

## DAY ONE

## WEDNESDAY 9 FEBRUARY 2011

## STREAM ONE

| TIME  | SESSION   | PRESENTER  |
|-------|---|--|
|       | SESSION 1 - NORFOLK ROOM  |  |
| 08.30 | Welcome to keynote speakers, international visitors and audience  | <b>AWA M&amp;D Committee Convenors,</b><br>Stephen Gray and Neil Palmer                        |
| 09.00 | <b>K01: Membrane Distillation and Forward Osmosis: Energy, Recovery, and Water Quality Advantages</b>   | <b>Amy Childress,</b><br>University of Reno, USA   |
| 09.45 | <b>01: Desalination for the city of London: tackling challenging pretreatment requirements while minimizing environmental impact</b>                      | <b>Frans Knops,</b><br>Norit X-Flow, The Netherlands   |
| 10.30 | <b>MORNING TEA</b>  |  |
|       | SESSION 2 - NORFOLK ROOM  | Chair: Stephen Gray  |
| 11.00 | <b>02: Sydney's desalination plant: operating experience of Australia's largest SWRO plant</b>  | <b>Alban Delpey,</b><br>Veolia Water Australia, NSW  |
| 11.30 | <b>03: Pilot trialing of technologies for the treatment of microfiltration backwash from an advanced water treatment plant</b>                            | <b>Sean Trainor,</b><br>CH2M Hill, NSW   |
| 12.00 | <b>04: Developing novel approach for tracing desalinated water in Sydney Water's water distribution system</b>  | <b>Azhar Nomani,</b><br>Sydney Water Corporation, NSW  |
| 12.30 | <b>LUNCH</b>  |  |
|       | SESSION 4 - NORFOLK ROOM  | Chair: Adam Anstead  |
| 13.30 | <b>08: Pretreatment for MF/RO reuse: experience from South East Queensland</b>  | <b>David Solley,</b><br>GHD, Gold Coast, QLD   |
| 14.00 | <b>09: Desalter's Paradise: operating experience at the Gold Coast Desalination plant</b>   | <b>David Cohen,</b><br>Veolia Water Australia, QLD   |
| 14.30 | <b>10: Measuring salinity of seawater and brine</b>   | <b>Siobhan Boerlage,</b><br>GHD, Gold Coast, QLD   |
| 15.00 | <b>AFTERNOON TEA</b>  |  |
|       | SESSION 6 - NORFOLK ROOM  | Chair:   |
| 15.30 | <b>14: In situ bio-fouling detection methods: experience at the Adelaide desalination pilot plant</b>   | <b>Con Pelekani,</b><br>SA Water, SA   |
| 16.00 | <b>15: The role of free volume in the trade off between high water permeability and high permeability selectivity of polymeric desalination membranes</b> | <b>Anita Hill,</b><br>CSIRO, VIC   |
| 16.30 | <b>16: Static hypochlorite induced accelerated ageing of RO membranes: the effect of PH on performance</b>  | <b>Bogdan C. Donose,</b><br>Advanced Water Management Centre,<br>University of Queensland, QLD |
| 17.00 | POSTER SESSION  |  |
| 20.00 | CONFERENCE DINNER   |  |

## STREAM TWO

| Time  | Session   | Presenter   |
|-------|---|---|
|       | SESSION 1 - NORFOLK ROOM  |   |
| 08.30 | Welcome to keynote speakers, international visitors and audience  | <b>AWA M&amp;D Committee Convenors,</b><br>Stephen Gray and Neil Palmer     |
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| 09.45 | <b>01: Desalination for the city of London: tackling challenging pretreatment requirements while minimizing environmental impact</b>                            | <b>Frans Knops,</b><br>Norit X-Flow, The Netherlands                        |
| 10.30 | <b>MORNING TEA</b>  |   |
|       | SESSION 3 - PHOENIX ROOM  | Chair:  |
| 11.00 | <b>05: Effect of reverse osmosis concentrate composition on effectiveness of seeded precipitation removal of scale precursor ions to enhance water recovery</b> | <b>Peter Sanciole et al,</b><br>Victoria University, VIC                    |
| 11.30 | <b>06: Membrane desalination of hypersaline groundwater for remote mining sites</b>   | <b>Hiep Le,</b> Osmoflo, SA   |
| 12.00 | <b>07: Case study – Treating contaminated groundwater from the Botany Aquifer</b>   | <b>Fred Barendregt,</b><br>Kellog Brown and Root, NSW                       |
| 12.30 | <b>LUNCH</b>  |   |
|       | SESSION 5 - PHOENIX ROOM  | Chair: Con Pelekani   |
| 13.30 | <b>11: Laboratory scale evaluation of ultrafiltration membranes for distributed wastewater treatment at an Australian car manufacturer's production site</b>    | <b>Bernard Agana,</b><br>Victoria University, VIC                           |
| 14.00 | <b>12: Enhancing Microfiltration Performance in Wastewater Reclamation by Ultrasound-assisted Coagulation</b>   | <b>Yoko Hakata, Linhua Fan and Felicity Roddick</b><br>RMIT University, VIC |
| 14.30 | <b>13: Brackish water desalination pretreatment pilot commissioning of UF system</b>  | <b>Hwu Lazaredes,</b><br>Memcor Australia                                   |
| 15.00 | <b>AFTERNOON TEA</b>  |   |
|       | SESSION 7 - PHOENIX ROOM  | Chair:  |
| 15.30 | <b>17: Glenelg to Adelaide Park Plans recycled water project: environmentally sensitive water treatment</b>   | <b>Peter Trimboli,</b><br>Memcor Australia                                  |
| 16.00 | <b>18: Operating Performance update – the Western Corridor Recycled Water Scheme</b>  | <b>Troy Walker,</b><br>Veolia Water Australia, QLD                          |
| 16.30 | <b>19: Victorian Department of Health's approach to validating membrane systems for pathogen reduction</b>  | <b>Luc Richard,</b><br>Department of Health, VIC                            |
| 17.00 | POSTER SESSION  |   |
| 20.00 | CONFERENCE DINNER   |   |

## DAY TWO

## THURSDAY 10 FEBRUARY 2011

## STREAM ONE

| TIME  | SESSION  | PRESENTER   |
|-------|--|---|
|       | SESSION 8 - NORFOLK ROOM   | Chair: Diane Wiesner  |
| 09.00 | K02: Emerging Trends and Technologies in Exploiting Impaired Quality (Seawater and Wastewater Effluent) Sources for Drinking Water | Gary Amy,<br>Kaust University, Saudi Arabia   |
| 09.45 | 20: Demonstration testing for the world's first large scale ceramic membrane plant   | Jonathan Clement,<br>PWN Technologies, The Netherlands                                  |
| 10.30 | MORNING TEA  |   |
|       | SESSION 9 - NORFOLK ROOM   | Chair: Neil Palmer  |
| 11.00 | K03: Will pressure-retarded osmosis enable the harvesting of a still un-tapped source of renewable energy?                         | Amy Childress,<br>University of Reno, USA   |
| 11.30 | 21: Initiatives and research at the National Centre for Excellence in Desalination, Perth WA                                       | David Furukawa,<br>Chief Scientific Officer   |
| 12.00 | 22: Membrane biofouling in MBRs and RO Processes   | Tony Fane,<br>Director, Membrane Research Centre, Singapore                             |
| 12.30 | LUNCH  |   |
|       | SESSION 11 - NORFOLK ROOM  | Chair:  |
| 13.30 | 26: Determination of water vapour and some transport parameters for the aromatic polyamide layer of RO membranes                   | Judy Lee,<br>University of Melbourne, VIC   |
| 14.00 | 27: Alginate fouling in dead end membrane filtration - Effect of pH  | Darli Myat,<br>Institute for Sustainability and Innovation,<br>Victoria University, VIC |
| 14.30 | 28: Protecting IP in the water industry  | Sarah Herbert,<br>ShelstonIP, NSW   |
| 15.00 | AFTERNOON TEA  |   |
|       | SESSION 13 - NORFOLK ROOM  | Panel: Neil Palmer, Gary Crisp, Con Pelekani  |
| 15.30 | K04: KEYNOTE and WORKSHOP on PRESSURE VESSELS Doug Eisberg, Avista Technologies  |   |

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| 10.30 | MORNING TEA  |   |
|       | SESSION 10 - PHOENIX ROOM  | Chair: Rob Heilbronn  |
| 11.00 | 23: Critical assessment of the techniques characterising nascent changes in microporous membrane                                   | Pierre LeClech,<br>UNESCO Centre for Membrane Science UNSW, NSW   |
| 11.30 | 24: Membrane bioreactors – design experiences and application for a small remote location  | Mike McCoy,<br>Better Technical Options                           |
| 12.00 | 25: Design and Operation of the 9ML/day Fairfield MBR Water Reclamation Plant  | Brent Gibbs,<br>Tenix, WA   |
| 12.30 | LUNCH  |   |
|       | SESSION 12 - PHOENIX ROOM  | Chair:  |
| 13.30 | 29: Restoration of the organic-fouled nanofiltration membrane in industrial wastewater   | Mojgan Bassandeh,<br>UNSW, NSW                                    |
| 14.00 | 30: Fate of aged reverse osmosis membranes: Reuse, recycling or disposal?  | Pierre Le-Clech,<br>UNESCO Centre for Membrane Science, UNSW, NSW |
| 14.30 | 31: MBR: The triple D route to Class A water   | Ronald Van't Oever,<br>Norit X-flow BV, The Netherlands           |
| 15.00 | AFTERNOON TEA  |   |
|       | SESSION 13 - NORFOLK ROOM  | Panel: Neil Palmer, Gary Crisp, Con Pelekani                      |
| 15.30 | K04: KEYNOTE and WORKSHOP on PRESSURE VESSELS Doug Eisberg, Avista Technologies  |   |

## POSTERS

- P01. Preparation and Characterisation of Poly(vinylidene fluoride)/Nanoclay Composite membranes  
Chi Yan Lai, Institute for Sustainability and Innovation, Victoria University
- P02. The performance of stretch-formed poly-tetrafluoroethylene membrane in direct contact membrane distillation  
Jianhua Zhang, Institute for Sustainability and Innovation, Victoria University
- P03. Adelaide Desalination Plant: pilot to commissioning of UF system  
Peter Trimboli, Memcor Australia
- P04. An intelligent diagnosis algorithm for reverse osmosis membrane performance in real field application  
Suhan Kim, Pukyong National University, Korea
- P05. Impact of Coagulation of Microcystis aeruginosa on Microfiltration of Biologically Treated Effluent  
Yong Tee Goh, John Harris and Felicity Roddick, RMIT University

| TIME           | SESSION  | PRESENTER   |
|----------------|--|---|
| 08.30          | K05: Coal Seam Gas Water and its reuse   | Tobie Welgemoed, MWH Global, QLD                          |
| 09.15          | 32: Policy for the management of coal seam gas water   | Lindsay Delzoppo, General Manager, Operations, DERM, QLD  |
| 09.45          | 33: Treatment of process waters for re-use in an antimony extraction facility                  | Mark Mullett, Hatch Ltd                                   |
| 10.15          |  |   |
| 10.45          | K06: Soil aquifer treatment (SAT) and Nanofiltration: an attractive technology for water reuse | Gary Amy and Saroj Sharma, Kaust University, Saudi Arabia |
| 11.15          | 34: Reducing energy: new ways to balance quality and costs for membrane bioreactors            | Gerin James, Siemens Water technologies, Memcor Asia      |
| 12.00          | Concluding Plenary   | All Participants  |
| 13.30          |  |   |
| 13.30<br>16.30 | SITE TOUR – TUGUN SEAWATER DESALINATION PLANT – courtesy of Veolia Water Australia             |   |

## Poster presentations

Posters will be displayed in the exhibition area during the conference. Poster Presenters will need to stand by their posters during the poster session on Wednesday (1700-1800) to give a 5 minute presentation followed by questions from viewing delegates.

## Exhibition

A small trade exhibition of up to eight stands will be staged in association with the conference. The principal industries expected to showcase their products and services to the delegates will be:

- Manufacturers and distributors of various types of membranes technologies and unit systems
- Suppliers of energy recovery devices, pumps and peripherals
- Companies supplying disinfectant chemicals, anti-scalants and water balancing chemicals
- Suppliers of pipelines, valves and pumping station peripherals for treatment plants
- Consultants involved in risk assessment and recycled water projects

With expected delegate attendance of 150 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.

Exhibition space is available at \$2000 including GST. A 3x2 metre stand includes a complimentary delegate registration. For further information on exhibiting, please contact AWA on (02 9436 0055).

## Technical Tour

**Date:** Friday 11 February

**Location:** Gold Coast Desalination Plant, Tugun

**Cost:** \$30 per delegate

Completed and opened in late 2008, the Tugun plant is capable of supplying up to 133 megalitres of water per day of desalinated drinking water for the people of south east Queensland.

The plant is capable of supplying enough water for the daily needs of 650,000 people. The massive water storage tanks at the plant, which hold 30ML of fresh drinking water, are filled and emptied into the water grid more than four times each day. When the seawater arrives at the plant through a 2.2km long underground pipeline, screens remove particles bigger than 3mm.

Veolia Water Australia, as operator of the plant in conjunction with Queensland Government authority WaterSecure, has kindly agreed to provide a conducted tour of the site for a limited number of conference delegates on the afternoon of Friday 11 February 2011. This is a unique opportunity to see this plant which ticks the green environmental boxes for its energy efficiency and protection of the marine environment.

**Delegates will need to wear enclosed shoes**

## Conference Dinner

**Wednesday 9 February 2011 - 20.00-22.30**

**Venue:** Four Winds Restaurant

(Located on the 26th floor of Crowne Plaza)

**Cost:** Included in the registration fee. Tickets for accompanying persons and day delegates can be purchased at \$90 per person (Incl. GST)

Four Winds Revolving restaurant has 360 degree views of the Gold Coast city, hinterland and ocean. You will be treated to a sumptuous buffet of local seafood and international delicacies.

The restaurant is located on the 26th floor of the Crowne Plaza Surfers Paradise and has been a local landmark and premier tourist attraction for many years.