



Paula Wilson
Idaho Department of Environmental Quality
1410 N. Hilton, Boise, ID 83706

April 16, 2020

Document Docket Number: 58-0125-2001, Rules Regulating the IPDES Program

Dear Ms. Paula Wilson,

IDEXX appreciates the opportunity from the Idaho Department of Environmental Quality (Department) to submit our input on the Rules Regulating the Idaho Pollutant Discharge Elimination System (IPDES) Program, IDAPA 58.01.25: Docket No. 58-0125-2001. At this time, IDEXX would like to request the Department to consider the following comments.

1. Suggest revising the bacteria indicator from fecal coliform to *Escherichia coli* (*E. coli*), as indicated within sections: 07 (d) i. (pg 8); 07 (f) iii. (pg 9); 08 (b) iii. (pg 12); 08 (c) i. (pg 13), 11 (g) ii. (1) (pg 19); 18 (b) iv. (2) c. (pg 38).

Rational: *E. coli* are a better indicator 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].

2. Suggest clarifying all references to the bacteria parameter of fecal streptococcus.

Rational: Enterococci is referenced as a bacteria parameter within section 07 (d) i. (pg8). This parameter is noted within the rules to have been "previously known as fecal streptococcus." It's unclear if all remaining references, within the regulation, to fecal streptococcus are to be enterococci.

While we understand that changing a bacteria requirement, from fecal coliform to *E. coli*, could be beyond the scope of the current proposed changes to the IDAPA 58.01.25, we hope that the Department will consider revising this bacteria parameter to better protect public health. It's also our understanding that the Idaho's recreational bacteria indicators have been revised to follow the recommendations within the U.S. EPA's 2012 Recreational Water Quality Criteria and revising the wastewater indicator to *E. coli* would allow for better data comparability. IDEXX appreciates the opportunity to provide this comment and looks forward to the next steps in the rule changing process.

Respectfully submitted,



Jody Frymire | Regulatory Affairs Specialist | IDEXX Water | One IDEXX Drive, Westbrook Maine
| idexx.com/water | Jody-Frymire@idexx.com | (207) 556-4840

References

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2. Doyle, M., & Erickson, M. (2006). Closing the Door on the Fecal Coliform Assay. *Microbe*, Volume 1, Number 4, page 162.
3. Allen, M., Edberg, S., Clancy, J., & Hruday, S. (2013). Drinking water microbial myths. *Critical Reviews in Microbiology*. ISSN: 1040-841X (print), 1549-7828 (electronic). Retrieved from <http://informahealthcare.com/mb>
4. Cummings, D. (n.d.). The Fecal Coliform Test Method Compared to Specific Tests for Escherichia coli. Retrieved from IDEXX: <https://123.idexx.com/resource-library/water/water-reg-article9B.pdf>
5. U.S. Environmental Protection Agency. Recreational Water Quality Criteria. Office of Water 820-F-12- 058. Retrieved from <https://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf>