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VIA EMAIL

Secretary Becky Keogh

Arkansas Department of Energy and Environment

Division of Environmental Quality

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

The Arkansas Chapter of the American Fisheries Society is the largest organization of professional fisheries and aquatic biologists in the state of Arkansas. With approximately 200 members, the Arkansas Chapter adheres to the goals of our parent society, the American Fisheries Society, which include the promotion of scientific research and sustainable management of fisheries resources and their habitats.

The Chapter supports the proposed moratorium on medium and large concentrated animal feeding operations (CAFOs) in the Buffalo River watershed, and actions to strengthen regulations in sensitive karst terrain. In addition to supporting comments, the Chapter submits minor grammatical changes and questions and comments to unclear language.

**Rule 5.901** – Remove “National” from references to Buffalo River watershed. “Buffalo National River” denotes the National Park Service geographic entity. “Buffalo River watershed” is more appropriate.

**Rule 5.901(A)** - **“**United States Geological Survey” is the appropriate name.

**Rule 5.901(B)** – Why is this limited to swine? From a nutrient standpoint, wouldn’t other types of medium and large CAFOs (e.g., turkey, chicken, cattle) also contribute significant pollutants of concern?

**Rule 6.206(A)(3)** – Lampreys are fish; this is redundant.

**Rule 6.301(B) -** Does the existence of a tributary entering the stream between the discharge location and the point 2 miles downstream affect the calculation? For example: the streamflow at the proposed discharge location is 2 cfs, the tributary contributes 3 cfs, the streamflow 2 miles downstream is 1.9 cfs. Is this a losing stream segment?

* What about the situation where a 2 cfs stream goes completely dry a half mile downstream and then resurges within the 2 mile stretch with a flow of 1.8 cfs?
* Although the “bedrock” can be cavernous, a better word might be “soluble”.
* A requirement should be included that the geology is reviewed by an ADEQ geologist.
* As written this states that all streams in karst terrain/geology should be assumed to be losing streams unless proven otherwise. We believe this is a prudent and support this added language.

**Rule 6.301(C)(2)** – “Seasonal flow” language contradicts 6.301(B) that indicates losing stream studies must be conducted at either a flow of 7Q10 or one (1) cfs.

**Rule 6.301(C)(3)(a) –** A professional hydrologist should conduct these studies, rather than owner or operator.

**Rule 6.301(D)(4) –** The geometric mean is always lower than the arithmetic mean, or “average.” This revision allows for higher excursions in discharge concentrations that are considered allowable.

* “However, at no time shall the fecal coliform content exceed a geometric mean of 200 colonies per 100 milliliters in any water defined as an Extraordinary Resource Water or Natural and Scenic Waterway” – how many samples and over what time frame does this apply? This inclusion weakened the requirements. Before this revision, no individual sample could exceed 200 colonies per 100 milliliters.

**Rule 6.301(D)(5)** – What is the justification of 10 mg/L? This concentration may be applicable for protection of infants from blue baby disease, but this does not seem applicable here. Nitrogen, or -N, should also be included.

**Rule 6.301(D)(6) –** Maintain instream dissolved oxygen concentrations at what value or values? This should be specified.

**Rule 6.401(A)(2)** – It is unclear whether dissolved oxygen should be maintained at existing concentrations or criteria outlined in Regulation 2.

**Rule 6.401(D) –** Consider replacing “basin” with “watershed” for consistency throughout document.

**Rule 6.403(A) –** In other places throughout the document “7Q10” is used. Replace for consistency.

**Rule 6.404(H)** – Define “season when early life stages are present.” Does this apply to all species? Life history studies have not been conducted for all species present throughout Arkansas. Much of the spawning information referenced in Fishes of Arkansas (Robinson and Buchanan 1988) is outdated and sourced from life history studies conducted outside of Arkansas. However, there is a wide range of known spawning seasons for native fishes, commonly spring through fall. Therefore, early life stages of fishes are found throughout the entire year.

**Chapter 6** - Is there a difference between "basin" and "watershed"? They seem to be used interchangeably in this document. Why are both used in this heading?

* Remove “National” from references to Buffalo River watershed. “Buffalo National River” denotes the National Park Service geographic entity. “Buffalo River watershed” is more appropriate.

**Rule 6.602(A) – “**United States Geological Survey” is the appropriate name.

**Rule 6.602(B)** – Why is this limited to swine? From a nutrient standpoint, wouldn’t other types of medium and large CAFOs (e.g., turkey, chicken, cattle) also contribute significant pollutants of concern?

Respectfully submitted,



Matt Schroeder

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American Fisheries Society