



Mr. Jake Harper  
Department of Energy and Environment  
5301 Northshore Drive  
North Little Rock, AR 72118

August 4, 2020

**Document: Regulation 2 – Establishing Water Quality Standards for Surface Waters of the State of Arkansas**

Dear Mr. Jake Harper,  
IDEXX appreciates the opportunity from the Arkansas Department of Energy and Environment (Department) to submit our input on Arkansas' Regulation 2: Establishing Water Quality Standards for Surface Waters. At this time, IDEXX would like to request the Department to consider the following comments.

We suggest removing the bacteria indicator of fecal coliforms included as an acceptable bacterium for the assessment of ambient waters, stated within Chapter 5, section 07 (2.507).

The rationale for the suggested edit is that *Escherichia Coli* (*E. coli*) are better indicators for fecal contamination versus fecal coliform, thus more protective to human health.

Fecal coliform bacteria are commonly identified as being thermotolerant bacteria (able to grow at 44.5 °C) [1]. Thermotolerant bacteria consists of *E. coli*, Klebsiella, Enterobacter, and Citrobacter species [1,2]. When testing for fecal coliforms, the population of the bacteria present can affect the fecal coliform results; for example, Klebsiella, Enterobacter, and Citrobacter species are false-positive indicators of fecal contamination as they are from nonfecal origin [2]. It has been found, up to 15% of Klebsiella (nonfecal origin) are thermotolerant and up to 10% of *E. coli* are not thermotolerant, thus potentially causing an error rate of 25% when testing for fecal coliforms [3]. *E. coli* are the only bacteria, of the coliform bacteria group, that come from the intestinal tract, have found to be more specific to the detection of fecal contamination and are the definitive indicator of fecal contamination in the U.S. Drinking water regulations [3,4] and are included as the EPA's recommended bacteria for recreational surface waters [5].

While we understand that changing a bacteria requirement could be beyond the scope of the current proposed changes to Regulation 2, we hope that the Department will consider removing the allowance of fecal coliforms as an acceptable indicator for the assessment of ambient waters to better protect public health. IDEXX appreciates the opportunity to provide this comment and looks forward to the next steps in the rule changing process.

Respectfully submitted,

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References

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