

**From:** [Lin Wellford](#)  
**To:** [ImpairedWaterbodies\\_Comments](#)  
**Cc:** [Hunt.Laura@epa.gov](mailto:Hunt.Laura@epa.gov)  
**Subject:** Data from Big Creek Research Extension Team shows impairment  
**Date:** Wednesday, March 16, 2016 11:45:31 AM

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Arkansas Department of Environmental Quality

5301 Northshore Drive

North Little Rock, AR 72118-5317

[ImpairedWaterbodies\\_Comments@adeq.state.ar.us](mailto:ImpairedWaterbodies_Comments@adeq.state.ar.us)

March 16, 2016

Dear Director Keogh,

I am providing these comments in regard to the water quality of the Upper Buffalo River-Big Creek tributary of the Buffalo National River concerning the 2016 303(d) list of impaired streams. The Buffalo National River is considered an Extraordinary Resource Waters (ERW). The designation of an ERW includes the entire watershed of this waterbody (Regulation 2.302 (A)) and therefore includes the 5<sup>th</sup> largest tributary of the Upper Buffalo called Big Creek located in Newton County.

I reviewed data recently obtained through the Arkansas Freedom of Information Act provided by ADEQ. I presume the same data set was used by your staff to assess the Upper Buffalo-Big Creek for impairment. These data were collected by the UA Big Creek Research and Extension Team (BCRET) and funded by the Arkansas tax payer. I have reviewed the information and determined referencing the standards noted in Regulation 2 and the Draft 2016 Integrated Water Assessment and Monitoring Report that Upper Buffalo River-Big Creek meets the criteria as an impaired stream for the following reasons.

1. Using the file "Big Creek Water Analysis":

BC6-Upstream (worksheet). The BC6 sampling station is located downstream of the C& H hog operation at approximately Latitude 35.8923, Longitude -93.0583.

From 5/13/14-6/9/14 during the primary contact season (May 1-September 30) for E. coli, 5 samples were collected during a 30 day period (Regulation 2.507) and the Geometric mean for E. coli of 126 colonies/100ml was exceeded:

5/13/14	920.8	
5/19/14	133.3	
5/28/14	290.9	
6/5/14	307.6	
6/9/14	410.6	Geometric Mean=339 col/100ml

2. From 6/19/14-7/15/14 during the primary contact season for E. coli samples 5 were collected during a 30 day period that exceeded the Geometric mean for E. coli of 126 colonies/100ml:

6/19/14	36.4	
6/24/14	28150.0	
7/1/14	238.2	
7/7/14	1732.9	
7/15/14	686.7	Geometric Mean=783 col/100ml

3. There were 22 data points for E coli during the "primary contact" season

May 1-September 30, 2014. Of the 22 samples, 8 samples (36% of the samples) exceeded the single grab limit of 298 colonies/100 ml. According to Regulation 2.507, there must be at least 8 samples collected during the primary contact season. No more than 25% of the samples can exceed the single grab limit during the primary contact season (p. 41-Draft 2016 AR Integrated and Monitoring Plan).

4. Using the file "Big Creek Water Analysis":

BC7-Downstream (worksheet) is located downstream from C&H hog operation

approximately at Latitude 35.9393, Longitude -93.0728.

From 5/28/14-6/24/14 during the primary contact season for E. coli 5 samples were collected during a 30 day period that exceeded the Geometric mean for E. coli of 126 colonies/100ml:

5/13/14	1553.1	
5/19/14	53.7	
5/28/14	209.8	
6/5/14	201.4	
6/9/14	517.2	Geometric Mean=283 colonies/100 ml

5. From 6/24/14-7/23/14 during the primary contact season for E. coli 5 samples were collected during a 30 day period that exceeded the Geometric mean for E. coli of 126 colonies/100ml:

6/24/14	24950	
7/1/14	129.6	
7/7/14	649.8	
7/15/14	816.4	
7/23/15	94.9	Geometric Mean=697 colonies/100 ml

6. From 9/3/14-9/30/14 during the primary contact season for E. coli samples 5 samples were collected during a 30 day period that exceeded the Geometric mean for E. coli of 126 colonies/100ml:

9/3/14	65.7	
9/11/14	980.4	
9/18/14	579.4	
9/23/14	47.1	
9/30/14	85.7	Geometric Mean=172 colonies/100 ml

7. In addition, there were 22 data points for E coli during the "primary contact" season

May 1-September 30, 2014. According to Regulation 2.507, there must be at least 8 samples collected during the primary contact season. No more than 25% of the samples can exceed the single grab limit during the primary contact season (p. 41-Draft 2016 AR Integrated and Monitoring Plan). Of the 22 samples, 7 samples (**31% of the samples**) exceeded the single grab limit of 298 colonies/100 ml.

8. Big Creek at Carver Analysis:

The Big Creek USGS gaging station (07055814) is located at the bridge adjacent to the Carver Cemetery at Latitude 35°58'44", Longitude 93°02'36" NAD27.

Using the "2014 Data" spreadsheet, Dissolved Oxygen (DO) below 6.0 mg/L ,the primary critical limit (Regulation 2.505), **occurred 14% of the time exceeding the 10% threshold** (Page 39, Draft 2016 Integrated Water Quality and Monitoring Assessment Report) during the period of record provided 6/18/14-10/21/14.

As a result of the analyses listed above based on ADEQ's criteria and standards, I am requesting that ADEQ place Upper Buffalo River-Big Creek on the 2016 list of impaired streams. There is ample evidence to list this tributary of the Buffalo National River as impaired.

ADEQ has delegated authority from EPA to implement provisions from the Federal Clean Water Act, yet arbitrarily and capriciously chose to ignore information provided by the University of Arkansas BCRET and the US Geological Survey in assessing Upper Buffalo Big Creek during their assessment and evaluation process. As an Arkansas tax payer, I am greatly concerned about the ADEQ's scientific integrity and ability to comply with the legal

and scientific requirements of the Clean Water Act.

Sincerely,  
Lin Wellford  
Ozark River Steward  
Green Forest, AR