

March 10, 2017

Katherine McWilliams
Arkansas Department of Environmental Quality
Office of Water Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Ms. McWilliams,

Thank you for the opportunity to comment on the draft permit number **5264-W**, for the storage and land application of liquid waste from a swine facility, C&H Hog, Farms, Inc. in Newton County Arkansas.

National Parks Conservation Association is strongly opposed to the issuance of this permit in the watershed of Buffalo National River. While we understand that additional conditions have been placed on the permittee related to buffers (Condition 15), the fact remains that buffer zones will not mitigate the path or impact of swine waste on the Buffalo National River's karst ecosystem. We oppose the permit for the following reasons.

First, allowing the permit would violate the protections afforded to this Tier 3 River.

The Buffalo National River is a Tier 3 River. As you know this designation applies to Outstanding National Resource Waters (ONRWs) where ordinary use classifications and supporting criteria may not be sufficient or appropriate. ONRWs are frequently considered the highest quality waters of the United States, but may also include waterbodies that are of "exceptional recreational or ecological significance," as stated under 40 C.F.R. Section 131.12(a)(3) of the anti-degradation policy. ONRWs are afforded the highest level of protection under the anti-degradation policy. Existing water quality must be maintained and protected, and only activities that cause short-term and temporary degradation may be allowed.

The impact of swine waste on the Buffalo River's water quality is not new, short term, or temporary. Water quality monitoring from 1985 to 1995 by Mott (1997) indicated low but slowly increasing fecal coliform bacteria levels within the main channel of the Buffalo River. A new study is being released by the National Park Service that looks at 25 year trends in the Buffalo National River's water quality.

We respectfully ask that ADEQ consider postponing a final decision on C&H's Regulation 5264-W permit until that study is available and can be considered by the department.

Second, the nutrient management plan impacts land conservation practices in the watershed.

The Buffalo River's Water Resource Management Plan states that the Buffalo National River's water quality is threatened by the rapid rate of land conversion from forest to pasture. If current trends continue, by the year 2050, pasture acreage in the watershed will be equal to forest acreage. In 1998, Steele and Mott chose three middle river tributaries to investigate the effect of agricultural activity on water quality. The agricultural tributaries were compared to a control site, a pristine tributary with a watershed near the headwaters of the Buffalo. All three tributaries consistently had nutrient and bacteria concentrations and loads two to three orders of magnitude greater than the control site. (Page 91, Buffalo River Watershed Management Plan). Fecal coliform bacteria and nutrient concentrations were 125 times higher for bacteria and 44 times higher for nutrient concentrations at peak discharges when compared to the pristine site. The current nutrient management plan that C&H employs depends heavily on the availability of pasture land in the Buffalo River Watershed. As existing pastures reach nutrient saturation, the pressure to convert forest to pasture increases in order to manage the solid and liquid waste produced by C&H swine.

Third, applying animal waste to fields over karst threatens the National River and regional groundwater.

According to the United States Geological Service, the geology of the Jasper Quadrangle was first mapped by Purdue and Miser in 1916 (GEOLOGIC MAP OF THE JASPER QUADRANGLE, NEWTON AND BOONE COUNTIES, ARKANSAS). Subsequent studies, by Aley and Brahana, support the National Park's Water Resource Management Plan. Ground water recharge in the Buffalo River system is either through the slow percolation of water through the soil until it reaches the aquifer, or concentrated rapid movement of water to the subsurface drainage network, most common in areas dominated by karst, which is typical in the Ozarks. (Page 25 Buffalo River Watershed Management Plan). There is concern for the quality of ground water in the region because large amounts of waste are surface applied as fertilizer.

The Ozark Aquifer is the largest and most important aquifer in the region and is a drinking water source for northern Arkansas, southern Missouri, northeastern

Oklahoma and southeastern Kansas. Water usage from the aquifer is increasing and protection of the groundwater is important not only for maintaining water quality of the Buffalo but also for more general protection of a major drinking water source in the Ozarks (U.S. Geological Survey Hydrologic Atlas 730-F Robert A Renken, 1998).

Forth, the size of C&H Farms operation calls into question the ability to mitigate damages to the national park ecosystem

Condition No. 2 of the C&H Farm permit prohibits any discharge from this facility. If the facility anticipates any discharge then the facility must apply for a National Pollutant Discharge Elimination System (NPDES) permit 180 days prior to the anticipated discharge. NPCA contends that C&H Farms does discharge to either or both the Buffalo National River and/ or the Ozark Aquifer through its Waste Management Plan which is part and parcel of the confined animal farrowing operation.

In 1995 ADEQ was awarded a competitive Environmental Protection Agency (EPA) 319 (h) Nonpoint Source Grant to conduct a 5-year study, A Buffalo River Liquid Waste Management System Demonstration Project (Swine Demonstration Project). The EPA 319(h) Nonpoint source grants were administered by the Arkansas Soil and Water Conservation Commission (ASWCC). The Swine Demonstration Project's purpose was to help insure the protection of the Buffalo River by working with the local swine farmers, the swine industry and government agencies to identify and address the problems associated with manure management. At the time, the number of sows at these facilities, located in the Buffalo River Watershed ranged from 250 to 550 per facility. The C&H facility is quite a departure from that study. C&H houses over 2,600 sows, in addition to boars and nursery pigs. Hog farmers in 1995 could not adequately handle the waste produced in farms of 400-550 pigs. A large Swine CAFO in the watershed not only endangers water quality in the national river, it puts an undue burden on water resources in watershed, the Ozark aquifer, and adjacent land use management and erosion control.

Over 100 years of scientific data demonstrates clearly where C&H Farm's feces-laden discharge is going. According to the draft permit, the facility is estimated, based on the animal weight and numbers provided in Section 2 of the NMP, to generate 1,897,635 gallons of waste annually. The annual total waste available (animal waste generation, wash water, rainfall, and 24-hour, 25-year storm event)

is estimated to be 2,624,000 gallons. There are 630 acres available for land application, according to the Nutrient Management Plan.

If 2,624,000 gallons of liquid waste is applied to 630 acres of land a year, and there is “no discharge”, then all that waste (minus whatever is lost to evaporation) should still be on the fields. That is over 4,000 gallons per acre per year, minus the natural evaporation of H₂O. Based on the actual feces and urine the animals generate, each acre would receive more than 3,000 gallons of swine waste annually, or 14.5 gallons of swine waste, not wash water or rainwater, per square foot. Where does it go?

Since there is obviously NOT a pool of hog waste 4,000 gallons deep, sitting there on the fields the water just goes into the ground. Does it then disappear in to the Buffalo National River or the Ozark Aquifer? In either case, it is discharging somewhere into the waters of the state.

We continue to contend that the Buffalo National River’s ecological value outweighs the risk imposed by C&H Hog Farm’s waste management plan. I am sure the Department is aware of the impacts of excessive nutrients in our national waterways. The Buffalo River is not exempt from those impacts. The continued location of C&H Farms, Inc., and application of waste in additional fields available to C&H, through the permitting of EC Farms, continues to threaten water quality in America’s first national river, a unit of the national park system.

In summary, C&H Farm, Inc. is the camel’s nose under the tent. NPCA requests that ADEQ deny C&H Farm’s application for permit 5264-W.

Sincerely,

Emily Jones
Sr. Program Manager, Southeast
National Parks Conservation Association