

TO: Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

FROM: Teresa Turk
1408 W Cleveland St.
Fayetteville, AR 72701

DATE: January 22, 2020

RE: PERMANENT MORATORIUM FOR MEDIUM AND LARGE SWINE OPERATIONS (CAFO/AFO)

Dear ADEQ,

Thank you for the opportunity to comment on the proposed permanent moratorium on medium and large swine operations better known as AFO or CAFO in the Buffalo River Watershed. I support a permanent moratorium for the following reasons:

- The Buffalo National River was designated as America's first national river in the entire United States in 1972. Arkansas essentially piloted the Wild and Scenic Rivers Act that eventually became law. The Buffalo should have the highest protection possible in the United States, not just in Arkansas.
- It has been demonstrated during the past 7 years how sensitive an ecosystem the Buffalo River watershed is to increases in phosphorous and nitrates generated by C&H CAFO. During C&H reign of environmental terror, C&H deposited over 18 million gallons of hog manure in the watershed. The result was a 90-mile-long algal bloom! Please do not allow this to happen again.
- If a permanent moratorium in the Buffalo River watershed is not put in place, is ADEQ prepared to spend millions of dollars on litigation, clean-up, and eventual purchase of another CAFO to protect the river? Please do not make this mistake again, learn from your misguided and industry influenced mistakes.
- My back of the envelope calculation on the tax payers money spent on the C&H mistake is conservatively \$7 million dollars and likely significantly more. I calculated these numbers as follows:

\$1.0 M to Big Creek Research and Extension Team (BCRET)

\$ 100,000 for the Harbor study on detection of pond leakage

\$ 5.2 M to purchase the conservation easement

\$ 700,000 for cleanup operations

And thousands of hours of staff time/travel to respond to public comment, meet with industry, permit review, enforcement, and other documentation of all things associated with C&H and EC spraying fields.

- During the past 7 years of C&H's destructive operations, the tourism industry has grown on average about 4% per year in Arkansas and is the state's second leading employer. However, tourism on the Buffalo National River significantly declined from 2017 to 2018.
- Jobs generated by the Buffalo National River declined from 911 in 2017 to 797 in 2018, a decline of 12.5%. Visitors to the Buffalo National River declined in 2017 from 1.47 million to 1.24 million in 2018, a decrease of 15.6%. Economic output in 2017 was \$71.1 million and \$62.7 million in 2018, a decrease of 11.8%.
- In 2017, ADEQ noted the presence of a 60-mile algal bloom and in 2018 a 90-mile algal bloom. The river area within the National Park is only 135 miles long. In 2018, 2/3 of the river experienced significant and unsightly algae, possibly toxic in some areas. The presence of algae generated by the 18 million gallons of phosphorous filled manure applied in the watershed dramatically harmed the river's ecosystem and the tourism business.
- The recently published report produced by the BCRET is full of scientific misinterpretation and underlain by a poor study design and assumptions. From the very nature of the title, the report assumes "sustainable" yet does not prove C&H is sustainable by any measure. For brevity, below is a short list of why this document is misleading and does not meet the threshold of scientific integrity:
 - a. The study design does not provide a control location to measure changes from one area (upstream vs. downstream) to another. The researchers chose not to conduct a standard well regarded and necessary procedure-dye tracing-to identify nutrient pathways within karst environments prior to designing their investigation. Due to this decision, they did not realize that the upstream data collection site is influenced (and contaminated) by nutrient run off from spraying operations. This very fact totally invalidates this study.
 - b. The study does not have temporal or spatial information nor verification of when and where manure was spread relative to sampling dates. Without knowledge of the inputs of manure paired with water quality collection, this leaves huge uncertainties when high E. coli and nitrate levels appear.
 - c. The study reviewers noted that water quality collection should be done frequently and targeted during storm events. The researchers failed to capture many of the storm events where huge quantities of manure flowed into Big Creek and other tributaries during the testing period. These events are critical to understanding why Big Creek and the Buffalo National River experienced algal blooms and high E. coli events.
 - d. The study authors are financially dependent upon the industry through grants and other consulting opportunities. Most of the authors are not unbiased independent researchers. In their attempt to appear unbiased, an outside review team reviewed their work and provided extensive recommendations. Most of those recommendations remain outstanding and were not addressed.

In conclusion, Arkansas tax payers spent at least \$7 million dollars in testing, clean-up, public response and eventual purchase of a conservation easement on a destructive large swine CAFO. Not only were millions of dollars spent, but the Buffalo National river's water quality declined significantly with some sections now placed on the EPA's 303(d) list of impaired streams. The economic generator of the area, tourism, also declined significantly and will likely continue to do so until the river recovers and a reduction in algae occurs. Some scientific articles suggest that ecological recovery in a karst river system could take 20-30 years for the river to be restored back to its previous ecological condition before large inputs of nutrients occurred.

For these reasons, please pass a permanent moratorium on medium and large swine AFO/CAFOs in the Buffalo River watershed. Please spend the Arkansas taxpayer's money on conserving special wild places in Arkansas and not enabling industry to destroy them.

Sincerely,

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