

From: [Sam Cooke](#)
To: [ImpairedWaterbodies_Comments](#)
Subject: 303(d) Comment
Date: Tuesday, March 15, 2016 8:42:39 PM
Attachments: [Friends 303d Comments 3.15.16-5.docx](#)
[Lake Norfolk DO reading.JPG](#)

Mr. Jim Wise
Arkansas Department of Environmental Quality
Water Division

Please accept the comment attached. Please let me know if you are unable to receive the files.

Sam Cooke

PO Box 61
Mountain Home, Arkansas 72654



ImpairedWaterbodies_Comments@adeq.state.ar.us.

Mr. Jim Wise
Arkansas Department of Environmental Quality
Water Division
5301 Northshore Drive
North Little Rock, AR 72118

Regarding: Proposed 2015 303(d) list and the draft 2016 Arkansas Integrated Water Quality Monitoring and Assessment Report (305(b) Report).

Friends of the North Fork and White Rivers (*Friends*) does not agree with the re categorization of Norfork Tailwater section from Impaired (Category 5) to Non-impaired with TMDL – Category 1.b.

Friends understanding of why a stream would be re-designated as Category 1b-Non-Impaired stream is that the last time data was collected by ADEQ for the waterbody, it was meeting its standard [6 ppm] at a given location. However, because of its history of poor dissolved oxygen(DO) conditions, it will continue to have a TMDL (6 ppm µg/L) standard that must be met. The TMDL standard is a minimum DO level for trout, not an optimum level. Mild degradation of the trout community occurs at this DO level and continues in severity of degradation with lower DO levels. Fish kills continue to occur at times due to low DO levels during critical periods.

The Norfork tailwater section still experiences the same problems with DO it did when the TMDL document was written by ADEQ. The only significant change has been the implementation of minimum flow in 2013. Any contribution to DO from minimum flow is a bonus and minimum flow has not been in place consistently or long enough to measure its contribution to solving low DO problems. Initial water quality and flow modeling stated plainly that minimum flow was not expected to improve DO levels in the tailwater, but would improve aquatic life habitat. The dam siphon was designed to create additional flow during periods of reduced hydropower generation.

We realize that Southwestern Power Administration has invested infrastructure updates as an attempt to address low DO concentrations below the dam. As was acknowledged by ADEQ in the 2009 TMDL on Page 2-6: “In accordance with operational plans developed by the White River DO Committee... The Southwest Power Administration (SWPA) voluntarily reduces generation at both Bull Shoals and Norfork when DO concentrations in the tailwaters are low. But, while the operational modifications have improved DO in the hydropower releases to a certain extent, it has not been improved up to the state water quality standard of 6.0 mg/L during critical periods.” While the DO levels have not been consistent with any flow rate, historically the DO levels continue to be below the 6.0 level in the drier critical months with lower flow.

Since 2009, two to three USGS gages were temporarily located directly below Norfork Dam that provide continuous (hourly) DO readings during critical periods (May through December). Friends of the Rivers joins AGFC in requesting ADEQ obtain DO data over sufficient periods of time (to account for flood

events) from the appropriate gages prior to making a final decision to recategorize Norfolk Tailwaters as Category 1b- Non-Impaired Stream with a TMDL. To utilize monthly DO reading from only one River Ridge Gage (~3 miles downstream) is inappropriate since it is not representative of the overall DO conditions during the critical period.

The TMDL study on the tailwaters did not address the cause of the low DO levels. Low DO levels in the hypolimnion lake level have been documented by ADEQ and the Twin Lakes Walleye Club (file attached). The ADEQ acknowledges that it is most likely caused by anthropogenic affects upon the lake watershed, and that the determination of cause was beyond the scope of the TMDL.

While it is safe to say that the dam and the lake are the cause of the low DO levels in the tailwater, the cause of the low DO levels in the lake are still not known. In spite of attempts to address the tailwater DO issue, nothing has successfully improved the DO levels during the well documented critical periods. Friends considers that DO levels remain insufficient to meet water quality standards for designated use, and request that the North Fork River tailwater stretch remain on the 303(d) list.

Sincerely,

Sam D. Cooke

President, Friends of the North Fork and White Rivers

Friends of the North Fork and White Rivers is an Arkansas 501(c)(3) non-profit organization devoted to creating an ongoing dialogue where individuals, groups, and government agencies can work together to conserve, restore and enhance these beautiful rivers.

From: [Sam Cooke](#)
To: [ImpairedWaterbodies_Comments](#)
Subject: Revised 303d Comment
Date: Wednesday, March 16, 2016 3:46:33 PM
Attachments: [Friends 303d Comments 3.15.16-5.docx](#)

Jim Wise
ADEQ
Water Division

Mr. Wise,

Please accept this corrected letter. I had use a wrong date(year) in the original. I apologize for the inconvenience.

Sam cooke

PO Box 61
Mountain Home, Arkansas 72654



ImpairedWaterbodies_Comments@adeq.state.ar.us.

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Arkansas Department of Environmental Quality
Water Division
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The Norfork tailwater section still experiences the same problems with DO it did when the TMDL document was written by ADEQ. The only significant change has been the implementation of minimum flow in 2013. Any contribution to DO from minimum flow is a bonus and minimum flow has not been in place consistently or long enough to measure its contribution to solving low DO problems. Initial water quality and flow modeling stated plainly that minimum flow was not expected to improve DO levels in the tailwater, but would improve aquatic life habitat. The dam siphon was designed to create additional flow during periods of reduced hydropower generation.

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