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COMMENTS ON DRAFT 303D LIST FOR 2018

Sent via Email to WaterbodyComments@adeq.state.ar.us

Dear Director Keogh:

Upon reviewing the draft 303d list of impaired waters of Arkansas, I have a number of comments I would like to make for the record. Although there are many streams within the State which need attention, I feel my beloved Buffalo River needs the full attention and effort of your agency to bring it back from the brink of a system-wide impairment.

The Buffalo River was designated as America's very first National River on March 1, 1972 when President Richard M. Nixon signed Public Law 92-237. Congressman John Paul Hammerschmidt was the major driving force in Washington D.C. behind this effort. Every other Congressman and Senator from Arkansas, and the Governor supported his efforts. The legislative history describes the river as "clean, clear, and unpolluted by industrial activities".

"That for the purposes of conserving and interpreting an area containing unique scenic and scientific features, and preserving as a free-flowing stream an important segment of the Buffalo River in Arkansas for the benefit and enjoyment of present and future generations, the Secretary of the Interior may establish and administer the Buffalo National River"¹

My earliest memories of the Buffalo River are from playing in it when I was a small child through my teenage years. I remember clear water where I could look down to the bottom of the deepest pools and see each piece of gravel individually, water which was so clear I was tempted to drink it, even though I had been taught not to, beautiful river views with tall bluffs reflecting on a glass smooth pool, swimming around chasing sunfish, Ozark bass, and smallmouth bass, and fishing without fouling my line and lure on algae. It was Paradise. Unfortunately, much of that Paradise is now lost. I hold the ADEQ and ANRC responsible for the majority of that loss. The draft 303d list is a continuation of what I see as an abject failure to take responsibility for your agency's actions, and inactions which have steadily debased the water quality of the river.

¹ Public Law 92-237, Buffalo National River Establishment Act

The Clean Water Act (CWA) (Public Law 92-500) [86 Stat. 816, et seq.] was also signed by President Nixon. Part 303 of the CWA discusses water quality standards (WQS) and implementation plans. Part 303(d)(1)(A) charges each State to identify waters in the State for which effluent standards are not stringent enough to meet the applicable water quality standards. In the current draft 303(d) list, ADEQ identifies a significant portion of the Buffalo River (18.2 miles, 29.4 km); including 7.5 miles (12.1 km) upstream (AR_11010005_011) and 10.7 miles (17.3 km) downstream (AR_11010005_010) of the mouth of Big Creek at Carver as not meeting bacterial standards based upon *Escherichia coli* (*E. coli*), a section of Big Creek (AR_11010005_022) not meeting the *E. coli* standards, and the lower portion of the same Big Creek (AR_11010005_020) not meeting dissolved oxygen standards. In each of these cases, the cause for the impairment is listed as “unknown”. The cause of the impairments in this area seems pretty obvious, based upon solid scientific data which I helped gather and which has been submitted to ADEQ (See Figure 9 in Brahana and others, 2017)². Arkansas is required to rank the streams not meeting the standards “taking into account the severity of the pollution and the uses to be made of such waters.” The specific regulations codifying CWA are published in Title 40 of the Code of Federal Regulations (40 CFR).

The Buffalo River is a Tier 3 stream with regards to the Antidegradation Policy found in 40 CFR 131.12(a)(3).

*“Where high quality waters constitute an outstanding National resource, such as waters of **National and State parks** and wildlife refuges and **waters of exceptional recreational or ecological significance**, that water quality shall be maintained and protected.”*

Tier 3 streams, such as the Buffalo River are known as “Outstanding National Resource Waterbodies” (ONRW). ONRW is the highest standard found in the Clean Water Act. Accordingly, the Buffalo River is classified by the Arkansas Pollution Control and Ecology Commission (APC&E) Regulation 2.203 as an “Extraordinary Resource Water” and a “Natural and Scenic Waterway” which are both analogous to ONRW status. In addition to the main stem of the Buffalo River, the regulation is clear that the tributaries to the Buffalo River which lie within the administrative boundary of Buffalo National River (National Park) should also be classified as ONRW. The water quality of ONRW streams **shall be maintained and protected**. This provides for a higher standard of protection than simply meeting WQS criteria for pollutants and designated uses.

“Maintained and protected” means no new or increased discharges to ONRWs and no new or increased discharge to tributaries of ONRWs that would result in lower water quality in the ONRWs³. There are several activities which trigger the Antidegradation

² Brahana, J.V., Bitting, C., Kosic-Ficco, K., Turk, T., Murdoch, J., Thompson, B., and Quick, R., 2017. Utilizing fluorescent dyes to identify meaningful water quality sampling locations and enhance understanding of groundwater flow near a hog CAFO on mantled karst – Buffalo National River, southern Ozarks. 26pp.

³ USEPA Water Quality Standards Handbook, Chapter 4: Antidegradation. Office of Water, EPA-823-B-12-002

policy analysis. Activities such as the **issuance of NPDES permits, scheduled water quality standards review** (such as the current draft 305(b) report), and the triennial review of water quality standards all trigger the Antidegradation policy analysis. Antidegradation policy analyses are not limited to point source dischargers; they also apply to nonpoint source activities. “Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control...”⁴ In my opinion, ADEQ, ANRC, and the Beautiful Buffalo River Action Committee (BBRAC) have completely failed to even try to meet this legal requirement. Specifically, when C&H Hog Farm, Inc. was initially granted coverage under the NPDES General Permit ARG590000, there was **No Antidegradation Policy Analysis**. When ADEQ developed the 2016 305(b) report, the ONRW values of the Buffalo River were ignored, despite considerable amounts of high quality data being provided by agencies and citizen scientists, and a very large body of public comment regarding impairment issues. When C&H Hog Farm, Inc. applied for a Regulation 5 permit (5264-W) **ADEQ again failed to conduct an Antidegradation Policy Analysis**. When BBRAC developed the Buffalo River Watershed-Based Management Plan., **I can find no evidence that an Antidegradation Policy Analysis was conducted**. In fact, Big Creek was not even one of the priority watersheds in the plan, despite the fact that impacts from C&H Hog Farm, Inc, and citizens who are extremely upset about ADEQ permitting this facility in such a sensitive location provided the impetus for the Governor to establish BBRAC. In spite of a large body of evidence for the need, ANRC did not put the Buffalo River watershed in their 2018-2023 Nonpoint Source Pollution Management Plan⁵, and from what I can find, **has not conducted an Antidegradation Policy Analysis** on the impacts of utilizing the Arkansas Phosphorus Index (API) in karst watersheds for the development of Nutrient Management Plans for land application of animal wastes.

The regulations require Arkansas to rank streams on the Impaired Waterbodies List. Because ADEQ proposes to use Category 4b for Big Creek and the Buffalo River, the draft list gives these streams a low rank. This is puzzling when I consider that the Buffalo River is a Tier 3 stream which supports a thriving tourism industry in some of the poorest counties in Arkansas. In fact, for 2017, tourism related to Buffalo National River is estimated to have resulted in \$62,634,500 in spending which supported 911 jobs in the local communities.⁶ Such economic value in addition to the recreation value and bragging rights The Natural State gains for having America’s First National River would indicate that the Buffalo River and her tributaries should be ranked at the top of the list, and should receive the highest level of effort by all concerned State agencies to reverse the impairments.

⁴ 40 CFR 131.12(a)(2)

⁵ Arkansas Natural Resource Commission 2018-2023 Nonpoint Source Pollution Management Plan

⁶ 2017 National Park Service Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation. Natural Resource Report NPS/NRSS/EQD/NRR--2018-1616

The draft 303d list fails to list the Buffalo River as impaired for algae. I have seen algal blooms the past three years unlike any I have ever seen on the Buffalo River. The algae is so dense in many places that swimming is not feasible, and is actually hazardous because of cyanobacteria. The algae blooms are so large and extensive that it is nearly impossible to fish many sections of the river without continually un-fouling line and lure. The algal blooms are so extensive and dense that they can stop a canoe in its tracks. The algae in many areas has severely reduced the available habitat for aquatic organisms. To date, ADEQ has done very little to measure the extent and density of the algal blooms, and has neither proposed nor done anything to reduce the algal impairment of the “scenic and scientific” features of the Buffalo River.

Arkansas Pollution Control and Ecology Commission Regulation 2.509(A) discusses algal growth in concentrations sufficient to cause objectionable algal densities or otherwise impair designated uses of the waterbody as being caused by nutrients. Certainly, this seems to fit the conditions on the Buffalo River.

Because of the rapid increase in algal production in the Buffalo River downstream of Big Creek, and the location of C&H Hog Farm, Inc. on this tributary since late 2012, it is almost inescapable that the CAFO is the source of the increased nutrients which have “tipped the scale” in the direction of impairment. EPA regulations allow for short-term or temporary lowering of water quality in an ONRW, but this generally refers to a period of time of weeks and months, not years.⁷ Algal production in the Buffalo River downstream of Big Creek at Carver is severely limiting my enjoyment of the river. I now consider the Buffalo River as impaired by algae for 90 miles. The water quality of the Buffalo River **has not been maintained and protected** as required by 40 CFR 131.12(a)(3). Coverage under NPDES Permit ARG590000 which allowed for the development of C&H Hog Farm, Inc. within the watershed did not take into consideration the karst geology of the watershed, nor did it consider the potential impacts of discharging up to 45.5 tons of N and 36 tons of P₂O₅ per year into the groundwater and onto the surface of the land.⁸

The design for C&H Hog Farm and the Nutrient Management Plan do not provide stringent enough requirements and best management practices (BMPs) to restore the water quality of the Buffalo River in a reasonable period of time. The Buffalo River Watershed-Based Management Plan (BRWMP) is completely voluntary, and is unlikely to restore the water quality of the Buffalo River or Big Creek.⁹ To use Category 4b for Big Creek and the Buffalo River, ADEQ must be able to show that appropriate pollution control re-

⁷ USEPA Water Quality Standards Handbook, Chapter 4: Antidegradation. Office of Water, EPA-823-B-12-002

⁸ DeHaan, Grabs, and Associates. C&H Hog Farm, Major Construction Approval Application, May 18, 2012

⁹ FTN Associates, 2018. Buffalo River Watershed-Based Management Plan. <https://www.adeg.state.ar.us/water/planning/integrated/303d/pdfs/2018/2018-05-22-final-buffalo-river-wmp.pdf>. 794 pp.

quirements exist, and that if these requirements are followed, they are expected to reverse the impairment within a reasonable period of time.¹⁰

The six elements to address in order to list as a Category 4b are.

1. The identification of the segment and a statement of the problem causing the impairment. ADEQ has done this, except for the 90 miles of the Buffalo River impaired with algae.
2. A description of the pollution controls and how they will achieve water quality standards (WQS), including describing the pollutant loads needed to meet WQS and a description of the requirements for implementing the controls. ADEQ has not done this.
3. An estimate of the time it will take for the WQS to be met. ADEQ has not done element 2, so you have not done element 3 either.
4. A schedule for implementing the pollution controls. ADEQ has not done elements 2 or 3, so you cannot provide a schedule for implementing pollution controls.
5. A plan to monitor the water and track the effectiveness of the pollution controls. ADEQ has not done this. The frequency of monitoring on the mainstem of the river is inadequate to track effectiveness of pollution controls, even if they actually existed.
6. A commitment on the part of the State of Arkansas to revise the pollution controls, as needed to meet WQS. ADEQ has shown no inclination to commit to pollution controls period, much less to revise them to meet WQS.

I request that you place the Buffalo River below Big Creek on the 303d list for algae. I also request that you give the impaired sections of the Buffalo River, and any tributary within the boundary of Buffalo National River which shows an impairment when viewed as an ONRW a Category 5 rank. I implore you to take some of the \$821,775 received from EPA in May to begin righting the wrongs your agency has done to the Buffalo River.

Sincerely,



Chuck Bitting

¹⁰ Monschein, E. and Mann, L, 2009. Category 4b – A regulatory alternative to TMDLs: TMDL 2007. USEPA