

September 22, 2019

Becky W. Keogh
Director
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118

Submitted Electronically to: regcomment@adeq.state.ar.us

Dear Director Keogh:

I am making these comments in relation to Arkansas Pollution Control and Ecology Commission Docket numbers 19-002-R and 19-003-R. These are changes to Regulations 5 and 6 to institute a permanent moratorium on medium and large CAFOs in the Buffalo River watershed, and also to institute a moratorium on Land Application Only permits in said watershed.

I would like to thank ADEQ for beginning to right the wrongs of the past seven years by banning medium and large confined animal feeding operations (CAFOs) and land application permits within the Buffalo River watershed (HUC 11010005). This action and the closing of C&H Hog Farm and their subsidiary operation EC Farms is long overdue. I recognize that if not for the outcry of the citizenry to our Governor, this would not be happening. Unfortunately, your agency stonewalled the public at every turn until very recently. In short, I support the changes to the regulations.

Changing regulations is a great thing, but is not nearly enough. ADEQ has failed to meet its legal requirements in regards to the Buffalo River. Those requirements are spelled out in 40 CFR 131.12. This is the portion of the Code of Federal Regulations dealing with the Antidegradation of Outstanding National Resource waterbodies (ONRW). The Buffalo River, and her tributaries which lie within the boundary of Buffalo National River are supposed to be protected from ANY REDUCTION in water quality. Unfortunately, ADEQ issued a permit to a large CAFO on Big Creek, eliminating those protections with the single stroke of the pen. So, while I support a CAFO ban in the watershed, I also know that one would not be needed if your agency had done its job. The Antidegradation Rule was placed in 40 CFR in 1975 as part of the Clean Water Act implementing regulations. Prior to that, the US Department of Interior had an Antidegradation Rule. Once placed in the CWA regulations, it became the responsibility of EPA, or States with delegated authority, to ensure the water quality in these ONRW streams are maintained and protected. CAFOs are widely shown in scientific journal articles to be one of the most polluting industries in the nation. To issue a permit to place a CAFO on a karst landscape, a scant 5 miles upstream of an ONRW, would require extensive testing of groundwater flow, karst sensitivity, biological sensitivity, and an exhaustive review of surface water background conditions. None of this was done prior to the C&H permit. In my view, that fatal flaw in your agency's permitting is inexcusably criminal, and is not going to be erased by the closure, cleanup, and ban.

The Buffalo River has suffered tremendously from the operation of C&H Hog Farm. Just last week, Dr. Andrew Sharpley was giving a talk at the University of Missouri. In the article, Dr. Sharpley was quoted as saying C&H dumped massive amounts of pollutants into Big Creek on two separate occasions. The article goes on to quote him as saying that this was from two hundred-year flood events. I have lived on the Little Buffalo River for nearly 20 years. In that period, I have not witnessed any hundred-year flood events. I have seen impressive rises since C&H went into operation, but none as high as prior to the C&H permit.

These massive pollutant loads, which were not captured by routine sampling, have greatly changed America's First National River. The excessive algal blooms over the past three years were unprecedented. The bottom of the river is not clean. The river leaves a stinking scum line on the hull of my canoe after each float downstream of Big Creek. This NEVER used to happen, even in flood or extreme low flow conditions. What could cause such a change? Maybe it is from high levels of P in the stream sediments and higher levels of N in the water column, feeding algae, periphyton, and who knows what. Great damage has been done, tourism numbers and revenues are down. Businesses are suffering. Ecological damage causes economic damage. It is a very simple relationship.

Now that we will soon have a permanent CAFO ban in Regulations 5 and 6, I hope, what is next? Here are a few suggestions:

1. In 2020 ADEQ will be required to do another biennial review of water quality. In the 2018 assessment methodology, there were no special assessment methods used for ERW or ONRW streams. That must be changed. For the Buffalo River, those water quality conditions present in 1975 when the Antidegradation rules were placed in 40 CFR should be the numeric and narrative standards, not the same standards as every other stream outlined in the current version of Regulation 2. It is fine to have a floor of conditions for streams at large, but these standards were never intended to be the stick against which ERW and ONRW streams are measured. This very special subset of waters is required to meet a higher standard. I can tell you from experience that the majority of river miles in the Buffalo River was impaired in 2018.
2. ADEQ needs to work with ANRC and other State and Federal agencies to get the Buffalo River watershed in the State Nonpoint Source Pollution Prevention Plan. This will allow riparian landowners in the watershed to compete better for funding for conservation practices through the section 319 program. Because the Buffalo River watershed is not in this plan as a priority watershed means landowners here are at a competitive disadvantage. Without this help, the Antidegradation requirements will not be achieved.
3. ADEQ should review all point source permits in the watershed, and work with each of the facility owner/operators to find methods to improve the collection, treatment, and discharge of wastes so that discharge of P, N, and other pollutants can be reduced to the greatest extent possible. ADEQ should also work with each of these entities to ensure they are eligible for water quality improvement grants, infrastructure grants, etc., and that they are able to train

and retain highly qualified system operators. Without this action, the Antidegradation requirements will not be achieved.

4. ADEQ should work with ANRC, The Nature Conservancy, and the County Judges and Quorum Courts of all the counties which manage unpaved roads within the Buffalo River watershed to find funding for the implementation of unpaved road work to reduce sediment discharge into surface and subsurface streams. These sediments make their way to the Buffalo River, causing impacts to stream geomorphology such as mid-channel bar development and avulsion which compounds the impact by rapidly eroding the river banks. Without this action, the Antidegradation requirements will not be achieved.
5. ADEQ should work with the National Park Service to ensure waste management facilities along the river are operating at the highest level, and that activities by citizens visiting the park as well as park operations are being done to ensure water quality is being protected. Without this action, the Antidegradation requirements will not be achieved.
6. ADEQ should work with AGFC and the Stream Heritage Partnership to assist landowners and counties in the watershed to reduce the number of low water crossings acting as low head dams. These structures create fish passage problems, and also dramatically alter stream geomorphology, causing long lasting problems to water quality and aquatic life. Without this action, the Antidegradation requirements will not be achieved.
7. ADEQ should work with State Legislators to get the Buffalo River watershed placed in the Nutrient Surplus areas. This is a problem which is going to get very serious in the near future. When the C&H debacle was first starting, several of us in the area noticed a dramatic increase in the size of the existing poultry operations. A simple one-to-one relationship exists between poultry and pollutants. More poultry equals more poultry waste equals more P on the ground. With the construction and impending opening of the Butterball feed mill in Yellville, there exists a nearly mathematical certainty that the lower portion of the Buffalo River watershed, particularly Tomahawk, Water, and Rush creek sub-watersheds, will receive dramatic increases in the amount of P land applied. These areas are all underlain by highly developed karst with extensive faulting, folding, and fracturing. The karst conduits in these areas will provide rapid transport of pollutant loads to the Buffalo River without any effective cleansing. The impacts of this can be reduced slightly if the Buffalo River watershed is in a nutrient surplus area. Without this action, the Antidegradation requirements will not be achieved.
8. ADEQ should fund a groundwater tracing program for the Buffalo River watershed. Without this action, the Antidegradation requirements will not be achieved. Several scientifically valid groundwater tracing studies have demonstrated the fact that the Buffalo River receives groundwater from rainfall in the Crooked Creek basin. There are likely additional areas of inter-basin groundwater piracy. In addition to inter-basin groundwater transfer, the areas within the Buffalo River watershed need to be traced to understand the dynamic relationships between surface water, groundwater, and hydrologic stage. Several of the published traces

show this dynamic relationship exists, but is only poorly understood at this time. The University of Arkansas, Fulbright College of Arts and Science, has the equipment and facilities to accomplish such an effort. The Ozark Underground Lab also has the facilities and equipment, as well as a level of experience and knowledge of the area which is unrivaled. I would be happy to assist with this effort in any way that I can.

9. The Arkansas Phosphorus Index (API) is completely inadequate for use in a karst area. Even if ADEQ succeeds in getting CAFOs banned from the Buffalo River watershed, that will only affect those which use a "liquid animal waste management system". The many CAFOs using dry-litter will not be impacted. Their reliance upon a Waste Management Plan which uses the API will still result in the DEGRADATION of the Buffalo River. Nutrients need to be applied at agronomic levels for the forage and its utilization (haying vs. grazing). The API is designed to apply N at the agronomic levels, which results in P application of roughly one order of magnitude over agronomic levels. P is hard to manage over time. The higher the P in the soil, the higher the dissolved species of P compounds. Riparian best management practices (BMPs) such as riparian buffers eventually can get overladen with P. Once this happens over a large enough area of the stream riparian area, long-term alteration of the stream biota is inevitable. ADEQ needs to work with ANRC, UA Cooperative Extension Service, and NRCS to ensure the necessary changes are made to the API so that it becomes a tool for fertilizing to agronomic needs, not a waste disposal tool. Without this action, the Antidegradation requirements will not be achieved.

If ADEQ makes a good faith effort to take care of the waters of the State, I will work diligently to assist your efforts. If not, I will continue to work diligently to ensure changes are made to laws and regulations which will require such efforts. You are in the drivers seat. You can do much good for the people of Arkansas and the US, or you can ignore your responsibilities under law and regulation and continue on the path your agency has followed for some time. Which will it be?

Sincerely,

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