

Interactive comment on “MUWS (Microbiology in Urban Water Systems) – an interdisciplinary approach to study microbial communities in urban water systems” by P. Deines et al.

Anonymous Referee #1

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The authors propose to use a “multi(inter)disciplinary” (“multi” and “inter” seem to be exchanged in the text randomly) approach to characterize and understand the microbes in potable water distribution systems and sewer networks. They refer to a joint effort of civil-, biochemical engineers and molecular microbial ecologists. Such an approach has been discussed for years and is not at all new (see for example the reviews 1-3). In their manuscript the part of the molecular ecology is outlined in some detail (conventional community analysis using DGGE compared to plating on R2A agar followed by DGGE, FISH, CARD-FISH). In contrast, the part of the civil and biochemical engineers is not touched at all. There is no attempt to include, for example, function in this approach. The manuscript covers well-trodden paths and present nothing new.

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The paper is a mixture of conceptual outline of a project with some preliminary results. None of the figures presenting experimental data (Fig. 2 (what is a, b?), 3, or 4) is quantified properly or interpreted. That extreme differences in the community composition result when analyzing an ecosystem directly with DGGE or after selective enrichment of resulting colonies on nutrient agar plates is a well-known and much documented fact. Whether this is done with drinking water, sewer systems, biofilms or whatever does not change the well-known outcome.

1) Daims et al. (2006) Wastewater treatment: a model system for microbial ecology. *TRENDS in Biotechnology* 24, 483-489.

2) Rittmann B. et al. (2006) A vista for microbial ecology and environmental biotechnology. *ES&T*, Feb. 15., 1096-1103.

3) McMahon et al. (2007) Integrating ecology into biotechnology. *Current Opinion in Biotechnology* 18, 287-292.

Interactive comment on Drink. Water Eng. Sci. Discuss., 3, 43, 2010.

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