pew Environmental Impacts at 30.

¹¹³ See **Exhibit 99** - *Livestock’s Long Shadow* at 197.

¹¹⁴ See Id. at 187, 195-196.

- Eight species of freshwater mussels: the Pink Mucket, the Scaleshell Mussel, the Rabbitsfoot, the Speckled Pocketbook, the Fat Pocketbook, the Curtis Pearlymussel, the Snuffbox Mussel, and the Turgid Blossom;
- Four bird species: the Piping Plover, the Ivory-billed Woodpecker, the Red-Cockaded Woodpecker, and the Least Tern;
- Three species of plants: the Running Buffalo Clover, the Missouri Bladderpod, and the Pondberry;
- Two species of fish: the Yellowcheek Darter¹¹⁵ and the Pallid Sturgeon;
- Cave Crayfish; and
- Ozark Hellbender.

In addition to these ESA-protected species, Northeastern Arkansas also contains other species of “conservation concern” under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) / International Union for Conservation of Nature (IUCN) such as the Strawberry Darter.¹¹⁶

Each of these species is sensitive to and is likely to be affected, endangered, and jeopardized by the environmental effects associated with the construction and operation of industrial poultry facilities in its vicinity, both individually and cumulatively. None of the EAs address potential impacts on of these species’ habitats and the effects, yet many of these species and ecosystems are already in sensitive situations. Primarily the effects to these species stem from land clearing to construct CAFOs, the operation of the CAFOs, CAFO waste management and land applications, and other effects including stream sedimentation, nutrient runoff, vectoring from CAFOs to wildlife through insects and rodents, and greenhouse gas emissions. *See, e.g.*, Appendix A “Summary of Examples of Poultry Operations’ Effects on Protected Species in Northeastern Arkansas” attached hereto briefly listing some of the effects poultry facilities can have on bats, birds, plants, fish, mussels, and special species to the Northeastern Arkansas Region like the Hellbender and the Cave Crayfish.

E. Environmental & Economic Injustice and Industrial Animal Operations

The burden of living with and alongside animal confinement operations is born disproportionately by underprivileged communities, often communities of color.¹¹⁷ Studies show

¹¹⁵ Agriculture is listed as a threat to Yellowcheek darter habitat in the upper Little Red River Watershed. **Exhibit 100** - FWS, Recovery Outline, Yellowcheek Darter at 6 (August 2011).

¹¹⁶ **Exhibit 101** - IUCN, Red List of Threatened Species, *Etheostoma fragi*, Strawberry Darter (2013).

¹¹⁷ *See, e.g.*, **Exhibit 102** - R.D. Bullard & B.H Wright, *Environmental justice for all: community perspectives on health and research needs*, 9 TOXICOL. IND. HEALTH 821-841 (1993); **Exhibit 103** - A.E. Ladd and B. Edwards, *Corporate Swine and Capitalistic Pigs: A Decade of Environmental Injustice and Protest in North Carolina*, 29 SOCIAL JUSTICE 26-46 (2002); **Exhibit 104** - M.C. Mirabelli et al., *Asthma symptoms among adolescents who attend public schools that are located near confined swine feeding operations*, 118(1) PEDIATRICS e66-e75 (2006); **Exhibit 105** - M.C. Mirabelli et al., *Race, poverty, and potential exposure of middle school students to air emissions from confined swine feeding operations*, 114 ENVIRONMENTAL HEALTH PERSPECTIVES 591-596 (2006); **Exhibit 106** - NATIONAL RESEARCH COUNCIL, *TOWARD ENVIRONMENTAL JUSTICE: RESEARCH, EDUCATION, AND HEALTH POLICY NEEDS* (National Academy Press 1999); **Exhibit 107** - M. Tajik et al., *Impact of odor from industrial hog operations on daily living activities*, 18(2) NEW SOLUTIONS 193-205 (2008); **Exhibit 108** - S. Wilson et al., *Environmental injustice and the Mississippi hog industry*, 110 (supp. 2) ENVIRONMENTAL HEALTH PERSPECTIVES 195-201 (2002); **Exhibit 109** - S. Wing et al., *Environmental injustice in North Carolina’s hog industry*, 108 ENVIRONMENTAL HEALTH PERSPECTIVES 233-238 (2000).

that “[l]ow income communities and populations that experience institutional discrimination based on race have higher susceptibilities to CAFO impacts due to poor housing, low income, poor health status, and lack of access to medical care.”¹¹⁸ Due to impairment to air and water resources, impacted communities experience injury to human health, as well as losses of the “beneficial use” and “quiet enjoyment” of their property.¹¹⁹

According to John Ikerd, a University of Missouri Agricultural Economics professor, virtually every argument made in support of industrial animal agriculture is based upon its supposed economic benefits to rural communities.¹²⁰ CAFOs, however, consistently fail to live up to their economic promises.¹²¹ According to USDA’s Economic Research Service (USDA ERS), as “farms” in the United States have become larger and fewer through industrialization, small family farms go out of business.¹²² Rural Northeastern Arkansas is currently populated in large part by family farmers who rely on traditional agriculture, livestock rearing, and associated values of ecological stewardship for their livelihoods and wellbeing. The influx of hundreds of industrial poultry facilities will dramatically and irreversibly alter the Region.

FSA’s 2016 Handbook states “[t]here is no lead agency for coordination or consultation on socioeconomic impacts or environmental justice,” and that “it has been determined that FSA actions do not involve activities with potential to disproportionately or adversely affect or displace low income or minority groups.” 2016 FSA Handbook at § 57(B) and (D). Such a blanket approach ignores the known effects of confinement operations, and ignores Executive Order 12898 (1994), which orders federal agencies to adopt strategies to address environmental justice concerns. In the EAs Petitioners have reviewed that pre-date the FSA 2016 Handbook, almost every one claims that while a percentage of low income or minority population exists nearby to a proposed CAFO, it is not a high enough percentage to merit consideration. Not only is that assertion unfounded on an individual operational level, it fails on all levels to analyze the cumulative effects of these actions.

F. Animal welfare impacts

Under NEPA, the human environment includes the physical environment, which includes wild and domestic animals. This also includes agriculture and agricultural animal health. ALDF Comments at 5-6; *see also Middle Rio Grande Conservancy District v. Norton*, 294 F.3d 1220, 1223-24 (10th Cir. 2002); *Stauber v. Shalala*, 895 F. Supp. 1178 (W.D. Wis. 1995). Animal welfare is an important social and economic consideration, especially at industrial animal agriculture facilities. The public has an aesthetic interest in the humane treatment of animals at poultry facilities as evidenced by (among other indicia), its choosing humanely and sustainably

¹¹⁸ **Exhibit 110** - K.J. Donham et al., *Community Health and Socioeconomic Issues Surrounding Concentrated Animal Feeding Operations*, 115(2) ENVIRONMENTAL HEALTH PERSPECTIVES 317-320, 318 (2007).

¹¹⁹ **Exhibit 107** - M. Tajik (2008) at 201. Also, several studies have been done on the state of North Carolina and environmental justice issues, where the siting of hog and poultry operations has resulted in alarming problems for North Carolinians ranging from hundreds of waste pits being sited near schools, churches, public water wells, and on floodplains. *See Exhibit 111* - Environmental Working Group, “Exposing Fields of Filth” (Jun. 21, 2016).

¹²⁰ **Exhibit 112** - Ikerd, John *The Economics of CAFOs & Sustainable Alternatives* (2009).

¹²¹ *Id.*

¹²² *See, e.g., Exhibit 113* - Edwards B., Ladd, A.E. “Environmental justice, swine production, and farm loss in North Carolina.” *SOCIOL. SPECTR.* 20(3) 263-290 (2000).

raised foods increasingly over industrial “efficient” meat production.¹²³ Thus the Agencies should evaluate the federal financial assistance requests, both in the purpose and need analyses under NEPA and the cumulative impacts analyses, in light of the public’s concerns with the true costs of “cheap meat”.

A food production system that utilizes intensive confinement and six or seven “batches” of hundreds of thousands of birds per batch per facility, raises grave animal welfare concerns. Most broiler chickens spend their entire lives in warehouse-like sheds, stocked in such high densities that they cannot exert their natural behaviors of nesting, roosting, or even flapping their wings. For example, the Tracy Operation CAFO proposes to give each bird 100.8 square inches of living space. For comparison, a sheet of paper provides 93.5 inches of space.¹²⁴ Furthermore, the high levels of ammonia in broiler houses limit the chicken’s sense of smell, damaging their lungs and rendering them unable to perceive their environment.

Chicken houses are usually windowless, with temperature maintained through forced ventilation.¹²⁵ They are barren except for sparse amounts of litter material on the floors and rows of feeders and drinkers. These sheds provide environments that only frustrate chickens, decreasing their welfare and depriving them of natural inclinations. Many chickens will die from disease and stress related to these overcrowded conditions, however, economies of scale continue to encourage the use of these facilities.¹²⁶

Another burden faced by these chickens involves genetic vulnerabilities arising from selective breeding. While increasing productivity, selective breeding severely jeopardizes birds’ welfare. At six weeks of age, most broiler chickens have such difficulty supporting their abnormal body weights that they spend almost 90 percent of their time lying down, usually in their own waste.¹²⁷ Selective breeding can also lead to lameness, respiratory disease, big liver spleen disease, weakened immune systems, ascites, and acute death syndrome.¹²⁸ Ascites, a condition in which the heart and lungs do not have the capacity to support an overgrown body, is common in broiler chickens.¹²⁹

Once chickens reach market weight, they are caught and transported to slaughter. Both events are traumatic for chickens. Up to 1,500 birds per hour are caught with methods that often cause severe injury. During transport, the birds are often denied food, water, and shelter from the elements. Many chickens die during both of these processes. The slaughter process itself is no better; humane slaughter laws do not protect chickens (48 U.S.C. § 1902(a)), and many are killed without being stunned first through an electric water bath, or are boiled alive when stunning methods do not work.¹³⁰

¹²⁴ See **Exhibit 34** - ALDF Comments at 3.

¹²⁵ **Exhibit 114** – American Society for the Prevention of Cruelty to Animals (ASPCA), “A Growing Problem: Selective Breeding in the Chicken Industry: The Case for Slower Growth” (Nov. 2015).

¹²⁶ Id.

¹²⁷ Id.

¹²⁸ Id.

¹²⁹ Id.

¹³⁰ **Exhibit 34** - ALDF Comments at 4-5.

Reducing crowded conditions on poultry facilities is a basic way to increase animal welfare, protect environmental health, and protect human health (see ALDF Comments at 5 discussing alternatives). Yet none of the approximately 100 EAs consider any single meaningful alternative to the proposed plans.

III. A PEIS will Support Agencies' Compliance with their Legal Obligations

As discussed in detail above, continued reliance on individual EAs for evaluating these related projects is insufficient, especially with regard to shared and cumulative impacts. The Agencies' current approach – only looking at each facility individually and individually and narrowly considering the impacts to the immediately surrounding area - falls far short of a meaningful comprehensive environmental review.

In the alternative, a PEIS would allow the Agencies to meaningfully analyze the large number of industrial poultry facilities in Northeastern Arkansas seeking federal financial assistance and to efficiently coordinate federal resources to fulfill NEPA responsibilities. In fact, proposed FSA actions that are expected to have a “significant effect” on the human environment demand such a PEIS. 7 C.F.R. § 799.50(a); see also 7 C.F.R. § 799.8(a); 40 C.F.R. § 1508.27 (a “significant effect” analysis includes consideration of a proposed action’s “potential effects in the context of society as a whole, the affected region and interests, the locality, and the intensity of the potential impact.”) An EIS is “normally” required for FSA proposed actions that include “[b]road Federal assistance programs administered by FSA, involving significant federal financial assistance or payments to program participants, that may have significant cumulative impacts on the human environment,” 7 C.F.R. § 799.51(a)(2)), and “[o]ngoing programs that have been found through previous environmental analyses to have major environmental concerns.” 7 C.F.R. § 799.51(a)(3). Prior FSA loans to concentrated animal feeding operations have caused major environmental concerns. *See, e.g., Buffalo River Watershed Alliance et al. v. Department of Agriculture*, Order, ECF No. 58, No. 4:13-cv-00450-DPM (Dec. 2, 2014).

Reviewing one action at a time – potentially hundreds of times over across approximately twenty-six county offices - is a repetitive ineffective, and wasteful use of governmental resources. A PEIS is the starting point for analyzing direct, indirect, and cumulative impacts across the Region. It will allow the Agencies to substantially reduce repetitive analyses and provide a better-defined and more expeditious path towards decision-making. *See* CEQ 2014 Programmatic Guidance at 5-6.

Additionally, the expansion in industrial poultry facilities in Northeastern Arkansas involves at least three (3) federal agencies - FSA, SBA, and the Fish & Wildlife Service, as well as information provided by state agencies. In situations where multiple agencies are involved and must review, consult, and approve a decision – or in this case, hundreds of decisions - NEPA favors a PEIS to ensure inter-agency coordination, communication, meaningful public participation across common area, and the establishment of efficient decision-making processes. *See* CEQ 1997 Cumulative Effects Guidance at 20 (success of agency action enhanced by coordination with other agencies and “at a minimum” “ongoing periodic consultation should occur early in the scoping process whenever there are significant cumulative effects issues.”).

CONCLUSION

For the reasons discussed above, Petitioners request that FSA and SBA act immediately to meaningfully assess and comprehensively review the similar and cumulative impacts under NEPA from the expansion of industrial poultry confinement facilities in Northeastern Arkansas as a result of connected demand from OMP and Peco by conducting a programmatic EIS and tiering all individual funding requests.

Because the federal environmental review process and the state permitting processes are ongoing, and because FSA is to complete its environmental reviews within sixty days and distribute funds fifteen days after approval, Petitioners ask the Agencies to respond to this Petition as soon as possible or by March 1, 2017. Should you wish to discuss this matter, please contact Elisabeth Holmes, Blue River Law, P.C., at eli.blueriverlaw@gmail.com or at (541) 870-7722.

Respectfully Submitted by Petitioners
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Enclosures: Appendix A
Exhibits 1 - 114
cc: Petitioners
Supporting Organizations

SUPPORTING ORGANIZATIONS

The following organizations support the efforts of this Petition:

Friends of the North Fork and White Rivers (Friends) is an Arkansas a 501(c)(3) nonprofit organization dedicated to working with individuals, businesses, watershed groups and government agencies to assure clean, healthy water in the North Fork and middle White River watersheds for generations to come. Our five county focus includes counties in the petition, and Friends works to address the cause, prevention and remediation of excess nutrient and pathogenic pollution of our waters. Friends advocates for the setting and enforcement of healthy water standards. *Sam Cooke, President.*

Ozark River Stewards is an Arkansas organization. Ozark River Stewards was established by concerned citizens in 2013 to advocate for the protection and preservation of Ozark area waterways, their ecosystems and all forms of life that depend on their water quality for their existence. We organize educational events and presentations, coordinate actions to raise public awareness of threats to waterways, host events to engage people in advocacy efforts, and publish an e-newsletter that goes out to 400+ people who requested to be kept informed on our efforts. *Lin Wellford, Action and Oversight Coordinator.*

CERTIFICATE OF SERVICE

The foregoing Petition, Appendix, Exhibit List, and Exhibits were submitted on January 17, 2017 to the following:

<u>Via Federal Express</u> United States Department of Agriculture Administrator 1400 Independence Avenue, S.W. Washington D.C. 20250	<u>Via Federal Express</u> United States Small Business Administration Maria Contreras-Sweet, Administrator 409 3rd Street, S.W. Washington, D.C. 20416
<u>Via Email val.dolcini@wdc.usda.gov</u> <i>(Petition and Exhibit list only)</i> <u>and Federal Express (entire filing)</u> United States Department of Agriculture Farm Service Agency Val Dolcini, Farm Service Agency Administrator 1400 Independence Avenue, S.W. Washington D.C. 20250	

/s/ Elisabeth A. Holmes

Elisabeth Holmes
Blue River Law, P.C.
*Attorney for Arkansas Rights Koalition, Animal Legal Defense
Fund, and the Center for Biological Diversity*