



AWA Biosolids and Source Management National Conference

18-20 June 2012

QT Gold Coast, Surfers Paradise, Queensland

PROGRAM AND REGISTRATION

AWA proudly presents the 6th Biosolids National Conference combined with the 2nd Source Management Conference to be held from 18-20 June 2012 on the Gold Coast.

The AWA Biosolids and Source Management Conference allows for knowledge of the treatment process as a whole and influent contaminants that may reduce the outlets for this reuse. This is essential in understanding the whole life cycle of the system and the potential issues that can arise, not only in treatment but disposal.

Source management and biosolids go hand in hand to achieve an integrated solution and running this conference together will enable experts to explore both areas and link them together.

Who should attend?

Topics, projects and technologies discussed at this conference will most interest the following groups:

- Biosolids professionals
- Source management/Trade waste professionals
- Government agencies (local, state and federal)
- Wastewater treatment engineers
- Environmental scientists and researchers
- Soil scientists and agronomists
- Manufacturers and distributors
- Academics and lecturers
- Students and researchers
- Community members
- Consultants
- Regulators

Program Outline

MONDAY 18 JUNE 2012

- Registration opens
- Opening plenary followed by concurrent sessions
- Exhibition opens
- Conference dinner

TUESDAY 19 JUNE 2012

- Keynote presentations followed by concurrent sessions

WEDNESDAY 20 JUNE 2012

- Workshops and technical tours

PLATINUM SPONSOR



GOLD SPONSOR



SILVER SPONSOR



Keynote Speakers



JOHN NOVAK
Professor of Civil Engineering,
Virginia Tech, USA

John Novak is the Nick Prillaman Professor of Civil and Environmental Engineering at Virginia Tech where he has been a faculty member for the past 31 years. He has conducted research in sludge management, wastewater treatment, solid waste management and soil and groundwater remediation.

He has received four awards for papers he has published over his career. In 2007 he received the Simon Freeze Award from the American Society of Civil Engineers for his contribution to "advancing the understanding of sludge dewatering processes and improving biosolids management". He is the author of over 300 papers in journals and conference proceedings and has served as the major advisor to over 180 graduate students. Dr. Novak also served 6 years as a member of the Research Council of the Water Environment Research Foundation, the last three as Chair. His BS and MS degrees are from the University of Missouri-Columbia and his PhD is from the University of Washington.

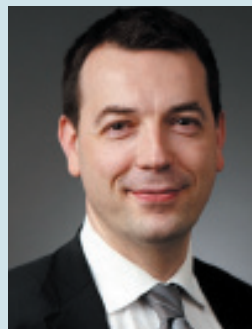


PROF JURG KELLER
Director, Advanced
Water Management
Centre, Australia

Prof Jurg Keller is Director of the Advanced Water Management Centre at the University of Queensland and Professor in the School of Chemical Engineering. He also holds a Vice-Chancellor's Senior Research

Fellowship at UQ and is one of the inaugural IWA Fellows with the International Water Association. He is also a Fellow of the Academy of Technological Sciences and Engineering (ATSE).

Jurg has over 20 years experience in water industry research, particularly in biological wastewater treatment, environmental biotechnology, microbial fuel cells and resource recovery concepts. He is aiming to combine leading edge of research and development with effective industry-relevant collaborations. He has over 6000 ISI citations but has also worked with many of the leading water industry partners in Australia and even internationally. He has been the founding Director of the AWMC since 1996 and has developed it into one of the leading research centres in this field worldwide with over 100 staff and students investigating innovative ways to improve water management.



BILL BARBER
Technical Director,
Biosolids and Wastewater,
AECOM, Australia

Bill is a Technical Director within AECOM's Water business line and an industry leader in biosolids treatment and processes. He is based out of Sydney, but operates across the Australia and New Zealand region,

and supports AECOM's global biosolids practice. Bill has worked in research and development; technology supply, engineering consultancy, and also within a Water Utilities company. Bill is a chartered chemical engineer and environmentalist and has a PhD in advanced anaerobic digestion from Imperial in London. Whilst at United Utilities, a UK Water company, Bill was influential with a fundamental change in biosolids strategy resulting in the installation of (currently) the world's largest thermal hydrolysis plant and a reduction of the water company's carbon footprint of 8%. Bill is has written numerous publications on all aspects of biosolids treatment and strategy development.



MICHAEL CATCHPOLE
Field Manager Trade Waste,
Allconnex Water, Australia

Michael Catchpole (Mick) has over 42 years experience in the water industry starting as an apprentice plumber, drainer in 1970. Leading hand and foreman commercial / industrial plumber, drainer, gasfitter until 1987. Local authority plumbing inspection until 1994. Team leader, coordinator and

manager of trade waste teams since 1994. Mick has completed the Dip Engineering Construction Hydraulics, Dip of Business, certificate in sewerage treatment operations, cert IV work place trainer and assessment. Industry accomplishments include:

- Lectured at Yeronga TAFE from approx 1998 to 2002. Designed and presented the course material and assessed the students in a 13 week trade waste elective subject which was part of the Dip Construction Hydraulics course.
- Member of the Water Services Association of Australia (WSAA) Source Management Network since 2004 and WSAA Training Reference Group (TRG) member since its inception in 2006-07.
- As a TRG member participated in the review of the national water industry training material from Government Skills Australia (GSA) for NWP429B, NWP430A and NWP431A and played a major part in obtaining a national minimum qualification for trade waste officers.

PRELIMINARY PROGRAM MONDAY 18 JUNE 2012

TIME	TOPIC	PRESENTER	TOPIC	PRESENTER	TOPIC	PRESENTER
8.00	REGISTRATION					
Session 1: Opening Plenary						
8.45	Welcome	AWA				
9.00	K01 Keynote Presentation	KEYNOTE John Novak, Virginia Tech, USA				
9:45	K02 Keynote Presentation	KEYNOTE Jurg Keller, Advanced Water Management Centre				
10.30	MORNING TEA					
SOURCE MANAGEMENT STREAM			BIOSOLIDS STREAM		BIOSOLIDS STREAM	
Session 2: Working within regulations			Session 3: Risk - Pathogens and contaminants		Session 4: Biosolids as a resource	
11.00	01 The Implications for water utilities of adopting the national Wastewater Quality Guidelines	Andrew Kirkwood Sydney Water	04 Survival of human enteric pathogens in soil amended with biosolids	Karen Schwarz Curtin University	07 From Wastewater treatment plant to bio-refinery. Advanced resource recovery processes	Troy Walker Veolia Water Australia
11.30	02 Development of a unified trade waste policy for Unitywater	Brian Parson Unity Water	05 In Situ waste stabilisation pond desludging - Case study	Kathleen Hocking Power and Water	08 Resources Recovery from Australian Biosolids: Technology Options	Chraig Mehta AWMC
12.00	03 Maintaining sewer salt load reductions through cleaner production	Randa Kondos City West Water	06 Triclosan in biosolids: A hazard assessment for soil organisms	Rai Kookana CSIRO	09 Development of a beneficial use for clay rich biosolids	Peter Bishop Melbourne Water corp
12.30	LUNCH					
Session 5: Trade Waste as a resource			Session 6: Risk management		Session 7: Strategic thinking 1	
13.30	10 Biosolids to energy: co-processing fog and sludge to increase energy recovery potential	Joseph Cesca CH2M HILL	13 Laboratory Simulation of pathogen die-off in airdried and stock piled biosolids	Duncan Rouch RMIT University	16 Review of Sydney Water's biosolids strategy	Iain Fairbairn Sydney Water
14.00	11 Development of a catchment based wastewater mass load model	Colin Hester Queensland Urban Utilities	14 South East Water Sewage treatment Plants - Implementation of HACCP based approach to monitor biosolids quality from 'source to resource'	Avarind Surapaneni South East Water	17 UnityWater biosolids management strategy	Gokul Bharambe CH2M HILL
14.30	12 A case study: sustainable and cost-effective water treatment solutions for the dairy industry	Alianne Rance EcoLogical Water Solutions	15 New Zealand Biosolids: Regulation, Risks and Realities	Jim Bradley MWH	18 A strategy for beneficially reusing Melbourne Water's biosolids	Sri Patnaikuni Melbourne Water
15.00	AFTERNOON TEA					
Session 8: Risks - Pathogens and contaminants			Session 9: Sustainability and climate change		Session 10: Biosolids processing technologies 1	
15.30	19 Management of pollutant sources to minimise salinity risk for sporting ovals using recycled water for irrigation	Muhit Rahman University of Western Sydney	22 Using Real Results to improve the sustainability of biosolids reuse	John Powell Resource Recovery Management	25 Technical Study of Hydrothermal Processing of Melbourne Water biosolids	Philip Wilkie Melbourne Water
16.00	20 Investigation into urine diversion toilets in an institutional setting	Prasanthi Hagare University of Technology	23 Biosolids Application Enhances carbon sequestration in soils	Nanthi Bolan University of South Australia	26 A simple biosolids Solution	Michael Naughton Barwon Water
16.30	21 Integrated sewage quality management system - the management of pollutants using BDE209 as a case study	Lidia Harvey Melbourne Water	24 Life Cycle Assessment Perspectives on the Beneficial Reuse of biosolids	Joe Lane AWMC	27 High rate methogenesis as a new stabilisation technology	Dang Ho AWMC

Subject to Change (see website for updates)

PRELIMINARY PROGRAM TUESDAY 19 JUNE 2012

TIME	TOPIC	PRESENTER	TOPIC	PRESENTER	TOPIC	PRESENTER
9.00	REGISTRATION					
Session 11: Keynote Presentation						
9.45	K03 KEYNOTE Presentation - Source Management	Michael Catchpole, Allconnex Water	K04 KEYNOTE Presentation - Biosolids	Bill Barber, Biosolids and Wastewater, AECOM		
10.30	MORNING TEA					
COMBINED SOURCE MANAGEMENT & BIOSOLIDS STREAM			BIOSOLIDS STREAM		BIOSOLIDS STREAM	
Session 12: Risks - Pathogens and contaminants			Session 13: Biosolids processing technologies 2		Session 14: Health	
11.00	28 The Heavy Metal Prince: A case study of seriously contaminated biosolids	Brendan Hanigan Southern Water	31 Effect of temperature increase from 55 to 70 degrees on anaerobic digestion of WAS	Huoqing Ge AWWC	34 Updating Sydney Water's pathogen risk assessment from land applied biosolids to include blastocystis	Peter Cox Sydney Water
11.30	29 Can regulation provide a better environmental outcome? NPDC's drive to lower metal levels in biosolids	Kimberley Hope New Plymouth District Council, NZ	32 Which digester enhancement opportunity is best for me?	Cameron Staid MWH	35 Biosolids Reuse in New Zealand - assessing the impacts of chemical cocktails on the soil ecosystem	Jacqui Horswell ESR Ltd, NZ
12.00	30 Examining the risks to public health and the environment from perfluorochemicals (PFC's) when applying biosolids to land	Bradley Clarke University of Arizona	33 Treatment processes and changes in biosolids volatile organic sulphur compounds	Jean Davis Sydney Water	36 Front to back: a social, economic and technical assessment of reuse-orientated sanitation systems in a peri urban town, Northern Malawi	Ben Cole Murdoch University
12.30	LUNCH					
Session 15: Codigestion of biosolids and industrial waste			Session 16: Odour		Session 17: Strategic thinking 2	
13.30	37 Evaluation of Biosolids treatment technologies for combined industrial and domestic wastes	James Kay CH2M Hill	40 How bad do biosolids smell?	John McAndrew MWH	43 The future of biosolids regulation	Paul Darvodelsky PSD
14.00	38 Anaerobic co-digestion of biosolids with meat industry DAF sludge under batch condition	Yuanmei Sha RMIT	41 Laboratory scale investigation of potential odour reduction strategies in biosolids	Yolanta Gruchilik Curtin University	44 Review of regulations (Australian and Overseas) governing repeat application of biosolids on agricultural land	Daryl Stevens Atura
14.30	39 Full scale application of Anaerobic treatment system in Japan - co digestion of food processing waste	Kazumasa Kamachi Swing Corporation	42 Controlling an Environmental Nuisance: Odour	Phil de Groot Trility Pty Ltd	45 Collaborative efforts in biosolids management ANZBP 2007-2012	Nancy Penney Water Corporation
15.00	AFTERNOON TEA					
Session 18: Risks - Emerging risks management			Session 19: Technologies applies		Session 20: Innovative and emerging techniques	
15.30	46 A national approach to regulation and management of chemicals in Australia	Tara McCormack South East Water	49 Completion in the bedding in of new dried biosolids technology	Ronald Crafter United Water	52 Recuperative thickening: Impact of dewatering on anaerobic activity	Damien Batstone University of QLD
16.00	47 The status of knowledge and current research on emerging organic contaminants in New Zealand biosolids	Grant Northcott Plant and Food Research	50 A review of the Oxley Creek WWTP Centralised Biosolids Handling Facility after Five Years of Operation	Daniel Starrenburg Queensland Urban Utilities	53 Assessment of repeat application frequency for beneficial use of biosolids in the south-east region of outer Melbourne	Nihal Albuquerque RMIT
16.30	48 Manufactured nano-materials - an emerging issue for wastewater treatment and biosolids reuse	Mike McLaughlin CSIRO	51 Anaerobic digestion of WAS at Coombabah WWTP	Graham Gloag Worley Parsons	54 Pilot study on ultrasonic pre-treatment of waste activated sludge anaerobic digestion for improved energy recovery	Sofia Andriany Queensland Urban Utilities

Subject to Change (see website for updates)

Exhibition

A small trade exhibition of ten stands will be staged in association with the conference. It will showcase the latest products and services for the Biosolids and Source Management industry. Exhibitors confirmed at time of print are:

- AIM Water
- Arkwood Organic Recycling
- Australian and New Zealand Biosolids Partnership (ANZBP)
- Conhur
- EcoCatalysts
- Ecological Water Solutions
- Fox Environmental Systems
- IRTECH Australia
- Resource Recovery Management
- Wastelink P/L

With expected delegate attendance of 120 personnel working in the water industry, the exhibition will be an excellent forum for products and services to be discussed and contacts to be made.

Workshops

20TH JUNE 2012, 9am to 12pm

Two optional workshops will be conducted on Wednesday 20th June following the Conference.

Please note there is no cost to delegates to attend and spaces are limited, so pre-registration is essential.

BIOSOLIDS REGULATION IN AUSTRALIA – THE GOOD, THE BAD AND THE FUTURE

Facilitated by the Australian and New Zealand Biosolids Partnership (ANZBP) Advisory Board

A key challenge of today's Biosolids Managers is to operate effectively under a range of regulatory requirements. Understanding regulatory requirements such as appropriate stabilisation levels and land application factors can often be challenging for even those well versed in biosolids management practices. This interactive facilitated workshop will present the current status of regulation in Australia and explore the needs of the numerous parties involved in biosolids management. Guest speakers will provide some insight into working with their State Regulatory system which will ultimately highlight areas which need greater clarity for users. Attendees will be encouraged to discuss their own experiences throughout the workshop. A balanced discussion will then be held with the objective to consider key needs of future biosolids regulation in Australia. It is hoped the event can produce an agreed method and direction to encourage change in national biosolids regulation, and scope some of the core issues that should be addressed.

TRADE WASTE MONITORING PROCEDURES WORKSHOP

Course presenters: Terry Bevis and Lyn Shannon, Teachers, Water operations, TAFE NSW Riverina Institute

This will be an interactive introductory workshop to the Nationally Accredited Unit of competency "NWP429B Coordinate, implement and report trade waste monitoring procedures", which is a compulsory Unit in the Certificate IV in Water Operations (Trade Waste). Workshop registration will include sufficient course materials that will give you the option to complete the unit in subsequent weeks via either Distance Education or Recognition of Prior Learning (RPL) through TAFE NSW Riverina Institute at no additional cost. Successful completion of the Unit will provide participants with a Nationally Recognised Statement of Attainment.

Technical Tours

20TH JUNE 2012

BIOSOLIDS PROCESSING FACILITY & YATALA BREWERY

Time: Half Day Tour (Morning)

Cost: \$45 per delegate, includes lunch and transport

Limited to the first 40 registrants

The technical tour will cover both source management issues, as well as integrated biosolids management, and provide an opportunity to network in a more relaxed atmosphere. The first part of the tour will involve a visit to a local biosolids processing facility including anaerobic digestion and modern dewatering processes. The second part will be a visit to the Yatala Brewery. This is a showcase source management example, with upgrade of the local municipal treatment plant avoided by internal recycling of 80% of water. Technology applied includes high-rate anaerobic digestion, induced and dissolved air flotation, moving bed bioreactors, microfiltration, reverse osmosis, and UV sterilisation.



Venue

The QT Gold Coast (formerly Gold Coast International Hotel) has been selected as the venue for the 2012 AWA Biosolids and Source Management National Conference.

The QT Gold Coast is situated on the corner of the Gold Coast Highway and Staghorn Avenue only a couple of hundred metres north of the main shopping precinct of Cavill Avenue and the beaches of Surfers Paradise.

The hotel has recently undergone a multimillion dollar renovation to all its public areas and food and beverage outlets, and will provide an outstanding venue for the 2012 Conference program, trade exhibition and social events.

REGISTER ONLINE AT www.awa.asn.au/bsmconference

Accommodation

Accommodation rates at the QT Gold Coast start at \$165 per night (plus \$25 per person to include breakfast).

To book refer to the accommodation section of the conference website.

Registration Information

To attend the conference, workshops and technical tours, please register online:

www.awa.asn.au/bsmconference

Registration Fees

AWA Members – \$880 including GST

Non Members – \$990 including GST

Day Registration – \$440 including GST

Full Registration Inclusions

- Attendance at conference and exhibition
- Morning tea and lunch (Monday - Wednesday)
- Afternoon tea (Monday - Tuesday)
- Satchel including the program, abstracts, conference papers on USB and list of participants
- Conference Dinner
- Workshops

Day registration does NOT include the conference dinner.

Conference Dinner

Venue: Dolphin Cove, Sea World Resort, Gold Coast

Date: Monday 18 June 2012

Time: 6.30pm – 10.00pm

Dress: Smart Dress

Cost: Included in the registration fee. Tickets for accompanying persons and day delegates can be purchased at \$150 per person

Come join us for a sumptuous seafood buffet and front row seats by the lagoon at Dolphin Cove, for our own private screening of the "Imagine" Dolphin Show. Delight at this unique and wondrous presentation starring the world's most popular and endearing marine mammals. Learn all about the beautiful Sea World dolphins while witnessing their amazing agility and grace as they interact with their trainers at Dolphin Cove.

Proudly Sponsored by:



Cancellation Policy

Cancellations must be made in writing to AWA. Cancellations received prior to or on Friday 1 June 2012 will be issued a refund less \$100 administration charge. Refunds will not be issued for cancellations received after Friday 1 June 2012. Substitute delegates can be accepted without charge.

Methods of Payment

Online payments can be made with VISA or Mastercard (Diners Club not accepted). To request an invoice, you must forward an official purchase order including details of the registrant(s) to awaevents@awa.asn.au. You must then quote the purchase order number in the online registration form. Payment must be received within 14 days to confirm your registration.



Organiser/Enquiries

Australian Water Association

Ph: 02 9436 0055

Email: awaevents@awa.asn.au

Web: www.awa.asn.au/bsmconference

ABN 78 096 035 773

