

OZ WATER 12

8-10 MAY 2012
SYDNEY

AUSTRALIA'S
NATIONAL WATER
CONFERENCE AND
EXHIBITION

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CENTRE



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**CHAIRMAN'S
WELCOME**



Welcome to Ozwater '12 in Sydney. This Conference and Exhibition represents a significant milestone in the history of the Australian Water Association, as 2012 marks the 50th anniversary of AWA and this will be the 26th national event. Hence this will be a unique opportunity to reflect on the achievements in the water sector, to consider the considerable challenges that lie ahead and to explore technical,

institutional and organisational changes and innovations. In addition to the well established conference format there will be an overlay of information on the development of sector during this time. The past decade has been one of intense focus on water with a brutal drought affecting regional and urban areas, with consequent impacts on economic outputs, surface water quality and availability of water supplies. This has led to an unprecedented expenditure on water infrastructure and ongoing interest in the flow and quality within surface and ground waters plus the basic structure of the governance of water management. The more recent heavy rains and flooding have served to reinforce the variability of the Australian climate and the need to anticipate the long term changes to climate and the wider national and international trends.

The theme for Ozwater '12 "Sharing Knowledge, Planning the Future" was adopted to capture the half century in which AWA has been an active participant in the water sector and the substantial challenges and opportunities that are ahead. The technical programme has attracted an outstanding range of quality papers that cover the range of topics within the conference themes. The keynote speakers have been selected to provide a mixture of local and international specialists with a particular emphasis on originality of ideas and an appreciation of the need to adapt to future issues. Workshops have become a growing feature of the conference and provide an opportunity for delegate to actively participate in discussions of topical interest. Specialist technical sessions provided by IWA, WSAA, the American Water Works Association and the Young Water Professionals round out the program. The Exhibition will be bigger than ever before with a wide range of equipment, services and technical personnel available throughout the three days, the 'buzz' and energy within the Exhibition area have become a major part of all Ozwater events.

The formal and informal networking is an integral part of major conferences and has become one of the unrivalled advantages of Ozwater. The more formal Welcome Reception and Gala Dinner are again available with the added benefit of the entertainment provided particularly at the Gala Dinner. The technical tours feature Australia's first ever water supply (and effluent disposal scheme) the Tank Stream, plus Busby's Bore and technical inspections that concentrate on recycling, reuse and energy recovery. AWA is pleased that Sydney Water is its Partner for this conference and exhibition and recognise the large contribution that Sydney Water has made to AWA and to this event.

The Sydney area offers a world class location for our anniversary meeting with stunning views of the harbour and a range of tourist attractions within the city and wider region. I invite you to have an exciting few days in Sydney in May 2012, to meet old friends, make new contacts, learn from local and international fellow professionals and generally have a great time.

David Barnes

David Barnes
Chair
Ozwater 2012 Committee

**AWA'S CHIEF EXECUTIVE
INVITATION**



On the cusp of AWA's 50th year, it is a particular privilege to extend a warm invitation to you to participate in this major event.

The Australian Water Association is the largest and most broadly based association for water professionals and organisations in Australia and Ozwater is the most significant event on the annual water calendar.

I have previously observed that the standing of Ozwater is based on a few simple but critical premises: first, it is run by and for water sector; second, it is about quality and relevance; and finally it is about participation of and exchange between individuals.

At a more personal level however, we expect thousands of participants at Ozwater '12 in Sydney because it will be a place to share ideas, renew relationships and make new ones. It will also unashamedly be about business, through an extensive program of formal and informal events and through the largest water exhibition the country has seen.

The Conference agenda will be full. AWA makes no apology for packing a lot into a few days. We value the water industry's time and commitment and we want to ensure that every delegate or exhibition visitor is rewarded with value to take away.

In his Welcome, our Conference Chair, Dr David Barnes has mentioned the theme for this year's Ozwater and a little about what you can expect to see and hear. I think that you will agree that the Keynote speakers from around Australia and the world will offer some outstanding insights on key water issues.

David and his hard working Committee have spent countless hours reviewing papers to ensure that you will receive a selection of the best during this Conference. They have been supported by many more experts from around the country who reviewed papers. I hope you will reward their efforts and the talent and hard work of our many paper presenters by joining us in Sydney.

We have been blessed with extensive support from our industry and water sector partners. In particular, I thank our Conference Partner, Sydney Water, and principal sponsors, WSAA, Thiess and the National Water Commission.

I am thrilled with the line-up for Ozwater '12 and extend my congratulations and thanks in advance to David and the Sydney Ozwater Committee. Every one of these people is a volunteer who has committed their time and talent to delivering this event. It has been time well spent, as can be seen by the quality of the program and associated activities.

I look forward to welcoming you to Sydney for what will be an outstanding event.

Tom Mollenkopf

Tom Mollenkopf
Chief Executive
Australian Water Association

**SHARING
KNOWLEDGE,
PLANNING
THE FUTURE**

Ozwater'12 celebrates the 50th anniversary of AWA and as such is a unique opportunity to acknowledge the achievements in the water sector and to consider future challenges and opportunities.

The issue of water availability within our cities and in regional areas has been highlighted by the prolonged drought through the first decade of the 21st century and the recent floods in Eastern Australia have further reinforced the ongoing and increasing variability of our climate. There is a need to strike a balance that recognises the demands to supply water for municipal purposes, to produce food and fibre and to support viable and diverse ecological systems. This balance has brought water issues to the front of regional and national agendas, the equitable resolution of water allocation remains a topic of often passionate debate.

The past 50 years have seen major changes to the institutional and governance structure, increased focus on sustainability, the emergence of reliable new technologies, more holistic approaches that consider water cycle management, consideration of alternate management practices and the need to develop novel skill sets within the water sector. It is reasonable to assume that these developments will further evolve and that a further series of changes will occur.

The Ozwater'12 program will provide an opportunity to reflect on the outstanding achievements and to discuss several of the hot topics in the sector.

WHO SHOULD ATTEND?

Ozwater '12 is an event that will be of essential interest to any person with a professional involvement in the water industry. Ozwater '12 will represent all sectors of the industry, integrating ideas and knowledge among people involved in research, regulation, manufacturing, consultancy, management and operations, drinking water, wastewater and stormwater.

The following water industry sectors will have a large involvement at Ozwater '12:

- Manufacturers
- Technology and Innovation Organisations
- Industry Suppliers
- Water Utilities
- Consultants
- Contractors
- Non-Government Water Organisations
- Government - Federal, State and Local
- Community Organisations
- Educators
- Researchers and Academics
- Media

Australian Water Association (AWA) is an independent, not-for-profit association for water professionals and organisations, providing leadership in the water sector through collaboration, advocacy and professional development.

As Australia's peak water industry body, the AWA has the largest and most broadly based membership, with approximately 700 corporate members and 5,000 individual members representing the diversity and breadth of the water industry.

Formed in 1962, the Association has provided organisations with tools and opportunities to showcase their products and services, support and representation in the water industry for decades, and continues to evolve to face the challenges of an ever-changing and dynamic sector.

WHAT'S NEW IN 2012?

HAPPY HOUR AND ENTERTAINMENT

For the first time, AWA will be hosting a "happy-hour" for delegates on Tuesday 8 May between 5pm and 6pm at the Gentrack "Ozwatering Hole" in Exhibition Hall 4. Entertainment and drinks will be provided for registered delegates.

OZWATER'12 SMARTPHONE APPLICATION - "OZWATER APP"

An exciting new smartphone application will be available for all Ozwater'12 participants. This wide ranging application will allow delegates, exhibitors and sponsors to access -

- Delegate, speaker and exhibitor profiles
- Download papers, posters and presentation
- Instant social networking
- Personalised timetable planner
- Blogs and forums
- Appointment scheduling
- Maps and directional information
-and lots more

AWA will supply free wireless networking for all Ozwater'12 delegates. All registered participants will be sent full access details and information prior to attending the event.

The "Ozwater App" will allow delegates to plan their sessions, make appointments and communicate with other delegates even before arriving at Ozwater'12.



THE "OZWATER CUBE"

A high-tech diary room will be available at Ozwater'12 where delegates, exhibitors and sponsors can share their thoughts and ideas about the presentations or water sector issues. This is an exciting concept whereby Ozwater'12 participants can actively communicate to the other participants and the world.

OZWATER MEETING ROOMS

A series of complimentary meeting and lecture rooms will be made available to Ozwater'12 delegates, exhibitors and sponsors. These meeting rooms will be located in Exhibition Hall 6 and can be reserved on an hourly basis. To reserve a room or for more information please see the Ozwater website.

INDUSTRY FORUMS

The Ozwater Industry Forums are a new component of the Ozwater technical program and will provide delegates and invited participants the opportunity to interact with commercial, educational and research organisations regarding new research, challenges, developments, services and technologies.

The Industry Forums will be held as a pre-conference activity on Monday 7 May.

Specific details, invitations and attendance information will be provided to Ozwater delegates 6 weeks prior to Ozwater.

Any organisation wishing to present an Industry Forum at Ozwater'12 should refer to www.ozwater.org/forums for application details and criteria.



0830 - 1000	Keynote Session James Cameron, Chief Executive Officer, National Water Commission Herbert Dreiseitl, Atelier Dreiseitl, GERMANY								
1000 - 1045	Morning Tea								
1045 - 1215	Water and People Community Consultation and Community Participation	Changing Times Sustainable Decision Making	Changing Times Future Cities	Water and Wastewater Systems and Processes Operation and Management - Wastewater	Water and Wastewater Systems and Processes Asset Management	Water and Wastewater Systems and Processes Water Treatment	Water Services Association of Australia presents: Water Recycling for Potable Reuse	AWA Water Law and Policy Specialist Network presents: Achieving sustainability in urban water management policy: lessons from the past to facilitate a more sustainable future	AWA Water Efficiency Specialist Network presents: The future role of water efficiency in Australia: developing and promoting a common approach
	Paul O'Donohue, Central Highlands Water, VIC RESPONDING TO WATER SHORTAGE IN THE BALLARAT WATER SUPPLY SYSTEM	Kirby Morrison, Hunter Water Corporation, NSW DEVELOPING A SUSTAINABLE EFFLUENT MANAGEMENT MASTER PLAN FOR THE HUNTER RIVER CATCHMENT	Matthew Ferguson, Sydney Water, NSW A 12-MONTH RAINWATER TANK WATER SAVINGS AND ENERGY USE STUDY FOR 52 REAL LIFE INSTALLATIONS	Stan McLeod, SA Water Centre for Water Management and Reuse, SA EMERGING MONITORING TECHNIQUES FOR AMMONIA IN CHLORAMINATED WATER SUPPLIES	Aravinda Stanley, Sydney Water, NSW INTEGRATION OF LEAKAGE MANAGEMENT INTO ASSET MANAGEMENT	Yaode Yan, Hunter Water Australia, NSW USE OF POWDERED ACTIVATED CARBON FOR THM CONTROL REVISITED	Water Recycling will remain a water supply option for the Australian water industry. This session will explore the opportunities and issues surrounding water recycling for potable reuse.	Facilitator: Jennifer Mckay, Director of Centre for Comparative Water Law and Policy, University of South Australia, SA Confirmed Presenters: James Cameron, Chief Executive, National Water Commission, ACT Scott Ashby, CEO, Department for Water, Adelaide, SA Bruce Naumann, Manager, Salisbury Water, SA Wayne Beatty, Orange City Council, NSW Refer to page 19 for further information on this workshop	Facilitator: Damien Connell, Strategic Advisor, Water Supply Demand Strategy, Melbourne, City West Water, VIC Confirmed Presenter: Reid Butler, BMT WBM, NSW Refer to page 19 for further information on this workshop
Nadia Jebbour, Parsons Brinckerhoff, WA SECURING SAFE DRINKING WATER FOR REMOTE INDIGENOUS COMMUNITIES IN WESTERN AUSTRALIA	Glenn Wilson, Yarra Valley Water, VIC INTEGRATED WATER MANAGEMENT PLANNING IN MELBOURNE, AUSTRALIA - MANAGING COMPETING OBJECTIVES	Steven Wallner, AECOM, VIC SOUTHBANK: A MASTER PLAN FOR INTEGRATED WATER MANAGEMENT	Russell Beatty, SKM, NSW THE DEVELOPMENT OF A MODEL OF NIGHT WATER USAGE FOR SYDNEY	Scott Gould, CSIRO, VIC COMPARISON OF ASSET FAILURE DATA FROM UTILITIES AROUND AUSTRALIA	Jennifer Dreyfus, SA Water, AWQC, SA OPTIMISATION OF CONVENTIONAL TREATMENT FOR THE REMOVAL OF CYANOBACTERIA CELLS				
Lynne Powell, Cairns Regional Council, QLD INDIGENOUS PARTNERSHIPS - OPPORTUNITIES AND OBSTACLES	Kimberley Althausm Department of Environment and Resource Management QLD REFLECTIONS AND INTERPRETATIONS ON THE USAGE OF STOCHASTIC ANALYSIS IN WATER RESOURCE ASSESSMENT	Benjamin Taylor, University of Southern Queensland, QLD INCREASING RAINWATER YIELD IN WATER SENSITIVE CITIES USING SHORT-TERM RAINFALL FORECASTS	Rory McKeown, East Gippsland Water, VIC TRACER STUDIES: AN EFFECTIVE TOOL FOR DETERMINING HYDRAULIC MIXING AND WATER AGE IN STORAGE AND DISTRIBUTION SYSTEMS	David Nicholas, Nicholas Corrosion Pty Ltd, NSW THE EFFECTIVENESS OF LOOSE POLYETHYLENE SLEEVING FOR THE PROTECTION OF DIOL PIPELINES: A REVIEW	Noel Dow, Victoria University, VIC POWER STATION WATER RECYCLING USING MEMBRANE DISTILLATION - A PLANT TRIAL				
1215 - 1315	Lunch								
1315 - 1515	Water and People Community Consultation and Community Participation	Changing Times Sustainable Decision Making	Changing Times Future Cities	Water and Wastewater Systems and Processes Operation and Management	Water and Wastewater Systems and Processes Asset Management	Water and Wastewater Systems and Processes Water Treatment	Water Services Association of Australia presents: National and International Research Collaboration/ The Future of Water Industry Skills	SEQ Water Grid Manager presents: Smart Water Grids: the Australian context and international application	International Water Centre presents: Collaboration in stormwater harvesting - moving from theory to practice
	Emily Callaway, CH2M HILL, USA TALKING ABOUT THE WATER CYCLE: COMMUNICATION IN CONTEXT TO FACILITATE PUBLIC ACCEPTANCE	Mark Noonan, Sydney Catchment Authority, NSW SPATIAL DECISION SUPPORT SYSTEMS FOR ASSESSING WATER QUALITY RISKS IN SYDNEY'S DRINKING WATER CATCHMENT	Graham Symmonds, Global Water Resources, USA SMARTER WATER: ENSURING WATER SUSTAINABILITY VIA INFRASTRUCTURE, INCENTIVES AND INFORMATION	Kalan Braun, Australian Water Quality Centre, SA Water, SA FLOW CYTOMETRY AS A MICROBIOLOGICAL MONITORING TOOL FOR TREATMENT AND DISTRIBUTION SYSTEMS	John Gabbedy, Degremont Thies Services JV, VIC LIFECYCLE MANAGEMENT THROUGH THE DEVELOPMENT OF AN EFFECTIVE ASSET MANAGEMENT SYSTEM ON THE VICTORIAN DESALINATION PROJECT	Kelvin O'Halloran, Seqwater, QLD MEETING THE PROPOSED NEW CHLORATE GUIDELINE OF 0.3MG/L	NATIONAL AND INTERNATIONAL RESEARCH COLLABORATION National and International Research Collaboration remains the backbone of relationships between WSAA members and international research partners. This session will review some of these research partnerships and the projects that have resulted from them.	Presenters: Heechul Choi, Professor, Environmental Science and Engineering, Gwangju Institute of Science and Technology, SOUTH KOREA Tze Weng Kok, Assistant Director, Network Optimisation, Public Utilities Board, SINGAPORE Barry Dennien, CEO, SEQ Water Grid Manager, QLD Peter McManamon, CEO, Linkwater, QLD Refer to page 20 for further information on this workshop	Facilitators: Brian McIntosh, Senior Lecturer, Integrated Water Management, International Water Centre, QLD and Don Begbie, Director, Urban Water Security Research Alliance, QLD Presenters: Presenters will include: developers; council; regulators; science. Refer to page 20 for further information on this workshop
Rachel Clarke, ACTEW Corporation, ACT WATER FOR OTHERS: ENGAGEMENT OF NON-BENEFICIARIES IN A WATER PIPELINE PROJECT	Philippa Charlton, MWH, VIC BREAKING THE WATER-ENERGY NEXUS	Jay Witherspoon, CH2M HILL, NSW TRUE COSTS FOR GREEN BUILDING CERTIFICATION PROGRAMS FOCUSED ON DECISION MAKING AND APPROACHES FOR SUSTAINABLE WATER INFRASTRUCTURE	Mark Angles, Sydney Water, NSW VALIDATION OF A MOLECULAR METHOD TO CONFIRM CLOSTRIDIUM PERFRINGENS	Tony Cartwright, Sydney Water, NSW FEEDBACK ON THE METHODOLOGY FOR INTRODUCING ASSET CONFIGURATION MANAGEMENT INTO A WATER AUTHORITY	Peta Thiel, Research Laboratory Services, VIC BROMATE REMOVAL THROUGH ACTIVATED CARBON - AN AUSTRALIAN PILOT PLANT STUDY				
Dena Fam, Institute of Sustainable Futures, NSW SOCIAL LEARNING IS ESSENTIAL IN TRANSITIONING TO SUSTAINABLE WATER SERVICES	Paul Smith, Optimatics, SA DECISION SUPPORT FOR SUSTAINABLE MANAGEMENT OF MELBOURNE'S WATER SUPPLY SYSTEM	Tony Overman, Barwon Water, VIC INTEGRATED STRATEGIC WATER PLANNING THROUGH SYSTEMS THINKING	Lee Foster, Seqwater, QLD TASTE AND ODOUR, MANGANESE AND CYANOTOXIN RISK ASSESSMENT	Paul Louws, Western Water, VIC SEWAGE SPILL PREVENTION STRATEGY	Jeremy Hartley, Curtin University, WA THE REDUCTION OF N-NITROSAMINE FORMATION POTENTIAL BY THE APPLICATION OF PRE-OXIDANTS OZONE, CHLORINE DIOXIDE AND HYPOCHLORITE				
	Sue Jenkins, Sydney Water, NSW WHAT CUSTOMERS REALLY WANT - FINDINGS OF A VALUE SEGMENTATION STUDY	Christopher Dey, The University of Sydney, NSW FULL CARBON AND ECOLOGICAL FOOTPRINTS FOR WATER ORGANISATIONS	Linda Gyzen, Jemena, NSW ROSEHILL RECYCLED WATER SCHEME - A CASE STUDY FOR CENTRALISED RECYCLED WATER SUPPLY	Christopher Chow, Australian Water Quality Centre, SA FIVE-YEAR EXPERIENCE IN USING ON-LINE UV-VIS SPECTROLYSER FOR RIVER WATER QUALITY MONITORING	Tony Wells, School of Engineering, The University of Newcastle, NSW A COLLABORATIVE INVESTIGATION OF THE MICROBIAL CORROSION OF CONCRETE SEWER PIPE IN AUSTRALIA	Satiya Wati, SA Water, SA CHLORINE DISINFECTION OF HUMAN PATHOGENIC VIRUSES IN RECYCLED WATERS			
1515 - 1600	Afternoon Tea								
1600 - 1730	Water and People Community Consultation and Community Participation	Changing Times Sustainable Decision Making	Changing Times Future Cities	Water and Wastewater Systems and Processes Operation and Management - Bulk Water	Water and Wastewater Systems and Processes Asset Management	Water and Wastewater Systems and Processes Water Treatment	Water Services Association of Australia		AWA Environmental Water Management Specialist Network presents: Towards multidisciplinary management of environmental water
	Martin Anda, EELS - Environmental Engineering and Life Systems, WA RESIDENTIAL WATER USE EFFICIENCY IN WA: RESULTS FROM NORTHWEST TOWNS AND PERTH BEHAVIOURAL CHANGE PROGRAMS	Pierre Mukheibir, Institute for Sustainable Futures, NSW ADAPTIVE PLANNING FOR RESILIENT URBAN WATER SYSTEMS UNDER AN UNCERTAIN FUTURE	Phillip Jordan, SKM, QLD AN INTEGRATED DEMAND AND SUPPLY MODELLING FRAMEWORK FOR INTEGRATED WATER RESOURCES PLANNING	Chris Hepplewhite, ACTEW Corporation, ACT FILLING A RESERVOIR: MORE THAN JUST WAITING FOR RAIN	Barry Cayford, Advanced Water Management Centre, The University of Queensland, QLD MICROBIAL CORROSION OF CONCRETE SEWER PIPES: IS ALL CORROSION THE SAME?	Russell Yap, UNSW, NSW THE SELECTIVITY OF PH REGULATED ALUM COAGULATION IN DISSOLVED AIR FLotation OF ALGAE LADEN STABILISATION POND EFFLUENT - A CASE STUDY	WATER PRICING		Facilitators: Lance Lloyd, Principal Ecologist, Lloyd Environmental, VIC Deb Nias, CEO, Murray Darling Wetlands Ltd, SA Confirmed Presenters: Robyn Loomes, Environmental Officer, Department of Water, WA Refer to page 20 for further information on this workshop
Emma Wiggan, Priority Sewerage Program, NSW DELIVERING KEY SOCIAL AND ENVIRONMENTAL BENEFITS THROUGH EFFECTIVE COMMUNITY CONSULTATION	Tim Clune, North East Region Water Corporation, VIC ONE RESOURCE - ADAPTING TO A NEW SERVICE DELIVERY PARADIGM	Sylvia Solarska, Umow Lai, VIC TOWARDS WATER NEUTRALITY IN COMMERCIAL OFFICE BUILDINGS	Jason Martin, Sydney Catchment Authority, NSW SCARMS - CASE STUDIES OF APPLICATION OF SYDNEY CATCHMENT AUTHORITY'S RESERVOIR MANAGEMENT SYSTEM	Baher Zaghlool, SMEC Australia Pty Ltd, VIC DURABILITY AND BEARING CAPACITY OF THE SHALLOW CONDUIT CROSSINGS OF MELBOURNE'S WESTERN TRUNK SEWER	Dylan Thorpe, Arup, VIC ZERO LIQUID DISCHARGE SOLAR DESALINATION PILOT PLANT EVALUATION				
Tim Bartrand, Tetra Tech, USA COMMUNITY PARTICIPATION IN DEVELOPMENT OF DECENTRALIZED GREEN INFRASTRUCTURE	Jacqueline Grove, Warringah Council, NSW ADOPTING BEST PRACTICE WATER QUALITY MONITORING TO REDUCE PUBLIC HEALTH RISKS: THE CASE OF MANLY DAM	Helena Amaro, Sydney Water, NSW THE SMART HOME OF THE FUTURE	Ian Monks, City West Water, VIC MASS BALANCE SIMULATION OF RCW SCHEME	Andrew Kasmarik, Sydney Water Corporation, NSW INTRODUCING LEAKTIGHT SEWERS TO SYDNEY WATER	Andrew Groth, Siemens Water Technologies, NSW OPTIMISATION OF PRE-COAGULATION AND POWDERED ACTIVATED CARBON FOR SUSTAINABLE MEMBRANE MICROFILTRATION OPERATION				
1900 - 2300	Gala Dinner								



KARL FALKENBERG

Director General of the Environment, European Commission
Economist and Journalist
Germany

Karl Falkenberg has a long experience as a negotiator in the European Commission. He started his career in the Commission as textiles negotiator, has dealt with international fisheries issues and since 1985 with the GATT. In 1990, he served as foreign policy advisor to EU President Jacques Delors, with particular focus on the German unification process. He was involved in the Uruguay Round negotiations and has been negotiating the telecommunications and financial services agreements in WTO. From 1997 to December 2000 he was in charge of the coordination of all WTO issues. In 2001 he was appointed Director in charge of sectoral trade policies and bilateral trade relations with North America, Japan, the Mediterranean area and the African, Caribbean and Pacific countries and in 2002 Director for Free trade agreements, Agricultural trade questions, ACP. From 2005 to 2008 he coordinated all bilateral trade policies as Deputy Director General. In January 2009, he took up the position of Director General of the Environment, covering the EU's environmental policy in both its domestic and international dimensions. Karl Falkenberg is a trained economist and journalist.



HUGH MACKAY

Social Researcher
Australia

Hugh Mackay is a psychologist, social researcher and novelist. He is the author of thirteen books, including six bestsellers. His latest book is *What Makes Us Tick? The Ten Desires That Drive Us*.

In recognition of his pioneering work in social research, Hugh has been awarded honorary doctorates by Charles Sturt, Macquarie, NSW and Western Sydney Universities. In 2004, he received the University of Sydney's alumni award for community service.



Hugh is an Honorary Professor of Social Science at the University of Wollongong, a former deputy chairman of the Australia Council, a former chairman of trustees of Sydney Grammar School, and was the inaugural chairman of the ACT government's Community Inclusion Board. He has been a newspaper columnist for over 25 years, and is a frequent guest on ABC radio.



JAMES CAMERON

Chief Executive Officer
National Water Commission
Australia

Mr James Cameron is the Chief Executive Officer of the National Water Commission. The Commission is Australia's national water reform agency. It provides independent assessments of the progress of Australia's federal and state governments in delivering on their reform commitments, as well as policy advice, advocacy and practical, financial support to help drive the water reform agenda.

Mr Cameron joined the Commission in October 2009. Prior to his appointment, he had a broad ranging career in the Australian federal government across the industry, communications and cultural portfolios. In particular, he has held senior management roles in the responsible for the reform and regulation of Australia's telecommunications, broadcasting and media sectors, the development of the information and communications technology sector and managing Australia's arts and sport policy as well as its key cultural institutions.

James holds a Bachelor of Arts (Honours) degree and a Graduate Diploma in Legal Studies.



RICH NAGEL

General Manager
West Basin Municipal Water District
USA

Rich Nagel was named General Manager by the West Basin Municipal Water District Board of Directors in May 2006 and was previously West Basin's Manager of Water Quality since 2000. He is responsible for West Basin's Water Reliability 2020 Program that includes providing a safe high-quality supply of water, reducing the service areas use of imported water, doubling the recycled water production at the nationally recognized Edward C. Little Water Recycling and Research Facility, doubling conservation initiatives, increasing public education and development of ocean-water desalination as an alternative water supply.



Nagel has over 25 years of experience in water supply and wastewater, water quality regulatory programs, research and development programs with numerous public and regulatory agencies on groundwater quality issues, remedial investigation activities and various water treatment studies overseeing numerous reports on groundwater studies and the effects of various contaminants. He was named 2011 Person of the Year by the WaterReuse Association for his significant contributions to the advancement of water reuse and dedication to the water reuse community.

A registered engineer, Nagel graduated from San Diego State University with a Bachelor of Science in Civil Engineering. He is on the Chair of the South Bay Steering Committee for the Greater Los Angeles Integrated Regional Water Management Plan, Board of Directors of the WaterReuse Foundation and California WaterReuse Association, Board Member of the Urban Water Institute and the Multi-State Salinity Coalition, alternate Board member of the National Water Research Institute and New Water Supply Coalition, served on DWR's Recycled Water Task Force, and the Los Angeles County Department of Public Works Recycled Water Task Force.





HERBERT DREISEITL

Founder, Partner, Artist, Landscape Architect
Germany

Herbert is a sculptor, artist and interdisciplinary urban planner with 30 years of experience. He founded Atelier Dreiseitl based on a vision for liveable cities inspired by a deep understanding of water. Herbert is committed to bringing to reality a new generation of sustainable infrastructure which combine city resource needs with space for nature and people. He has designed and overseen the construction of ground-breaking pilot projects which bring together urban hydrology, stormwater management, urban design and landscape architecture with great design.



Herbert is a passionate lecturer and travels worldwide sharing his enthusiasm and talent for communicating the essentials of a new vision of holistic city design. He has authored many publications including three editions of *Recent Waterscapes: Planning, Building and Designing with Water*.



KEVIN YOUNG

Managing Director, Sydney Water
Australia

Kevin is currently the Managing Director of Sydney Water and was formerly the Managing Director of Hunter Water.

Kevin has a degree with honours in engineering and a Master of Business Administration and is a Fellow of the Institution of Engineers Australia and a Member of the Australian Institute of Company Directors.

He has over 30 years' experience working for the private sector and Government authorities within Australia and overseas.



Kevin was previously Chairman of the Water Services Association of Australia whose members serve over 17 million Australians every day with water and wastewater services.



PAUL GREENFIELD

Vice Chancellor, University of Queensland
Australia

Professor Greenfield was appointed Vice Chancellor from 1 January 2008 and was Senior Deputy Vice-Chancellor from 2002 to 31 December 2007. Previously he was Deputy Vice-Chancellor, Deputy Vice-Chancellor (Research), Executive Dean of the Faculty of Engineering, Physical Sciences and Architecture and Pro-Vice-Chancellor (Physical Sciences and Engineering).

After graduating with a Bachelor of Engineering, first-class honours in chemical engineering from the University of New South Wales (UNSW), Professor Greenfield worked in the private sector before completing a PhD at UNSW. He worked at CSIRO before winning a three-year fellowship to the U.S. In 1975, he joined UQ as a lecturer in chemical engineering and a decade later became Head of Department.



In January 2006 Professor Greenfield was made an Officer in the General Division of the Order of Australia for service to science and engineering, particularly through research in the areas of chemical engineering, biotechnology, wastewater and environmental management, and to the tertiary education sector.

Professor Greenfield has extensive experience as a Board Director and is currently a Director on a number of company boards. He has also consulted and worked widely with industry on a range of projects spanning biochemical engineering, wastewater treatment and waste and environmental management, as well as economic evaluation of projects (particularly in the biotechnology and environmental fields). His interests lie in biotechnology, environmental management and R & D management and commercialisation.

He is currently Chair of the Scientific Advisory Group of the South East Queensland Healthy Waterways Partnership, a partnership involving the Queensland Government, 19 local councils, community groups, research institutions and industry which focuses on the health of the rivers, estuaries and bays of SE Queensland. Recently he was appointed Chair of the Expert Panel on Purified Recycled Water. This Panel will provide advice to the Queensland Water Commission on health and environmental aspects associated with the use of recycled water in South East Queensland. He is also Chair of the Riversymposium Strategic Planning Committee, the Thies International Riverprize Committee and the International Water Centre. In 2008, he was appointed to the Defence Science and Technology Organisation (DSTO) Advisory Board representing the academic and research community.



**GALA DINNER MASTER OF CEREMONIES
ADAM SPENCER**

Adam Spencer began his career in radio by winning the Triple J Raw Comedy championship in 1996. From there, Adam became a casual presenter, and eventually took over the coveted breakfast time slot, hosting from 1999 - 2004. A consummate learner, Adam holds a first class honours degree in Pure Mathematics and has an immense interest in science. These passions lead Adam to hosting the ABC programs *Quantum* and *FAQ* from 1998 to 2001. Adam has been a regular guest on Channel Ten's *Good News Week Debate* series, ABC's *The Glasshouse* and *The Fat*. In 2003 Adam hosted *Hit & Run* for the Foxtel's Comedy Channel.



OZ WATER 12

8-10 MAY 2012
SYDNEY

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OZWATER'12 COMMITTEE

David Barnes - Ozwater'12 Chair
Corinne Cheeseman - Australian Water Association
Tony Church - SKM
Erin Cini - Element Solutions
Andrew Kasmarik - Sydney Water
Grant Leslie - Water Services Association of Australia
Cheryl Marvell - Sydney Water
Kate Miles - AECOM
Richard Stuetz - University of New South Wales

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SELECTION OF PRESENTATIONS

The selection of papers to be presented at Ozwater'12 will be determined by an abstract peer-review process guided by the Ozwater'12 Program Committee. Scoring will be based on:

- Relationship and significance to the themes of the conference
- Originality
- Status of the project
- Technical content
- Quality (spelling, layout, etc)

Presentations must be based on outcomes, not future projects.

Ozwater is the leading water sector conference in Australia and as such the quality of presentation delivery should be of the highest standard. Past presenting experience (platform presentations only) of the submitting author will be considered. Abstracts submitted as platform presentation may be accepted as a poster based on programming constraints. Any presentations of a commercial or marketing nature will not be accepted.

Although there is no limit to the number of abstracts that may be submitted by an individual or organisation, a speaker will not be a more than two presentations on the program. The inclusion of more than one paper from the same organisation in the same session or topic is discouraged.

Refer to www.ozwater.org (Call for Papers section) for detailed criteria for selection.

SUBMISSION OF ABSTRACTS

Abstracts for papers may only be submitted through the official Ozwater'12 website (www.ozwater.org) from Monday June 6, 2011. Emailed or faxed abstracts will not be considered.

All abstracts must be submitted in English and clearly state the objectives and desired outcomes of the proposed presentation.

Please note the following abstract submission guidelines:

- Abstracts are to be submitted as a Microsoft Word document - use the template available at www.ozwater.org :
 - Maximum 2 x A4 pages of text
 - 10 point Arial font
 - 1 ½ line spacing
 - Up to 3 additional A4 pages of supporting tables and graphics may be included
 - Include the title, authors and affiliations as per the template
 - Do not include references, footnotes or keywords
- Abstracts should contain brief introduction (purpose), methodology, results and conclusion together with a discussion
- The title should be clear and concise
- Please select your preferred presentation type (platform, poster or either)
- You must select from the list the conference theme in which your abstract fits
- You may submit more than one abstract, however only one may be accepted for platform presentation
- Abstracts may be amended or withdrawn before September 1, 2011
- By submitting an abstract it will be assumed that all authors have consented to its submission and that all copyright provisions listed elsewhere have been met *
- Abstracts will appear in print as submitted

* The paper accepted into the Ozwater'12 program must not have been presented or published previously.

CONDITIONS OF PRESENTING AT OZWATER'12

For a paper to be accepted and presented at the conference:

- A paid registration (full conference or at least on the day of presentation) must be received in advance from the presenting author. The deadline for presenter registration will be March 9, 2012. This applies to both platform and poster presenters.
- Authors must be prepared to confirm their copyright ownership of the paper, the originality of the work, that the paper has not been previously published in any other form and that the Australian Water Association will be granted permission to publish the paper. This must be confirmed at the time of online abstract submission.
- A full paper must be submitted for review in January 2012.

Presenters will be responsible for their own expenses. Any presenter that withdraws from participating after the program has been published will be liable to standard registration cancellation conditions.

Please do not submit an abstract if you are unable to comply with any of the above conditions.

PEER-REVIEW AND PUBLICATION OF FULL PAPERS

Full papers for accepted oral presentations must be submitted in January 2012. Full papers will be peer-reviewed for a quality check for publication in the conference proceedings. Some authors may be required to revise their full paper based on reviewers' comments.

All papers accepted into the final program will be published on a USB device and provided to all delegates who attend Ozwater'12 and will be available for purchase from AWA after the conference.

FINAL DATE FOR ABSTRACT SUBMISSION – THURSDAY 1 SEPTEMBER 2011

Visit www.ozwater.org for specific submission information. Note the deadline policy is strict, and late proposals will not be accepted. To avoid missing the deadline, start preparing your abstract now.



OZWATER'12 PROGRAM OUTLINE

MONDAY MAY 7, 2012

- Pre-conference activities and registration
- Welcome Reception
- AWA National Awards Dinner

TUESDAY MAY 8, 2012

- Opening Ceremony followed by concurrent sessions & workshops
- Exhibition opens

WEDNESDAY MAY 9, 2012

- Keynote presentations followed by concurrent sessions & workshops
- Ozwater'12 Gala Dinner

THURSDAY MAY 10, 2012

- Keynote presentations followed by concurrent sessions & Workshops
- Conference and Exhibition close

FRIDAY MAY 11, 2012

- Technical Tours

IMPORTANT DATES

Thursday 1 September 2011

Abstract submission deadline

September 2011

Abstract review

October 2011

Notification of acceptance of abstracts

Friday 12 January 2012

Full papers due

January/ February 2012

Full paper peer-review

Friday 9 March 2012

Presenter conference registration due

Friday 30 Mar 2012

Revised full papers due (if required)

Poster presentations due

FOR FURTHER INFORMATION, PLEASE CONTACT:

Ozwater'12 Secretariat

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