**Drinking Water
Engineering and Science
Discussions**

Interactive comment on "Understanding and managing large sensor networks" by D. D. Ediriweera and I. W. Marshall

D. D. Ediriweera and I. W. Marshall

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Dear Referee

Thank you for taking the time to comment on the paper in discussion. Please find below my responses to your comments.

While as you have correctly pointed out the analysis presented within the paper does not directly investigate Drinking Water Systems, the objective of the work has been to identify limitations of the Sensing Elements within such systems which play a large role in their successful management. Compromised data from the Sensor Network therefore has significant impact on managing Drinking Water Systems, especially where the level of accuracy of an underlying sensor network is unclear due to its limitations. Such

issues in sensing will cause any follow up system or decision making process, which uses its data to be left largely vulnerable. To this end the study has aimed to illustrate: (1) how easy it is to overlook necessary design considerations of such sensing elements – a clear problem exists here as the selected real world case study demonstrates; and (2) basic principles which could be considered in the future to avoid such problems.

Regarding the issue which you raise on the study not specifically identifying why certain failures has taken place, this is in fact part of the findings which the paper attempts to illustrate - i.e. that due to the lack of thought in designing the sensor system, no device logs, or other failure information is available, and that therefore it is impossible to accurately identify what causes may be been responsible for majority of the failures – strongly affecting operator ability to maintain the system. The limited diagnosis provided in the paper is completely based on studying the measurements database collected during the operational period of the network.

While the recommendations of the paper may rightly appear to be not surprising to experienced eyes, considering that the problem is a real as found within the examined real world case study, it is clear that some implementers of these systems are naive to these considerations, and hence the opinion of the authors that the analysis presented within the paper and its recommendations are useful.

Regarding the final comment on language use and mistakes, if selected for publication, I am happy to review the paper and fix these as suggested.

Thank You