**Drinking Water
Engineering and Science
Discussions**

Interactive
Comment

Interactive comment on "Application of DVC-FISH method in tracking *Escherichia coli* in drinking water distribution networks" *by* L. Mezule et al.

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The manuscript by Mezule et al refers to the application of a DVC-FISH method in tracking Escherichia coli in drinking water distribution networks. The need for new and more accurate methods to assess the presence of pathogens and surrogates in water is clearly needed and the DVC-FISH method might be an interesting option in the future.

Apart from the authors interpretations, what I believe that can be taken from the manuscript (or at least more deeply discussed) is that the accumulation of viable but not cultivable E.coli might be acceptable at a certain level (yet to determine) in biofilms and at a lower extent in suspension and not bring any water safety concerns to consumers. At least this is in agreement with the fact that no outbreaks were observed

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Interactive Discussion

Discussion Paper

during the time that the study took place. What are the authors views on this matter? How reliable is the surveillance of the waterborne outbreaks? Would it be possible in the future to indicate a threshold concentration for which the VBNC E. coli presence might cause disease in humans?

For the size of the network, it might be advisable to increase the number of sampling sites in future studies, or else select a subsection of the network. This would allow for an easier interpretation and correlation of the different parameters, and a better control of the system under study.

Specific comments: Page 519, lines 13-14: "The estimated recovery rate for the concentration of drinking water was 81 ±33 %". How was this estimated?

Page 519, line 22: Please give more details on the model of the microscope and separate the parts related to the microscope filters. Only one filter was specified. Was the PNA probe signal detected in the same filter as the DAPI signal?

Page 521, line 4: How were the detection limits assessed? Are there any references or experimental work supporting those values?

I would like to see some statistics on the manuscript. Are differences between results statistically meaningful (for instance, when comparing between seasons or samples from different locations).

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