

BUFFALO RIVER COALITION

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**Comments Re: Permit Number 3540-WR-7; AFIN 51-00020,
Submitted at Public Hearing, Jasper, AR, April 11, 2016**

The Buffalo River Coalition, which includes the Buffalo River Watershed Alliance, the Ozark Society, the Arkansas Canoe Club and the National Parks Conservation Association, respectfully submits the following comments to ADEQ in regard to the draft approval of Regulation 5 Permit 3540-WR-7 to convert from storage and application of waste from EC Farms to only land application of swine waste from C&H Hog Farms, a facility operating under a Regulation 6, NPDES General permit.

At first glance, this modification to add 36 more fields for C&H waste appears to be a good one – move waste further from the Buffalo, apply it mostly onto upland soils, increasing the overall field acreage and presumably lowering the application rate per acre. But looks can be deceiving, especially when one digs a little deeper and looks beneath the surface. Dilution is not the solution to pollution in this case.

The Buffalo River Coalition opposes the approval of this modification by EC Farms for the following reasons:

Permit and Regulatory Issues

Improper permitting

We contend that by allowing this questionable series of ownership transfers and modifications, ADEQ is circumventing the proper enforcement of state regulations by allowing C&H Hog Farms to add new acreage without modifying its own Nutrient Management Plan, thereby avoiding a reopening of its permit to public scrutiny. These maneuvers are a permitting scheme which should not be allowed.

Owner/Operator Issues

According to the most recent Newton County records, the current owner of C&H Hog Farm (NPDES Permit #ARG590001), is the actual owner of the property shown on the permit as the physical location of EC Farms. The permittee of 3540-WR-6 (Primary SIC: 0213-HOGS, Primary NAICS: 11221-Hog and Pig Farming) shown as the owner/operator of EC Farms, neither owns

nor operates any part of the operation, other than perhaps the erroneously issued permit itself. As further explained below, due to a chain of errors allowed by ADEQ, permit **3540-WR-6** and **all leases associated with it should be voided, and this modification of permit 3540-WR-7 should be denied.**

Acreage added prior to closure

On April 1, 2012 C&C Hog Barn, Permit **3540-WR-5**, AFIN 00020, a Regulation 5 Animal Feeding Operation with land use agreements for the application of its own hog waste, requested a minor modification to add 481.6 acres of land application area to its existing leased acreage. There was no increase in the number of animals in confinement. ADEQ approved the modification.

According to C&C Annual Reports, the facility was depopulated of swine sometime between May and November, 2013, the ponds were empty in November and the facility no longer functioned as an animal feeding operation. No waste was applied in 2014. Previous Annual Reports show that only a small part of the total leased acreage was actually used for waste application. Why was acreage added when the existing acreage was not being fully utilized and closure was imminent?

Certification of Closure

On March 17th, 2014, C&C Hog Barn, permit 3540-WR-5, received a certification of closure by NRCS and all operations ceased. The facility had been depopulated and waste storage ponds were filled. There was no physical "operation" remaining at the time of closure, however, owners chose not to terminate or void the permit and the permit remained active (although several required annual reports were not submitted to ADEQ in a timely manner).

Transfer of Ownership

On February 27th, 2015, permit 3540-WR-5 was transferred from C&C Hog Barn to EC Farms and on March 1, 2015 EC Farms was assigned permit **#3540-WR-6**, a no-discharge permit to "store and apply swine waste" even though there was no waste or waste storage facilities. According to public records there was no corresponding change in ownership of the property attached to the permit, which still belongs to the owners of C&H, and is still provided as collateral for a loan to C&H Hog Farms. According to records, the site includes vacant or "Flat" buildings with no personal property attached. EC Farms does not hold a deed to the property specified in the permit nor is there record of a lease for said property. EC Farms is not the "owner/operator" of a "facility" as stated in the permit. There is no facility.

Invalid Land Use Contracts

Land Use Contracts, which were updated in 2015 following transfer of ownership, "...allow EC Farms to land apply waste from his/her operation located in Newton County". EC Farms has no "operation", no land, and no waste of its own to apply. These Contracts do not allow for the application of waste from C&H or any other facility and thus are null and void.

Permitting Errors

We contend that ADEQ erred in allowing permit 3540-WR-5 to be transferred as a Regulation 5 permit to an individual who owned no facility and had no intention of operating a Regulation 5 animal feeding operation, or storing and land applying waste from the non-existent facility. The permit transfer form is inaccurate in this regard: Per Section II, EC Farms is not "*the owner of the facility*"

https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/3540-WR-6_Permit%20Transfer%20Form_20150211.pdf

Further, we contend that **permit #3540-WR-6 should be null and void** as well as any and all land use contracts associated with it. If an individual wants to receive waste from C & H Hog Farm, he/she must apply for a separate land application permit, or C&H must add them as lessors of acreage added to its own permit.

Modification as Land Application Site Only

On August 5, 2015, EC Farms submitted a Site Management Plan in support of a permit modification to "*convert from storage and land application of swine waste from EC Farms to only land application of swine waste from C&H Hog Farms..*"

https://www.adeg.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/3540-WR-7_Site%20Management%20Plan_20150727.pdf

On March 9, 2016, ADEQ granted draft approval to this modification request and assigned EC Farms permit **#3540-WR-7**. The modification, with conditions, was opened for public comment, ending with a public hearing on April 11, 2016.

We contend that **ADEQ must deny approval of this modification** because:

1. The ownership transfer under 3540-WR-5 was improper as noted above;
2. The leases included in the Site Management Plan specify that "*EC Farms will land apply swine waste from his /her operation...*". EC Farms does not produce any waste and does not have an "operation" therefore the leases are not valid.

3. A separate permit is required per Regulation 5.601, Permit For Land Application Site Only which states (emphasis added):

"A separate permit may be issued for a land application site if the operator submits an application which includes a site management plan for the land application site and a plan detailing nutrient application rates; the timing of waste application with respect to the nutrient uptake cycle of the vegetation found on the land application site(s); and waste storage and distribution method(s) prepared in accordance with the requirements of this regulation. The applicant for such a permit shall notify the Department of any contractual agreement for the use of the land as a land application site by submitting a copy of the agreement. "

This regulation, which spells out the requirements for a separate permit, was clearly intended to address the situation for which EC Farms is instead seeking a permit modification. A modification, major or minor, is not appropriate and instead, as Regulation 5.601 states, ADEQ should have required EC Farms to request a *separate* permit for land application sites only. However, a separate permit would be *de facto* a new permit, and Regulation 5.901 B) states: *"The Director shall not issue a permit pursuant to Regulation No. 5 for a Confined Animal Operation in the Buffalo National River Watershed ..."* Under the current moratorium on any new swine CAFO permits in the Buffalo River Watershed, issuing a new permit to EC Farms is prohibited.

Nutrient Management Issues

A) The National Park Service has requested that Big Creek be added to the 303(d) list of impaired streams due to low dissolved oxygen based on measurements taken by the USGS station near the mouth of Big Creek at Carver. Big Creek is composed of two large branches. The main fork where C&H is located is showing evidence of impairment by e-coli. This evidence is found using the Big Creek Research and Extension Team's own data. USGS data shows impairment for dissolved oxygen. The Left Fork of Big Creek does not have specific science available showing that it is impaired, but a visual inspection shows that there is evidence of nutrient loading as seen in this photo showing abundant algae mats.



Some of the largest spreading fields to be used by EC Farms are directly adjacent to the Left Fork of Big Creek. ADEQ has assured the public as well as the state legislature that it fully intends to address Big Creek pollution. According to recent soil tests, many of the C&H spreading fields are now showing "above optimum" levels of phosphorus, which will likely continue to be a potential source of contamination of the main fork of Big Creek for the foreseeable future even if spreading is discontinued. By now allowing waste application in the Left Fork of Big Creek, ADEQ is not demonstrating good faith in mitigating pollutants detected at Carver. These conditions are certain to deteriorate if ADEQ allows permit 3540-WR-7 to go forward.

B) About 25% of the EC fields are located in the creek bottoms along the Left Fork of Big Creek. The Left Fork of Big Creek already has elevated E. coli levels and shows evidence of nutrient loading (see photo above). Dye tracing studies initiated by Dr. Van Brahana demonstrated the ability of nutrients to travel through karst substrata from the vicinity of the C&H hog operation to the Left Fork of Big Creek in less than one week. This interconnectivity of watersheds is very troubling given that most of the EC Hog Farms manure fields sit atop karst terrain. (See Kosic: **"Proposals for integrating karst aquifer evaluation methodologies into national environmental legislations"** <http://link.springer.com/article/10.1007/s40899-015-0032-5/fulltext.html>)

C) About 75% of the fields where C&H waste will be applied are upland fields located at higher elevations. Those upland fields are very steep, making them very susceptible to erosion and transmission of surface applied waste. The risk of phosphorus-transport increases rapidly with overgrazing on these steep lands. In "normal" years, good management may prevent overgrazing, but periods of drought are likely to occur from time to time, and this is a very big problem for steep fields and soils with elevated soil test phosphorus (STP).

Regarding these upland soils, according to Dr. Van Brahana, *"The younger layers above the Boone Formation are dominated by shale and some sandstone, and these are common in the higher elevations of Big Creek and Left Fork of Big Creek. The shale has low permeability, and rain that falls on it runs off (like an umbrella) rather than soaking into the ground and the underlying karst rock (like a sponge) in the karstified Boone Limestone. That is why prior hog farms in this area, located on the shale had 'dead zones' down gradient from their lagoons. The feces and urine from 300 hogs killed all the plants beside the streams, until there was enough water to dilute them below a toxic level."*

D) EC Farms proposes to spread up to 6.5 million gallons of waste annually. This is more than twice the current annual waste production of C&H, the sole source of waste to be accepted by EC Farms. About one-half of the area proposed for waste application is in fields that already have STP higher than optimal for forage production (50 ppm). 39% of the area is above 100 ppm, and 20% is above 150 ppm. These high STP soils will contribute both dissolved and particulate phosphate to the water for many years, contributing to the algae blooms in the water (see photo above). According to the EC Site Management Plan, currently two fields are

not eligible for waste application due to high phosphorus risk, but in the near future, several others are likely to also become ineligible due to buildup of STP. Further, any increase in the waste application rate specified is likely to increase the risk (Arkansas Phosphorus Index) drastically. Only two of the 36 fields, totaling 33.1 acres, are designated as hayland. The balance are designated for grazing. Hay harvest would better assure removal of excess nutrients, whereas grazing leaves most nutrients (up to 90%) in place. Further, grazing can be far more erosive than hay production and harvest, particularly on sloping upland soils.

Threatened Species

E) Several waste spreading fields border or drain into USFS property where there are numerous caves and bat roosts. At least two endangered bat caves are located nearby. ADEQ must anticipate that EC Hog Farms and C&H Hog Farms will have a significant cumulative impact on degradation of the Buffalo River and its tributaries which encompass critical habitats for endangered and threatened Gray, Northern Long-eared and Indiana bats, found throughout the Big Creek and Left Fork of Big Creek watershed. In addition, there will be an increased risk of impact to the threatened Rabbitsfoot and Snuffbox mussel species found downstream in the Buffalo National River.

The destruction through habitat degradation of a hibernarium or maternity cave along creeks such as Big Creek and its Left Fork, which are known to be macroinvertebrate foraging zones for bats, is inevitable for endangered and threatened species including the Northern Long-eared bat, Gray bat, and Indiana bat (see 2015 bat acoustic survey results in commentary report by James Gore on Big Creek and the Left Fork of Big Creek:

<http://buffaloriveralliance.org/Resources/Documents/Bat%20Survey%20Left%20Fork%20Final-2.pdf>

Degradation of the Little Buffalo/Shop Creek river zone is equally predictable. The consequences of such a flawed action as ADEQ permitting EC Farms to land apply swine waste in an ever growing swath of BNR's watershed can only result in the bioaccumulation of phosphorus in the soil which will be released for years to come, and the spread of excess nitrates into the streams of a greater area. Such practices, if approved, will negatively impact the endangered bats' survival,. These bat populations are already under stress since the Buffalo River watershed has been identified positively for White Nose Syndrome, a disease which is decimating endangered and threatened bat species across America. This permit will further add to the cumulative stress suffered by these threatened species.

Should you consider this a minor worry or minimal residual effect of spreading swine effluent in the proposed increased area of critical bat habitat, Dorian Fox, writing for the National Parks Conservation Association Spring issue, "The Trouble With Bats," states:

"Along with pollinating plants and dispersing seeds, bats consume hundreds of tons of insects. According to a 2011 study published in the journal Science, the natural pest-control bats provide saves the U.S. agricultural industry up to \$53 billion each year. 'Since they eat thousands of

insects every night, if you take that out of the picture, then suddenly something's changing,' says Bruce Connery, Acadia National Park's wildlife biologist. 'You may not sense it right away, but there's got to be a ripple effect there.' As bat numbers dwindle, farmers may be forced to use more pesticides, upping our intake of these chemicals. Spruce budworm, an insect scourge of northeastern forests eaten largely by bats, could decimate Maine's timber industry. Fewer bats could also result in less obvious environmental effects such as a higher prevalence of disease-carrying mosquitoes or the loss of rare cave-dwelling organisms that depend on nutrients in bat guano."

(https://www.npca.org/articles/1158-the-trouble-with-bats?utm_source=parknotes&utm_medium=email&utm_campaign=magazine)

Other Concerns

F) One of the spreading fields of EC farms is within three miles of Hurricane Creek, which is listed as an Extraordinary Resource Water (ERW). This ERW is also listed on the 2008 303(d) list (the last one actually approved by EPA) for bacterial contamination. ADEQ is clearly not acting in the interest of the State of Arkansas' ERW resources by allowing an additional potential contaminant load on Hurricane Creek.

ADEQ must use scientific evidence to avoid further pollution of the Left Fork, Big Creek and Hurricane Creek and must adhere to their stated purpose of protecting Arkansas' most precious natural resources.

G) Heavy tanker trucks (honeywagons) will have to travel considerable distances from C&H to the 36 EC fields and must regularly negotiate steep winding gravel roads, as well as state highways, increasing the potential for accidents and spills and discharge to waters of the state.

H) Big Creek Research and Extension Team is already 3 years into a 5 year study of 2 C&H application fields. How will this shift onto EC fields affect the BCRET study? Will the current study remain valid? Will the Governor designate additional hundreds of thousands of dollars and expand the study to now monitor these additional fields?

I) ADEQ is required by 40 CFR §131.12(a) to develop and adopt a statewide anti-degradation policy for point-source and non-point-source pollution and identify methods for implementing that policy. The guidance generally includes:

- Processes for identifying the antidegradation protection level (i.e., the "tier") that applies to a surface water;
- Procedures for determining baseline water quality (BWQ);
- Approaches for assessing water quality degradation;
- Procedures for identifying and assessing less degrading or non-degrading alternatives;
- Procedures for determining the importance of economic or social development to justify significant degradation of high quality surface waters;

-Information on intergovernmental coordination and public participation processes.

We strongly recommend that ADEQ draft an implementation plan and begin implementing these procedures immediately. The anti-degradation review should in all cases be done PRIOR to approval of any discharge permit, including 3540-WR-7.

On the basis of this information and concerns expressed herein, the Buffalo River Coalition respectfully asks that ADEQ deny this modification of Permit 3540-WR-7, and we further request that its precursor, Permit 3540-WR-6 ,and all land use contracts associated with it be voided.

For the record, the Buffalo River Coalition submitted a letter to ADEQ Director Becky Keogh on June 15, 2015 expressing many of these same concerns. The letter is attached here for your reference.

Submitted on behalf of the Buffalo River Coalition,

Gordon Watkins, President, Buffalo River Watershed Alliance

Attachment: June 15, 2015 Letter to Director Keogh

CC via email:

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ATTACHMENT

June 15, 2015

Becky Keogh

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**VIA FIRST CLASS MAIL
ELECTRONIC DELIVERY**

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Re: C & H Hog Farm NPDES Permit No. ARG590001, File AFIN 51-00164

Dear Director and Deputy Director:

We understand from documents on the Arkansas Department of Environmental Quality's website that C & C Hog Farm transferred its Regulation 5 permit (# 3540-WR-5) to EC Farms (#3540-WR-6). We also understand that EC Farms recently submitted a minor modification request to land apply wastes from C & H Hog Farm and that your office in turn informed EC Farms that land application of wastes at its facility is a major modification and would therefore need to submit an application along with a revised Comprehensive Nutrient Management Plan. To our knowledge, EC Farms has not submitted any follow up documents.

We further understand that C & C's closure and "active" status was initiated and maintained by Richard Campbell, then owner of C & C Hog Farm and current owner of C & H Hog farm, and that your office in an interoffice memo dated April 14, 2014 indicated Mr. Campbell might want to modify his permit to allow hog waste from a different facility to be land applied to his fields. (Attachment 1)

Permit 3540-WR-5 operated as a small CAFO in the Shop Creek/Little Buffalo River/Buffalo River watershed. Its waste management plan was designed to handle waste applications from 616 swine. Some of the fields listed in the waste management plan are in the Medium to High Phosphorus range and may be unsuited for liquid swine waste applications. In fact, the waste management plan states that the main areas of concern for this farm are manure run-off (from facilities and field applications), maximize nutrient utilization, odor control/neighbor relations, and aesthetics.

Letter to Becky Keogh and Ryan Benefield
June 15, 2015
Page Two

The Comprehensive Nutrient Management Plan for 3540-WR-5 and 3540-WR-6 states:

This Comprehensive Nutrient Management Plan is an overall conservation system for your planned animal feeding operation (AFO) and is site-specific for this farm.

On the face of permit #3540-W-5 and permit # 3540-WR-6 and related documents, it would seem that this transfer is from one Regulation 5 animal feeding operation (AFO) to another. However, according to a Natural Resource Conservation Service letter to ADEQ on March 17, 2014, the liquid and solid wastes were removed and spread on pastureland underlined in the conditions of the permit and according to the Animal Waste Management Plan (Attachment 2). The 3540-WR-6 permitted facility as transferred from Permit #3540-WR-5 is no longer an operational Regulation 5 animal feeding operation (AFO) as there are no swine -no liquid waste-no storage ponds-no housing barns.

The recent activities with regard to C & C permit transfer to EC Farms, EC Farm's minor modification request to apply C & H waste, and ADEQ's subsequent response, raise several questions and concerns as follows:

-Why is C & H seeking to transport its waste off site and land apply under another permit? Is this a waste utilization vs waste disposal issue for C & H?

-Is this an attempt by C & H to circumvent the enforcement and regulatory process to avoid a public comment period and/or compliance with its own NMP?

-EC Farms should not be permitted to become a waste disposal site for C & H Hog Farm's excess waste. One set of problems should not be traded for another.

As we have stated in previous communications to your office, we believe public involvement and transparency from the start could well have prevented the ill-advised siting of a factory farm in the watershed of the treasured Buffalo River and the subsequent waste of taxpayer dollars to monitor and study the facility. Even at this juncture, though, public involvement can still provide valuable input to help recover the best outcome possible from an undesirable situation. Therefore, we urge ADEQ to reopen C & H Hog Farm's permit in its entirety and to allow public review and comment.

Sincerely,

On behalf of:

Bob Allen
Arkansas Canoe Club

Jack Stewart
Buffalo River Watershed Alliance

Emily Jones
National Park Conservation Association

Robert Cross
Ozark Society