

***Statement of Dr. John Van Brahana,
Registered Professional Geologist 1884 (State of Arkansas)
in Support of a Permanent Moratorium on Development of Concentrated
Animal Feeding Operations Within the Drainage Boundaries of the
Buffalo River Watershed***

I strongly support the changes proposed by the Arkansas Department of Environmental Quality (ADEQ) to Rule 5 and Rule 6 that would institute a permanent moratorium on issuance of permits for concentrated animal feeding operations (CAFOs) in the Buffalo National River watershed. I base my support on more than 50 years of professional experience involving groundwater, karst hydrogeology, field hydrogeology, employment of 28 years with the U.S. Geological Survey, serving as a Professor of Geosciences at the University of Arkansas, and intensive field work within the Buffalo National River since 1990. This experience utilized accepted practices of scientific rigor, with my direct involvement and supervision of the Karst Hydrogeology of the Buffalo National River research team. The science, based on hydrology, physics of groundwater and surface interaction in karst, chemistry, biology, geology, and tectonics that have resulted in rock fracturing in the region, indicate that concentrated wastes from these industrial agricultural operations should be permanently prohibited from the Buffalo National River (as well as all other watersheds underlain by karst) within the state of Arkansas.

The reasons for my support of a permanent moratorium are:

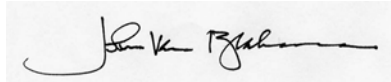
1. the watershed of the Buffalo National River is underlain by karst, a hydrogeologic phenomenon that allows rapid groundwater flow, little attenuation or filtration of nutrients and microbial constituents from the waste, and a long-standing and well-documented history of vulnerability to pollutants from CAFO operations locally, regionally, and world-wide.
2. the existence of karst in the Buffalo River watershed has long been recognized by a wide range of scientists and engineers, but was not considered in the requirements for the National Pollutant Discharge Elimination System (NPDES) General Permit for CAFOs under Regulation 6, under which the C&H Hog Farm was originally permitted, and which has since lapsed.
3. Studies that were developed by some of the country's leading geologists and hydrologists during the recent litigation over the C&H Hog Farm have demonstrated the unsuitability of

karst geology as a location for a confined animal feeding operation, particularly a swine CAFO. This is owing to the huge volumes of waste produced and the land-application of those liquid wastes, and the dangers they present to the Buffalo River watershed. ADEQ's staff of highly-qualified scientists also agreed with those conclusions.

4. The U.S. Department of Agriculture, Natural Resources Conservation Service in their publication Agricultural Waste Management Field Handbook (AWMFH) contains specific admonitions to disqualify areas underlain with karst geology. Chapter 4 of the Commission's Regulation (Rule) 5 states that "designs and waste management plans" of CAFOs shall be in compliance with, not only the requirements contained in Rule 5, but also the Field Office Technical Guide and the AWMFH. The AWMFH is very explicit in stating that karst geology underlying a proposed CAFO facility may disqualify a site for a waste storage pond, treatment lagoons, and other means of animal waste storage and application.
5. the Arkansas Phosphorus Index (API) fails to account for groundwater or karst. Utilization of the API presents undue risks relative to CAFOs in the Buffalo River watershed, as well as in the area of northern Arkansas which is underlain by karst-forming carbonate rocks.

I strongly encourage the Arkansas Pollution Control and Ecology Commission to adopt the proposed modifications to Rule 5 and 6, permanently prohibiting the development of swine medium-and-large CAFOs in the Buffalo River watershed.

Sincerely,

A handwritten signature in black ink, appearing to read "John Van Brahana", is written over a light gray rectangular background.

John Van Brahana, Ph.D., P.G.

Selected References

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