

*“Protecting the public health and natural resources of the  
White River watershed through advocacy, education, and research”*

WHITE RIVER  
WATERKEEPER®

870-577-5071 (phone) | [jessie@whiteriverwaterkeeper.org](mailto:jessie@whiteriverwaterkeeper.org) (email)

P.O. Box 744, Harrison, AR 72602

[www.whiteriverwaterkeeper.org](http://www.whiteriverwaterkeeper.org)

23 September 2019

VIA EMAIL

Director Becky Keogh  
Arkansas Department of Energy and Environment  
Division of Environmental Quality  
5301 Northshore Drive  
North Little Rock, AR 72118  
[reg-comment@adeq.state.ar.us](mailto:reg-comment@adeq.state.ar.us)

**RE: Regulation 5 & 6 Rulemaking; APC&E Commission Dockets #19-002-R & #19-003-R**

White River Waterkeeper represents over 200 members dedicated to protecting the public health and natural resources of the White River watershed through advocacy, education, and research. Proposed revisions applicable to the Buffalo River watershed and losing stream segments are commendable revisions that recognize the sensitivity of karst landscapes and the need for more stringent regulations that adequately protect waters of the state for current and future generations.

Due to the rapid movement of water and contaminants in karst terrains, such as the Buffalo River watershed, effluent discharge, land application, and facility construction requirements must be specifically tailored to reflect the pollution potential. Likewise, due to the unpredictable movement of contaminants in karst environments, the precautionary principle should always be applied in regulatory and permitting decisions.

**A. COMMENTS APPLICABLE TO CONSISTENCY BETWEEN RULE 5 AND 6.**

**I. Why is the proposed permanent moratorium in the Buffalo River watershed limited to swine? (Rule 5.901 and Rule 6.602)**

In response to comments, please describe the operation design and waste characteristics specific to swine CAFOs that warrants restrictions greater than CAFOs specific to other animal sectors. Historically, swine farming has been a more common animal agriculture sector in the Buffalo River watershed. However, a moratorium specific only to swine is likely to only result in a shift in prevalent animal sectors rather than limit the amount of waste generate, land applied, and ultimately making its way to sensitive surface and groundwater resources that should be protected throughout the watershed.

The moratorium should apply to all animal sectors meeting the equivalent animal unit size proposed for swine.



**II. As written, a facility meeting the size threshold of a medium swine CAFO could still be permitted under Rule 5.901(B) and Rule 6.602(B).**

Facilities housing swine (weighing over 55 pounds) with 750-2,499 animals and swine (weighing less than 55 pounds) with 3,000-9,999 animals do not meet the regulatory definition of a CAFO based on size alone. Operations within the medium size threshold “must also meet one of two “method of discharge” criteria to be defined as a CAFO or may be designated.”<sup>1</sup>

Please respond to comments describing the process for evaluating the potential for a medium-sized operation to be “found to be a significant contributor of pollutants,” and therefore designated as a CAFO.

**III. There are major discrepancies between the moratorium as outlined in Rule 5 and Rule 6.**

Rule 5.901(B) states the Director shall not issue a permit for a “Confined Animal Operation,” whereas Rule 6.602(B) prohibits the Director from issuing a permit for a “Concentrated Animal Feeding Operation” in the Buffalo River watershed.

A “Concentrated Animal Feeding Operation” or “CAFO” is “*an [Animal Feeding Operation (AFO)] that is defined as a Large CAFO or as a Medium CAFO pursuant to 40 C.F.R. § 122.23, or that is designated a CAFO in accordance with 40 C.F.R. § 122.23(c). Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.*”<sup>2 3</sup>

A “Confined Animal Operation” is defined as “*any lot or facility where livestock, fowl, or other animals have been, are or will be stabled or confined and fed or maintained and where crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over significant portions of the lot or facility.*”<sup>4</sup>

Does this mean that an AFO meeting the size threshold, but not regulatory definition of a medium CAFO, can obtain coverage under Rule 6 in the Buffalo River watershed?

**IV. Language should be strengthened to more narrowly define provisions of the moratorium.**

Including language stating “all operations meeting the size threshold will be assumed to be significant contributors of pollutants, and therefore designated as a CAFO” to Rule 5.901(B) and Rule 6.602(B) would address concerns outlined in section A. II. in comments

<sup>1</sup> 40 C.F.R. § 122.23

<sup>2</sup> See definition on p. 1-2, Rule 6.103.

<sup>3</sup> See definition on p. 2-1, Rule 5.201.

<sup>4</sup> *Id.*



above. However, size thresholds outlined in Rule 5.901(B) and Rule 6.602(B) do not provide sufficient clarity to which operations are subject to the moratorium.

For example, three types of swine production enterprises are farrow- to-finish, farrow-to-feeder, and feeder-to-finish. Depending on the enterprise, the proportion and number of swine in each size class (> or < 55 lbs) will vary.

C&H was permitted as a large CAFO. In their application they estimated having 2,503 swine > 55lb and 4,000 < 55lb. In reality, based on C&H's annual reports from 2013-2018,<sup>5</sup> on average, there were 2,422 swine > 55lb and 776 swine < 55lb.

### **C&H Annual Reports**

Annual Summary (# > 55lb, # < 55lb)

2018 = (2,400, 615)  
 2017 = (2,475, 619)  
 2016 = (2,498, 635)  
 2015 = (2,496, 750)  
 2014 = (2,503, 750)  
 2013 = (2,160, 1289)

No guidance documents detail how to define a CAFO when one has a borderline mixed number of animals. It could easily be argued that C&H classifies as a medium-sized facility. However, as discussed above, meeting the size threshold for a medium-sized facility does not automatically mean it is designated as a CAFO. For each combination of swine listed above from 2013-2018 C&H annual reports, please respond in comments as to whether the department would have classified a new facility with the proposed corresponding numbers as:

- a) Large-CAFO<sup>6</sup>
- b) Medium-CAFO<sup>7</sup>
- c) Medium-sized facility (not CAFO)

Please provide detailed response as to the factors underlying all determinations for hypothetically proposed operations to help clarify the scope of the moratorium.

CAFO definitions based on animal units (animal equivalent based on live weight) may be a more consistent means of defining CAFOs and applicable regulations.<sup>8</sup>

<sup>5</sup>

[https://www.adeg.state.ar.us/home/pdssql/p\\_permits\\_online\\_npdes\\_additional.aspx?PmtNbr=ARG590001&Category=PermitInformation&Title=Permit+Information](https://www.adeg.state.ar.us/home/pdssql/p_permits_online_npdes_additional.aspx?PmtNbr=ARG590001&Category=PermitInformation&Title=Permit+Information)

<sup>6</sup> 40 C.F.R. § 122.23(b)(4)

<sup>7</sup> 40 C.F.R. § 122.23(b)(6)

<sup>8</sup> See <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/livestock/af/>

**V. Technical requirements,<sup>9</sup> facility construction certification,<sup>10</sup> and permitting provisions<sup>11</sup> for CAFOs seeking NPDES permit coverage under Rule 6 should be (at minimum) as stringent as required by Rule 5.**

**VI. Land application requirements should be outlined for all outstanding natural resource waters as defined by the Arkansas Pollution Control and Ecology Commission Rule No. 2. (Rule 5.406(D))**

Ecologically Sensitive Waterbodies should receive the same land application considerations in Rule 5 and 6 as outlined for ERWs in Rule 5.406(D). If the Department does not wish to adopt this revision, please provide a detailed explanation as to why ESWs are seemingly less susceptible to nutrient runoff and pollution.

**VII. Annual reporting requirements for animal operations subject to Rule 5 and Rule 5 should be revised to adequately evaluate runoff potential.**

Reporting requirements should include:

- Phosphorus application rates; and
- Soil Iron (Fe) and Aluminum (Al) concentrations.

Neither of these requirements would be burdensome to applicable operations. They would provide the ability to evaluate soil phosphorus (P) saturation and adherence to the Arkansas Phosphorus Index. As it has been recognized that assumptions of the Arkansas Phosphorus Index may not be appropriate in karst settings, due to the subsurface movement of P,<sup>12</sup> it is prudent to evaluate multiple indicator of dissolved P loss potential to inform future management and permitting decisions.

If the Department does not feel the need to adopt additional reporting requirements requested above, please provide detailed response as to why these are not warranted including specific information about how current reporting requirements are reviewed for adherence to permit conditions.

**VIII. Please provide adequate information regarding the site-specific characteristics of the Buffalo River watershed (e.g., karst terrain) that result in waters of the state being more vulnerable to land use applications (e.g., CAFO operations) and thereby warranting a permanent moratorium on select swine CAFOs.**

<sup>9</sup> Rule 5, Chapter 4.

<sup>10</sup> Rule 5, Chapter 5.

<sup>11</sup> Rule 5, Chapter 6.

<sup>12</sup> See detailed discussion related to the inappropriateness of the Arkansas Phosphorus Index for use in karst terrain in White River Waterkeeper's comments on Arkansas's 2018 draft 303(d) list, p. 5-6, <https://www.adeg.state.ar.us/water/planning/integrated/303d/pdfs/2018/public-comments/Jessie%20Green%20-%20WRW.pdf> (accessed 23 September 2019).

**B. SPECIFIC COMMENTS ON RULE 6.****IX. Proposed changes to effluent limitations for discharges weaken protections for losing stream segments. Rule 6.301(D)(4)**

The geometric mean for two or more positive numbers is always lower than the arithmetic mean, or “average.” This revision allows for higher excursions in discharge concentrations that are considered allowable. These revised effluent limitations do not assure that changes are consistent with the Clean Water Act (CWA) section 303(d)(4). These relaxed limitations do not meet an anti-backsliding exemption outlined in CWA section 402(o)(2).

It is understood that the changes proposed were an attempt to be consistent with the geometric mean standard outlined in Rule 2.507. However, the Department has not demonstrated that the best professional judgement used to define the effluent limitation based on the arithmetic mean was not the original intent of the existing limitation.<sup>13</sup> Please respond as to whether monitoring and reporting requirements are consistent with applicable geometric mean standards outlined in Rule 2.507.<sup>14</sup>

The individual sample concentration allowable in discharges to Extraordinary Resource Waters (ERW) and Natural and Scenic Waterways (NSW; current rule)<sup>15</sup> is more stringent than allowing calculations based on the geometric mean (proposed revision). Limitations were clearly meant to be more stringent in ERWs and NSWs, otherwise there would be no need to reiterate the same effluent limitation. The Department has not defined the timeframe and sample requirements for calculating the geometric mean.

In response to comments, please provide a record of existing permits discharging to losing stream segments that are subject to provisions outlined in Rule 6.301.

**X. Clarify instream dissolved oxygen requirements. (Rule 6.301(D)(6) and Rule 6.401(A)(2))**

Should the existing instream dissolved oxygen requirements be maintained? If so, how is instream dissolved oxygen determined? Are there specific study design requirements (e.g., continuous vs. discrete sampling, number of samples, season, measures of central tendency, etc.)?

**XI. Language is contradictory and unclear as to how losing stream studies should be conducted.**

<sup>13</sup> The geomean criteria for fecal coliform defined by Rule 2.507 does not apply to weekly measures of central tendency.

<sup>14</sup> For calculation and assessment of Geometric Mean – calculated on a minimum of five (5) samples spaced evenly and within a thirty (30)-day period.

<sup>15</sup> Note: there is no mention of averaging limitations that apply to ERWs and NSWs in Reg. 6.301(C)(2)(d) (approved by the Arkansas Pollution Control and Ecology Commission, August 28, 2015).

It is understood that best professional judgement is necessary in losing stream determinations, and not every potential scenario can be forecast and addressed in the proposed rule. In order to provide clarity on how the current administrations interprets losing stream studies, please provide a detailed response to the following questions:

- How is 7Q10 flow determined?
- What happens if capturing 7Q10 or one (1) cfs flow is not feasible?
- Does the existence of a tributary entering the stream between the discharge location and the point two (2) miles downstream affect the calculation? For example, consider: the streamflow at the proposed discharge location is two (2) cfs, the tributary contributes three (3) cfs, the streamflow 2 miles downstream is 1.9 cfs. Is this a losing stream segment?
- What about the situation where a two (2) cfs stream goes completely dry a half mile downstream and then resurges within the two (2) mile stretch with a flow of 1.8 cfs?
- 6.301(C)(2) - "representative of seasonal flow" seems to be in conflict with 7Q10 requirements. Is there another interpretation?
- 6.301(B) indicates that monitoring locations should be selected based on outfalls and distance downstream regardless of hydrogeomorphic characteristics (i.e., riffle, run, pool, glide). Is this correct?

**XII. The presumption that, unless proven otherwise, all streams in karst terrain/geology are losing streams is a precautionary approach that is protective of sensitive waters of the state.**

We fully support the addition of the following sentence to Rule 6.301(B) –

*“If the topography, geology, flow data, or other stream-specific information indicates that a stream may be a losing stream, then the stream segment should be presumed to be a losing stream unless a specific evaluation is made of the stream that concludes the stream segment is not a losing stream.”*

**XIII. Hydrologic Unit Codes should be defined in Rule 6.401 (D).**

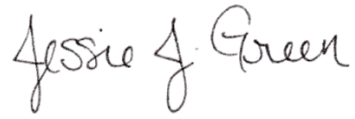
**XIV. Effluent limitations for Ecologically Sensitive Waterbodies should never exceed 10/15 mg/L CBODs. (Rule 6.401(B)(2))**

Please provide rationale as to why lower limitations would be warranted in the event more species-specific information is not available.

**XV. Monthly monitoring and reporting requirements should be required for point source discharges into watersheds of waters officially listed in Arkansas’s impaired waterbody list (303(d)). Rule 6.404.**



Respectfully submitted,



Jessie J. Green  
Executive Director & Waterkeeper