

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

WHITE RIVER
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17 July 2018

Caven Clark, Public Information Officer

Buffalo National River

402 N. Walnut

Harrison, AR 72601

caven_clark@nps.gov

Re: 13 July 2018 Buffalo River Water Quality Press Release

Mr. Clark,

Thank you for your efforts to advise the public about how to avoid illness when recreating in the Buffalo National River (BNR) and for the information provided about how *“concerned citizens, communities, and agencies are working together to better understand the sources of the problems, determine the potential risks, and evaluate the best practices for eliminating or managing the threats.”*

White River Waterkeeper (WRW) is ecstatic to hear about this multifaced partnership to address algal and associated concerns related to the health of our first national river, and those that visit. Regarding the 13 July 2018 press release from BNR, we'd like to inquire further, share information that may be of use to your efforts, and extend a lending hand as a stakeholder and partner in your ongoing efforts to address potential illnesses related to harmful algae in the Buffalo River.

Re: *“Please note that entities other than the NPS, ADEQ, and USGS also release water quality data. E. coli readings that may appear on social media and other sources are examples of citizen science. The processes used for analyzing these readings can take from three to five days. By the time the results are posted, the concern may have passed.”*

If BNR knows of other “citizen science” organizations besides White River Waterkeeper collecting these data, could BNR pass along contact information so we can coordinate with other organizations and try to maximize our sampling and resource efforts? As Ms. Miller, your acting Superintendent, and your staff scientists are aware – White River Waterkeeper is utilizing IDEXX methods, the same as Buffalo National River. In fact, much of our Quality Assurance Project Plan was adopted directly from BNR's **Quality Assurance Project Plan (QAPP) for Surface Water Sampling for Buffalo National River's Water Quality Monitoring Program**. In addition, I left my position as a Senior Ecologist with Arkansas Department of Environmental Quality



(ADEQ) after spending almost four years in the Water Quality Planning Section. Along with ample experience with water quality monitoring, I also helped develop several standard operating procedures for various monitoring efforts, which included revising the agency's quality assurance measures for *E. coli* monitoring. You can feel assured that our data are scientifically defensible and upheld by stringent QA/QC procedures.

Feel free to contact me if WRW could provide BNR with any of our monitoring data to help supplement data gaps BNR may have. As I'm sure you are aware with BNR's *E. coli* monitoring, our results are also available the day following sample collection. If there is additional information I can provide, or if BNR has suggestions or concerns for utilizing WRW's data to help benefit the park service, I would be more than happy to discuss.

Re: *"The National Park Service (NPS) routinely monitors water quality at 32 sites along the river, and has done so since the 1980s. Some of the parameters that are measured include E. coli, fecal coliform, turbidity, nutrients (nitrogen and phosphorus), water temperature, conductivity, pH, and dissolved oxygen."*

One way that BNR could help keep the public informed about current water quality conditions is through [Swim Guide](#)¹. It's a free platform that many government agencies (e.g., Florida Department of Health², Georgia Department of Environmental Protection³, Australian Government – National Capital Authority⁴) and non-government organizations (e.g., White River Waterkeeper⁵) utilize to bring the public easy to interpret and access information about recreational water quality. WRW utilizes the Swim Guide platform as one of our modes of communicating our data. We would be happy to give BNR a tutorial or offer to upload BNR's data – with source information attributed to BNR – free of charge. If BNR would forward results to WRW as soon as they are samples are read, we would gladly upload them for the public.

Re: *"the park has not confirmed any cases of illness directly linked to algae."*

What are the details surrounding how the park would confirm a case of illness directly linked to algae? White River Waterkeeper has developed a [Recreational Water Quality Illness survey](#)⁶ in response to the reports of illness after recreating in the Buffalo River. WRW's intent for the survey is to document and identify epidemiological trends related to illness reports. We will be sure to keep BNR informed of our summary results. Any feedback BNR could provide regarding how data or survey questions could be more meaningful and helpful, or better address BNR's specific concerns, are welcome suggestions. Participants are informed that WRW will not share any personal or identifying information related to survey responses. If BNR has a contact person for documenting similar reports, please forward their contact information.

¹ <https://www.theswimguide.org/>

² <https://www.theswimguide.org/beach/1754>

³ <https://www.theswimguide.org/beach/5854>

⁴ <https://www.theswimguide.org/affiliates/national-capital-authority-australia/>

⁵ <https://www.theswimguide.org/affiliates/white-river-waterkeeper/>

⁶ <https://goo.gl/forms/3MW4nogDv4C8cKKE2>



Re: *“In response to this summer’s significant algae growth, a sampling and monitoring project begins next week in a partnership with Arkansas Department of Environmental Quality (ADEQ) and the US Geological Survey (USGS). The project includes mapping and sampling areas to determine what species of algae are present. The results of this study will help direct future actions relative to managing potential health risks to visitors and overall impacts to water quality.”*

What are the details of the algae monitoring project? What does the study design entail and what parameters will be tested? White River Waterkeeper has five interns this summer, and we would be pleased to lend a hand in collecting any field observations that may aid your joint efforts. Also, a component of the benefits Waterkeepers provide to their communities includes monitoring and patrolling of their waterbodies. My background provides an added benefit at your disposal, and we would be happy to partner as a member of the multifaceted partnership BNR has indicated as working *“to better understand the sources of the problems, determine the potential risks, and evaluate the best practices for eliminating or managing the threats.”*

Has BNR determined a response plan for when an advisory will be issued and what would trigger a closure? The National Park Service is listed as a member of the [Arkansas Harmful Algal Bloom Task Force which has proposed advisories](#) be issued for concentrations of Microcystin and Cylindrospermopsin at concentrations higher than [proposed by U.S. Environmental Protection Agency](#) (Table 1). **If less protective of public health than EPA’s recommended advisory thresholds, what was the basis for BNR’s chosen action value?** Although two of the more common cyanotoxins associated with harmful algal blooms, if it is discovered that cyanobacteria producing other toxins are present, how will a response plan and advisory thresholds be determined?

Table 1. Comparison of EPA and Arkansas Harmful Algal Bloom (HAB) Task Force action advisory thresholds for Microcystins and Cylindrospermopsin.

	Microcystins (µg/L)	Cylindrospermopsin (µg/L)
EPA Advisory ⁷	4	8
AR HAB Advisory ⁸	10	10
AR HAB Closure ⁹	20	20

We are eager to join BNR as community partners in addressing water quality concerns throughout the watershed. WRW has funding available to develop informational signs to post at

⁷ USEPA. 2016. Fact Sheet: Draft Human Health Recreational Ambient Water Quality Criteria/Swimming Advisories for Microcystins and Cylindrospermopsin. EPA 822-D1-6001. <https://www.epa.gov/sites/production/files/2016-12/documents/draft-hh-rec-ambient-water-swimming-factsheet.pdf>

⁸ Olesen, Brie and Tate Wentz. 2016. Monitoring Harmful Algal Blooms in Arkansas, p. 19. https://arkansasafs.wildapricot.org/resources/Website/2018%20Meeting%20Presentations/12_Olsen_HABs%20in%20Arkansas.pdf

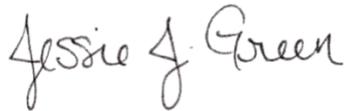
⁹



our Swim Club monitoring locations within the park service boundary informing people of what water quality data are available, how often they are collected, how to access data, and who is collecting data. BNR's partnership in allowing signage related to WRW's Buffalo River Swim Guide Program would provide a great benefit to the public.

We look forward to future discussions.

Respectfully,



Jessie J. Green
Executive Director & Waterkeeper