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Kathy Cooper

From: ecomment@pa.gov
Sent: Tuesday, December 19, 2017 8:42 AM
To: Environment-Committee@pasenate.com; IRRRC; eregop@pahousegop.com; environmentalcommittee@pahouse.net; regcomments@pa.gov; apankake@pasen.gov
Cc: c-jflanaga@pa.gov
Subject: Comment received - Proposed Rulemaking: Triennial Review of Water Quality Standards



Re: eComment System

The Department of Environmental Protection has received the following comments on Proposed Rulemaking: Triennial Review of Water Quality Standards.

Commenter Information:

Jody Frymire
IDEXX Water (jody-frymire@idexx.com)
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Westbrook, ME 04092 US

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Comments entered:

Attached is a comment on the Environmental Quality Board's Triennial Review of Water Quality Standards for the Proposed Rulemaking - 25 Pa Code, Chapter 93 Water Quality Standards at 47 Pa.B. 6609 - PA Bulletin Document Number: 17-1766.

The comment agrees with the Environmental Quality Board's proposed change of bacteria criteria for primary contact recreational water from fecal coliforms to Escherichia coli and recommending the bacterial indicator year-round be for E. coli as well as for secondary contact recreational water.

Thank you,

Jody Frymire
Regulatory Affairs Associate II
IDEXX Water

These links provide access to the attachments provided as part of this comment.

Comments Attachment: [PA Triennial Review Comment 2017.pdf](#)

Please contact me if you have any questions.

Sincerely,
Jessica Shirley

Environmental Quality Board
P.O. Box 8477
Harrisburg PA 17105-8477

Triennial Review of Water Quality Standards
25 Pa Code, Chapter 93 Water Quality Standards at 47 Pa.B. 6609 - PA Bulletin Document No. 17-1766

December 15, 2017

To Whom It May Concern,

IDEXX commends the Environmental Quality Board (Board) on the proposed amendments to the Pennsylvania Water Quality Standards bacteria criteria for recreational waters.

At this time, IDEXX would like to support the amendments the Board is proposing to the bacteria criteria, in changing the primary contact recreational water bacterial indicator from fecal coliform to *Escherichia coli* (*E. coli*), applied Statewide, but would like to recommend testing for *E. coli* year-round and as the bacterial indicator for secondary contact recreational waters as well.

1. *E. coli* is a better indicator for fecal contamination than fecal coliforms.

- a. Rationale:

The fecal coliform is 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*, & *Citrobacter* species are false-positive indicators of fecal contamination as they are from nonfecal origin [2]. It has been found that 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* is the only bacteria of the coliform bacteria group that comes from the intestinal tract and being found to be much more specific to the detection of fecal contamination, so much so, that *E. coli* is the definitive indicator of fecal contamination in drinking water [3,4].

IDEXX strongly recommends using the same indicator year-round and for primary and secondary contact recreational waters, not only due to the *E. coli* being a better fecal indicator, but using the same indicator will help maintain a laboratory's testing work flow and will provide consistent data year-round. If testing with two different bacterial indicators year-round the results may not correlate as the population of bacteria present could affect the testing results, for example: if the water sample has a high number of thermotolerant coliforms along with thermotolerant *E. coli*, then the fecal coliform results could be higher when compared to *E. coli* or vice versa.

- b. References:

Comment on the Environmental Quality Board's Triennial Review of Water Quality Standards for the Proposed Rulemaking - 25 Pa Code, Chapter 93 Water Quality Standards at 47 Pa.B. 6609 - PA Bulletin Document Number: 17-1766

Summary/Cover Page: Comment agreeing with the Environmental Quality Board's proposed change of bacteria criteria for primary contact recreational water from fecal coliforms to *Escherichia coli* and recommending the bacterial indicator year-round be for *E. coli* as well as for secondary contact recreational water.

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1. Warden, Paul; DeSarno, Monique; Volk, Sarah; and Eldred, Bradley. Analytical Services. Evaluation of Colilert-18 for Detection and Enumeration of Fecal Coliform Bacteria in Wastewater Using the U.S. Environmental Protection Agency Alternative Test Procedure Protocol. *Microbiological Methods, Journal of AOAC International*. Volume 94, Number 5: 2011
2. Doyle, Michael. Erickson, Mary. Closing the Door on the Fecal Coliform Assay. *Microbe*, Volume 1, Number 4, page 162: 2006
3. Allen, Martin; Edberg, Stephen; Clancy, Jennifer; Hrudehy, Steve. Drinking water microbial myths. *Critical Reviews in Microbiology*; ISSN: 1040-841X (print), 1549-7828 (electronic): 2013: <http://informahealthcare.com/mb>
4. Cummings, Dennis. The Fecal Coliform Test Method Compared to Specific Tests for *Escherichia coli*. IDEXX: <https://www.idexx.com/resource-library/water/water-reg-article9B.pdf>

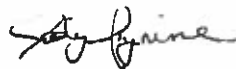
IDEXX strongly encourages the Board to amend the bacterial indicator for the State's Water Quality Standards for recreational water from fecal coliforms to *E. coli*. Hopefully this comment strengthens the rationale behind the bacterial change for primary contact recreational waters, but perhaps will help the Board consider year-round testing of *E. coli* and help proactively change the State's Water Quality Standards for secondary contact recreational water to *E. coli* as well, prior to the finalization of the EPA's recommendations on secondary contact recreational criteria. We appreciate the opportunity to provide these comments and look forward to the next steps on the proposed rule.

Respectfully jointly submitted,



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