

## Editorial

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This issue of *Water Management* once again demonstrates the diversity of topics covered by the journal and its readership, with high quality papers on hydrology, hydraulic analysis, water quality and treatment processes.

The issue opens with two briefing papers, offering novel approaches to two specific problems faced by hydraulic engineers. The first briefing by Zhang *et al.* (2012) offers a new theoretical approach to describe the surface profile of a hydraulic jump formed in an open channel of arbitrary cross-section. Vatankhah and Easa (2012) then provide an analytical solution for positive surge waves occurring in a rectangular channel, providing the community with a direct solution for determining positive surge characteristics. This solution will be of interest to practising engineers concerned with changes in open channel flow conditions, and also to students of fluid mechanics wishing to develop their understanding of surge.

In their second contribution to this issue of *Water Management*, Easa and Vatankhah (2012) consider the problem of hydraulic design of grass-lined open channels; a problem which is exacerbated by the non-linear nature of the roughness coefficient which varies with grass cover. The authors provide direct graphical and analytical solutions for varying side slopes which are likely to be of use in channel design.

Moving on to issues of surface water runoff and its treatment prior to discharge, this issue contains two papers from colleagues in Australia. In the first of the two papers, Beecham *et al.* (2012) present valuable data on the extent to which pollutant removal occurs in a permeable pavement system compared to a conventional pavement when treating rainfall runoff of varying quality. Although permeable pavement technology has been with us for 20 years, the uptake has been limited and sporadic. However, this paper clearly demonstrates the potential advantages of this passive treatment system for the water manager when faced with issues such as nutrient excess and eutrophication in receiving water courses.

Mohammed *et al.* (2012) also consider the issue of storm-water treatment; this time focusing on heavy metal removal. Specifically, the authors consider the laboratory-scale effectiveness of hydrous ferric oxide in the removal of heavy metals when subjected to intermittent loading. Results were positive and, similar to Beecham *et al.* (2012) will be of interest and value to the practising water manager and academics alike.

Finally, Wan Jaafar and Han (2012) present a new and innovative approach to the estimation of an index flood model for the median annual maximum flood (QMED). The authors identify and describe the limitations of using published catchment descriptors and so develop an alternative set of characteristics from alternative, readily available data sets which they then use to formulate a new regression equation based on those new variables. The authors compare the performance of their new approach favourably with the more standard prediction method of the *Flood Estimation Handbook*. However, the real value would appear to lie in the observation that this new methodology is globally applicable.

In reviewing the issue in its entirety, one can see that *Water Management* is maintaining its aim of providing high quality research and practice papers which will be of interest and use to researchers and practitioners. The editorial board is pleased to receive manuscripts from all areas of the globe, with Australia, China, Iran, Canada and the UK being represented by the authors who have contributed to this issue. The board is keen to maintain the rich diversity in subject matter and country of origin, and so I encourage all readers to consider submitting their high quality work to our successful journal.

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