

Editors

Rita Henderson

University of New South Wales, Australia

Gayle Newcombe

Australian Water Quality Centre, Australia

Chii Shang

The Hong Kong University of Science and Technology, Hong Kong

Saroj K. Sharma

UNESCO – IHE Institute for Water Education, The Netherlands

Benjamin D. Stanford

Hazen and Sawyer, P.C., USA

Editorial Board

Dr H Alegre, National Laboratory of Civil Engineering, Portugal

Prof. Dr Ing H Bode, Ruhrverband, Germany

Professor D Bursill, University of South Australia, Australia

Prof. Enrique Cabrera Rochera, Polytechnic University of Valencia, Spain

Prof. P-C Chiang, National Taiwan University, Taiwan

Prof. Dr L Di Bernardo, University of Sao Paulo, Brazil

Prof. E Drioli, University of Calabria, Italy

Professor Emeritus J K Edzwald, University of Massachusetts, USA

Professor Graham A Gagnon, Dalhousie University, Canada

Professor Rolf Gimbel, IWW University of Duisburg-Essen, Germany

Mr J B Gilbert, Water Transfer Associates, USA

Prof. Dr J Gregory, University College London, UK

Prof. M Y Han, Seoul National University, Korea

Prof. C P Huang, National Chiao Tung University, Taiwan

Professor P M Huck, University of Waterloo, Canada

Mr O Hydes OBE, Independent Drinking Water Consultant, UK

Prof. S Itoh, Kyoto University, Japan

Mr J Jeffery, Durham County Waste Management Ltd, UK

Prof. Dr M Jekel, Technical University of Berlin, Germany

Dr Ing habil K Johannsen, Hamburg University of Technology, Germany

Prof. Dr G Klein, German Aerospace Center, Germany

Professor D F Lawler, University of Texas, USA

Professor H Odegaard, Norwegian University of Science and

Technology, Norway

Professor S Ohgaki, The University of Tokyo, Japan

Prof. S L Ong, National University of Singapore, Singapore

Drs. G Oskam, Provincial Waterworks of Limburg, The Netherlands

Dr S Parsons, Scottish Water, UK

Professor J Qu, Chinese Academy of Sciences (RCEES-CAS), China

Prof. Dr Ir J C Schippers, UNESCO-IHE Institute for Water Education,

The Netherlands

Prof. Dr V Snoeyink, University of Illinois, USA

Dr M C Steynberg, Consultant Water Quality, South Africa

Prof. Dr Ing W Uhl, TU Dresden, Germany

Dr U von Gunten, EAWAG, Switzerland

Professor B Wang, Harbin Institute of Technology, China

Professor Yoshimasa Watanabe, Hokkaido University, Japan

Professor Paul Westerhoff, Arizona State University, USA

The Journal of Water Supply: Research and Technology–AQUA is Indexed/Abstracted in: Georef database, Bibliography and Index of Geology, Geosystems, Environmental Periodicals Bibliography, Chemical Abstract Service, Elsevier Biobase, Aqualine, Engineering Information, Inc.

Aims and Scope

The Journal of Water Supply: Research and Technology - AQUA is an official journal of the International Water Association (IWA). It publishes peer-reviewed research, review, and practical papers dealing with research and development in water supply technology and management covering the complete water cycle.

The journal's scope includes

- Sustainable water resources management
 - Source water quality, quantity, protection
- Applied limnology
- Hydraulics of water systems including source waters, treatment and distribution systems
- Water treatment processes, residuals treatment and management
- Modelling of source waters, treatment and distribution systems
- Applied methods to characterize water quality
- Distribution systems
- Water system management and policy
 - legislation, economics, public relations, crisis management
- Public health, risk assessment, regulations and standards
- Water reclamation and reuse (e.g. for agricultural or industrial use)
- Irrigation
- Desalination systems for water supply

Submission

All manuscripts should be submitted electronically through our Online Submission and Peer Review System: <https://www.editorialmanager.com/jwsrtaqua>. Authors should prepare their papers in accordance with the current *Instructions for Authors* printed at the back of this journal, and also available at www.iwaponline.com or from the Editorial Office at the address given inside the back cover.

Copyright © 2015 IWA Publishing

Except as otherwise permitted under the Copyright, Designs and Patents Act, 1988, this publication may only be reproduced, stored or transmitted, in any form or by any other means, with the prior permission in writing of the publisher, or in the case of xerographic reproduction, in accordance with the terms of a licence issued by the Copyright Licensing Agency. In particular, IWA Publishing permits the making of a single photocopy of an article from this issue (under Sections 29 and 38 of this Act) for an individual for the purposes of research or private study.

US Mail Identification Statement

Journal of Water Supply: Research and Technology–AQUA is published eight times a year in February, March, May, June, August, September, November and December. The annual subscription price for 2015, including postage is given on the inside back cover. Full details of subscriptions (including electronic access) can be obtained on request from the distribution agents, Portland Customer Services, at the address given on the inside back cover. IWA Publishing is a company registered in the UK, no. 3690822.

US publishing office: *Journal of Water Supply: Research and Technology–AQUA*, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001, USA. Periodicals postage paid at Rahway, NJ, USA.

Postmaster: please send address corrections to *Journal of Water Supply Research and Technology–AQUA*, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001, USA.