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*Bev Phelts, NT DNRETA, Australia*

1037 **Desktop Estimation of Yield for Aquifer Storage Recovery Schemes**  
*S.E. Pells, Cardno Willing, Australia*

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### D5: Hydrological Modelling

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1049 **Evaluation of Simple Approaches to Incorporating Variability in Design Temporal Patterns**

*K. Sih, P.I. Hill, R.J. Nathan, Sinclair Knight Merz, Australia*

1060 **Sponges or Wicks? What is the Role of Bogs in Hydrological Response on the Bogong High Plains?**

*Andrew Western<sup>1</sup>, Lionel Siriwardena<sup>1</sup>, Ruth Lawrence<sup>2</sup>, Ian Rutherford<sup>1</sup>*

*<sup>1</sup>University of Melbourne, Australia ; <sup>2</sup>La Trobe University, Australia*

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### D6: Water Quality

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1072 **Sediment Transport Assessment on the River Torre: Comparison of Two Bi-Dimensional Hydro-Morphological Models**

*M.M. Montoya Cardona, C. Gregoretti, S. Fattorelli, University of Padua, Italy*

1082 **Salinity Monitoring Using In-Stream, Close Spaced, Geo-Referenced 3D Salinity Mapping**

*B.R. Porter, T.A. Branford, SA DWLBC, Australia*

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## E1: Sustainable Water Management

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- 1090 **More Water Management Innovations in the Angas Bremer District of South Australia**  
*Tony Thomson, SA DWLBC, Australia*
- 1102 **Falling Groundwater Pressure Levels? Don't Panic!**  
*S.R. Barnett, SA DWLBC, Australia*
- 1110 **Improved Technologies and Management Practices in Private Irrigation — Implications for Water Savings in Southern Alberta**  
*Lorraine Nicol<sup>1</sup>, H. Bjornlund<sup>2</sup>, Kurt Klein<sup>1</sup>*  
<sup>1</sup>University of Lethbridge, Canada ; <sup>2</sup>University of South Australia, Australia
- 1120 **A Modeling System to Evaluate Future Water Allocation Strategies in Complex Basins: A Case Study of the Musi Catchment, India**  
*Biju George<sup>1</sup>, Hector M. Malano<sup>1</sup>, Brian Davidson<sup>1</sup>, Massuel Sylvain<sup>2</sup>*  
<sup>1</sup>University of Melbourne, Australia ; <sup>2</sup>International Water Management Institute, India
- 1132 **Quantifying the Impacts of Rainwater Harvesting in a Case Study Catchment; the Arvari River, Rajasthan, India**  
*C. Glendenning, R.W. Vervoort, University of Sydney, Australia*

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## E2: Climate Variability and Climate Change

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- 1144 **Temporal Variation of Extreme Precipitation Events in Australia: 1910–2006**  
*Guobin Fu, Neil R. Viney, S.P. Charles, CSIRO, Australia*
- 1156 **Sensitivity of Yield Estimate of Urban Water Supply Systems Under Climate Variability**  
*D.M. King, B.J.C. Perera, Victoria University, Australia*
- 1168 **Assessing the Impact of Climate Change on Urban Water Systems: Overview of Methods**  
*S.C. Ashbolt, S. Maheepala, CSIRO, Australia*
- 1180 **Assessing the Impact of Climate Change on the Surface Energy and Water Balance of the Seyhan River Basin Turkey**  
*Kenji Tanaka<sup>1</sup>, Yoichi Fujihara<sup>2</sup>, T. Kojiri<sup>1</sup>*  
<sup>1</sup>Kyoto University, Japan ; <sup>2</sup>NIHU, Japan
- 1190 **Reflecting a Climate Change Factor in Flood Frequency Analysis for Korean River Basins**  
*Dae Il Jeong<sup>1</sup>, Jerry R. Stedinger<sup>2</sup>, Young-Oh Kim<sup>3</sup>, Jang Hyun Sung<sup>3</sup>, Seok Young Yoon<sup>1</sup>*  
<sup>1</sup>Korea Institute of Construction Technology, Korea ; <sup>2</sup>Cornell University, USA; <sup>3</sup>Seoul National University, Korea

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## E3: Sustainable Water Management

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- 1201 **Natural and Human Induced Fire Impacts on Water Quality in Water Supply Catchments**  
*A. Wade<sup>1</sup>, I. White<sup>1</sup>, M. Worthy<sup>1</sup>, A.M. Gill<sup>1</sup>, N. Mueller<sup>2</sup>, R.J. Wasson<sup>3</sup>*  
<sup>1</sup>Australian National University, Australia ; <sup>2</sup>Ecowise Environmental, Australia; <sup>3</sup>Charles Darwin University, Australia
- 1213 **Identifying the Most Effective Catchment Management Options**  
*D.E. Robertson<sup>1</sup>, Q.J. Wang<sup>1</sup>, T.M. Etchells<sup>2</sup>, Hector M. Malano<sup>2</sup>*  
<sup>1</sup>CSIRO, Australia ; <sup>2</sup>University of Melbourne, Australia
- 1223 **Yield Estimate in the Upper Tinana Scheme Queensland, Australia**  
*Mohand Amghar, Parsons Brinckerhoff, Australia*
- 1235 **Managing Groundwater to Protect Karst Ecosystems in New South Wales**  
*R. Michael Williams<sup>1</sup>, Russell Commins<sup>2</sup>, Jan Gill<sup>1</sup>*  
<sup>1</sup>NSW DWE, Australia ; <sup>2</sup>NSW DECC, Australia
- 1248 **Carbon Sequestration in Australian Estuarine Wetlands**  
*A. Howe, José F. Rodríguez, P.M. Saco, University of Newcastle, Australia*

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## E4: Groundwater

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- 1260 **Chowilla Floodplain Groundwater Model**  
*Wei Yan, Brenton Howe, SA DWLBC, Australia*
- 1272 **Aquifer Interactions and Groundwater Discharge into Streams Identified Using <sup>87</sup>Sr/<sup>86</sup>Sr Isotope Ratios in the Upper Loddon Catchment, Central Victoria**  
*S.K. Hagerty, John A. Webb, La Trobe University, Australia*
- 1279 **Geological Controls on the Spatial Variability of Groundwater Recharge and Salinity in a Regional-Scale Basalt Aquifer in Western Victoria**  
*M. Raiber<sup>1</sup>, John A. Webb<sup>1</sup>, G.E. Jacobsen<sup>2</sup>, R. Chisari<sup>2</sup>, A.A. Williams<sup>2</sup>*  
<sup>1</sup>La Trobe University, Australia ; <sup>2</sup>ANSTO, Australia
- 1284 **Microbiological, Hydrochemical, and Isotopic Characterisation of the Aquifers at Alstonville, NSW, Australia**  
*A. Madden<sup>1</sup>, W. McLean<sup>1</sup>, J. Walsh<sup>2</sup>, M. Fanning<sup>3</sup>*  
<sup>1</sup>Parsons Brinckerhoff, Australia ; <sup>2</sup>Walsh Environmental Management Services, Australia; <sup>3</sup>Ballina Shire Council, Australia
- 1296 **Estimating Groundwater Inflow to a Shallow, Poorly-Mixed Wetland Using Environmental Tracers**  
*P.G. Cook<sup>1</sup>, C. Wood<sup>2</sup>, L. Powell<sup>2</sup>, E. Watt<sup>2</sup>, T. White<sup>2</sup>, Philip Brunner<sup>2</sup>, C.T. Simmons<sup>2</sup>*  
<sup>1</sup>CSIRO, Australia ; <sup>2</sup>Flinders University, Australia

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## E5: Hydrological Modelling

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- 1307      **Hydrological and Hydraulic Design Considerations in Australia — A Commentary**  
*G.G. O'Loughlin, Anstad Pty. Ltd., Australia*
- 1319      **Development and Testing of a Distributed Hydrological Model with Comparison to a Conceptual Lumped Model**  
*Qi Zhang<sup>1</sup>, Neil R. Viney<sup>2</sup>*  
*<sup>1</sup>Chinese Academy of Sciences, China ; <sup>2</sup>CSIRO, Australia*
- 1330      **Estimating Mean Annual Flow for the South West of Western Australia Using a Simple Regional Model**  
*J.M. Durrant, WA Department of Water, Australia*
- 1341      **Representation of Catchment Connectivity in Lumped Models**  
*L.E. Neumann, Andrew Western, R.M. Argent, University of Melbourne, Australia*
- 1353      **Predicting Flood Inundation Using a Hydrodynamic Model**  
*Y.T. Zerihun, SA DWLBC, Australia*

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## E6: Water Quality

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- 1364      **Spatial and Temporal Trends in the Water Quality of the Namoi River Catchment**  
*M. Neave<sup>1</sup>, L. McQuire<sup>1</sup>, Scott C. Rayburg<sup>2</sup>*  
*<sup>1</sup>University of Sydney, Australia ; <sup>2</sup>University of Canberra, Australia*
- 1375      **Characterisation of Solute Transport in a Seasonal Stream Using Continuous In-Situ Water Quality Monitoring**  
*K. Turner, D. Moliere, C. Humphrey, D. Jones, eriss, Australia*
- 1384      **Tasting the Dregs — Is an Interstate Framework Needed to Protect Water Quality in South Australia?**  
*L. Mosley, J. Riggs, EPA SA, Australia*
- 1393      **Development of a Catchment Water Quality Model for the South Australian Murray-Darling Basin**  
*L. Mosley, J. Stewart, B. Zammit, J. Riggs, EPA SA, Australia*
- 1403      **Modelling of Stream Salinity Management Options for the Warren River**  
*R.N.M. Dixon, M.A. Bari, WA Department of Water, Australia*



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## F1: Sustainable Water Management

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- 1414 **Proximal Sensing of Soil Water and Assessing Irrigator Performance as Decision Tools for Precision Irrigation**  
*C.B. Hedley<sup>1</sup>, I.J. Yule<sup>1</sup>, M.P. Tuohy<sup>2</sup>*  
<sup>1</sup>Massey University, New Zealand ; <sup>2</sup>Landcare Research, New Zealand
- 1426 **Smart Environmental Watering: Getting Most Benefit from Scant Flows for Floodplain Trees (River Murray, South Australia)**  
*A.E. Jensen, K.F. Walker, D.C. Paton, University of Adelaide, Australia*

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## F2: Climate Variability and Climate Change

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- 1438 **Climate Regimes and Yearly Streamflow Frequency Analysis in Sicily**  
*C. Arena, M.R. Mazzola, Università di Palermo, Italy*
- 1451 **Yield Modelling for Climate Step-Change in South East Australia: Approaches and Risks**  
*A. Ramchurn<sup>1</sup>, Brad Neal<sup>1</sup>, A.S. Kiem<sup>1</sup>, R.J. Nathan<sup>1</sup>, W.R. Hansen<sup>2</sup>*  
<sup>1</sup>Sinclair Knight Merz, Australia ; <sup>2</sup>VIC DSE, Australia

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## F3: Natural Disasters

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- 1463 **Fire and Water: Framing Fire and Fuel Management of Water-Supply Catchments**  
*A.M. Gill<sup>1</sup>, M. Worthy<sup>1</sup>, A. Wade<sup>1</sup>, N. Mueller<sup>2</sup>, I. White<sup>1</sup>*  
<sup>1</sup>Australian National University, Australia ; <sup>2</sup>Ecowise Environmental, Australia
- 1472 **Spatially Explicit Modelling of the Hydrologic Response of Bushfires at the Catchment Scale**  
*P.I. Hill, A. Mordue, R.J. Nathan, C.C. Daamen, K. Williams, Rachel Murphy, Sinclair Knight Merz, Australia*

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## F4: Ground Water

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- 1481 **Analysis of Groundwater Thermographs and Hydrographs at Different Time/Spatial Scales: Headwaters of the Namoi River, NSW**  
*Dawit Berhane<sup>1</sup>, R.W. Vervoort<sup>2</sup>, Peter Serov<sup>3</sup>*  
<sup>1</sup>NSW DWE, Australia ; <sup>2</sup>University of Sydney, Australia; <sup>3</sup>University of New England, Australia
- 1493 **Short-Term Groundwater Dynamics at a Paddock Scale**  
*John A. Webb, Baden G. Williams, Kate Bailue, Joe Walker, John W. Anderson, La Trobe University, Australia*

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## F5: Hydrological Modelling

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- 1501 **Land and Soil Spatial Data: Its Role in Hydrological Modelling, Water Resource Management and Wetlands Mapping**  
*J.A. Hall, D.J. Maschmedt, SA DWLBC, Australia*
- 1511 **Hydrological Anomalies in the Tambo River, Victoria**  
*R.J. Connell<sup>1</sup>, R.M. Argent<sup>2</sup>*  
<sup>1</sup>*Water Technology Pty. Ltd., Australia* ; <sup>2</sup>*University of Melbourne, Australia*

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## F6: Water Resources Planning and Management

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- 1521 **Integrated Reservoir Operation Modeling for Irrigation Systems: A Multi Objective Approach**  
*M. Janga Reddy<sup>1</sup>, D. Nagesh Kumar<sup>2</sup>*  
<sup>1</sup>*IIT Bombay, India* ; <sup>2</sup>*IISc Bangalore, India*
- 1532 **Urban Water Supply Drought Security: A Comparative Analysis of Complimentary Centralised and Decentralised Storage Systems**  
*George Kuczera, University of Newcastle, Australia*

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## G1: Sustainable Water Management

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- 1544 **A Collaborative Model Process to Examine Temperature Dynamics and Related Remediation Strategies for the Willamette Basin, Oregon**  
*Thomas S. Lowry<sup>1</sup>, Vince C. Tidwell<sup>1</sup>, Hal E. Cardwell<sup>2</sup>*  
<sup>1</sup>*Sandia National Laboratories, USA* ; <sup>2</sup>*US Army Corps of Engineers, USA*
- 1551 **Estimation of Precipitation Variation in River Basin Scale with GCM Outputs**  
*T. Kojiri<sup>1</sup>, T. Kobayashi<sup>1</sup>, T. Nozawa<sup>2</sup>*  
<sup>1</sup>*Kyoto University, Japan* ; <sup>2</sup>*NIES, Japan*
- 1563 **Saving Water by Changing the Operation of Hume Dam**  
*R.M. Nation, A.R. Ladson, Monash University, Australia*

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## G2: Climate Variability and Modelling

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- 1574 **A Joint Probability Approach for Seasonal Forecasting of Streamflows at Multiple Sites**  
*Q.J. Wang, F.H.S. Chiew, D.E. Robertson, CSIRO, Australia*
- 1582 **A High Resolution Spatio-Temporal Model for Single Storm Events Based on Radar Images**  
*J. Qin<sup>1</sup>, M. Leonard<sup>2</sup>, George Kuczera<sup>1</sup>, Mark A. Thyer<sup>1</sup>, A.V. Metcalfe<sup>2</sup>, M.F. Lambert<sup>2</sup>*  
<sup>1</sup>*University of Newcastle, Australia* ; <sup>2</sup>*University of Adelaide, Australia*
- 1595 **Effect of an Extreme Storm Event on Catchment Hydrology and Sediment Transport in the Magela Creek catchment, Northern Territory**  
*D. Moliere, K.G. Evans, K. Turner, eriss, Australia*

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### G3: Sustainability

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- 1606 **A New Approach to Water Allocation Management in New Zealand**  
*J.C. Bright, Aqualinc Research Ltd., New Zealand*
- 1618 **An Assessment of the Future Impact of Farm Dams on Runoff in the Murray-Darling Basin, Australia**  
*P.W. Jordan<sup>1</sup>, C.R. Wiesenfeld<sup>1</sup>, P.I. Hill<sup>1</sup>, Robert A. Morden<sup>1</sup>, F.H.S. Chiew<sup>2</sup>*  
<sup>1</sup>Sinclair Knight Merz, Australia ; <sup>2</sup>CSIRO, Australia
- 1630 **Development of an Integrated 1D-2D Hydrodynamic-Water Quality Model of the Edko Catchment and Shallow Lake System**  
*A.M. Azab, R.K. Price, I.I. Popescu, UNESCO-IHE, The Netherlands*
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### G4: Groundwater

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- 1642 **Heat as a Tracer of Stream Exchanges with Shallow Ground Water**  
*Jim Constantz, U.S. Geological Survey, USA*
- 1653 **Reactive Transport Simulation of the Pollutant Transfer Through the Unsaturated Soil Zone in the Framework of an Aquifer Artificial Recharge Process**  
*M. Azaroual<sup>1</sup>, A. Lassin<sup>1</sup>, M. Petteati<sup>1</sup>, L. André<sup>1</sup>, Ph. Blanc<sup>1</sup>, J. Casanova<sup>1</sup>, N. Rampnoux<sup>2</sup>*  
<sup>1</sup>BRGM, France ; <sup>2</sup>Véolia Environnement, France
- 1665 **Assessing Impacts of Confined Abstraction on the Gngangara Mound Using Transient Response Functions**  
*C. Xu, M. Martin, Water Corporation, Australia*
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### G5: Hydrological Modelling

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- 1677 **SIEREM: An Environmental Information System for Water Resources Modelling in Africa**  
*Jean-François Boyer, Claudine Dieulin, Eric Servat, UMR 5569 HSM, France*
- 1689 **The Behaviour of Hydrological Model Parameters in Extreme Environments: Constants or Variables?**  
*F.F. van Ogtrop, R.W. Vervoort, University of Sydney, Australia*
- 1700 **Regionalisation of Runoff Generation Across the Murray-Darling Basin Using an Ensemble of Two Rainfall-Runoff Models**  
*Neil R. Viney<sup>1</sup>, J. Vaze<sup>2</sup>, F.H.S. Chiew<sup>1</sup>, J.-M. Perraud<sup>1</sup>*  
<sup>1</sup>CSIRO, Australia ; <sup>2</sup>NSW DWE, Australia
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### G6: Water Resources Planning and Management

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- 1712 **A Stochastic Model for Identifying the Long Term Dynamics of Indoor Household Water Uses**  
*Lijie Cui, Mark A. Thyer, P.J. Coombes, George Kuczera, University of Newcastle, Australia*
- 1724 **An Analysis of Losses and Gains in Indus River System of Pakistan**  
*Fida Hussain, Hashim Nisar Hashmi, Shahid Ali, Indus River System Authority, Pakistan*
- 1735 **Integrated Modelling of Two Complex Water Supply Systems Using REALM**  
*T.J. Sheedy, David Stephens, E.J. Murrphy, Sinclair Knight Merz, Australia*

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## H1: Hydrological Modelling

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- 1742 **Rainfall-Runoff Characteristics of Young Oil Palm Catchment**  
*Zulkifli Yusop, M.H. Chong, A. Katimon, Fadhilah Yusof, Universiti Teknologi Malaysia, Malaysia*
- 1750 **Multi-Objective Genetic Algorithm Optimisation of Water Distribution Systems Accounting for Sustainability**  
*Wenyan Wu, Angus R. Simpson, Holger R. Maier, University of Adelaide, Australia*
- 1762 **Reservoir Design Optimization Using New Storage Moments Equations**  
*S.G. Fletcher<sup>1</sup>, K. Ponnambalam<sup>2</sup>*  
<sup>1</sup>WASA, Trinidad and Tobago ; <sup>2</sup>University of Waterloo, Canada

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## H2: Climate Variability and Modelling

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- 1771 **Investigating the Uncertainty in Flow at Gauging Sites in Gippsland Using Australian Standard 3778.2.3**  
*N. Ozbey<sup>1</sup>, P.J. Scanlon<sup>2</sup>, Andrew Western<sup>2</sup>*  
<sup>1</sup>Thiess Services, Australia ; <sup>2</sup>University of Melbourne, Australia
- 1783 **A High Resolution Large-Scale Gaussian Random Field Rainfall Model for Australian Monthly Rainfall**  
*A. Osti, M. Leonard, M.F. Lambert, A.V. Metcalfe, University of Adelaide, Australia*
- 1795 **A Multisite Stochastic Downscaling Framework for Climate Change Impact Assessment**  
*R. Mehrotra, Ashish Sharma, University of New South Wales, Australia*

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## H3: Sustainability

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- 1807 **The Contribution of Values and Attitudes to Irrigators' Decision Making**  
*G. Kuehne, H. Bjornlund, B. Cheers, University of South Australia, Australia*
- 1819 **A Framework for Water Entitlements and Trading in China**  
*T.L. McGrath<sup>1</sup>, R.A. Speed<sup>2</sup>, D. Shen<sup>3</sup>*  
<sup>1</sup>Kellogg Brown & Root Pty. Ltd., Australia ; <sup>2</sup>WET Project, Australia; <sup>3</sup>China Institute of Water Resources and Hydropower Research, China
- 1831 **Water Rights Trading in China's Water Policy Reform: Current Practices and Future Development**  
*Min Jiang, Macquarie University, Australia*

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## H4: Groundwater

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- 1843 **Hydrogeophysical Characterisation of Fractured Rock: Mapping Flow Paths in the Mount Lofty Ranges, South Australia**  
*Adrian Costar<sup>1</sup>, Tania C. Wilson<sup>1</sup>, Zoe Smit<sup>2</sup>, Graham Heinson<sup>2</sup>, A.J. Love<sup>3</sup>, M. Tingay<sup>2</sup>*  
<sup>1</sup>SA DWLBC, Australia ; <sup>2</sup>University of Adelaide, Australia; <sup>3</sup>Flinders University, Australia
- 1855 **Primary and Secondary Controls on Fracture and Fracture Permeability Development: An Example from the Fractured Rock Aquifers of the Clare Valley, South Australia**  
*L. Mortimer<sup>1</sup>, A.J. Love<sup>1</sup>, A. Aydin<sup>2</sup>, C.T. Simmons<sup>1</sup>*  
<sup>1</sup>Flinders University, Australia ; <sup>2</sup>University of Mississippi, USA
- 1867 **Groundwater Residence Time and Flow Velocity in Confined Tertiary Aquifers of the Northern Adelaide Plains, South Australia**  
*D.J. Baird<sup>1</sup>, C. Le Gal La Salle<sup>2</sup>, A.J. Love<sup>1</sup>, C.T. Simmons<sup>1</sup>*  
<sup>1</sup>Flinders University, Australia ; <sup>2</sup>Centre Universitaire de Formation et de Recherché de Nîmes, France

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## H5: Hydrological Modelling

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- 1879      **An Approach for Assessing the Physical Condition of Rivers at the Catchment Scale**  
*C.D. Harris, Martin C. Thoms, Scott C. Rayburg, M. Parsons, University of Canberra, Australia*
- 1890      **Investigating Spatial and Temporal Variability in Runoff and Sediment Generation Using a Physically-Based Model, THALES**  
*Russell Adams<sup>1</sup>, Andrew Western<sup>1</sup>, Brett Anderson<sup>2</sup>, A.W. Seed<sup>3</sup>*  
*<sup>1</sup>University of Melbourne, Australia ; <sup>2</sup>Water Technology Pty. Ltd., Australia; <sup>3</sup>Bureau of Meteorology, Australia*
- 1902      **Morphologic Complexity and Diversity in Natural and Channelized Streams**  
*Scott C. Rayburg<sup>1</sup>, M. Neave<sup>2</sup>*  
*<sup>1</sup>University of Canberra, Australia ; <sup>2</sup>University of Sydney, Australia*

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## H6: Water Resources Planning and Management

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- 1912      **What River Impacts This Reef? A Simple Reef Exposure Model**  
*M. Maughan<sup>1</sup>, J. Brodie<sup>1</sup>, J. Waterhouse<sup>2</sup>*  
*<sup>1</sup>James Cook University, Australia ; <sup>2</sup>CSIRO, Australia*
- 1924      **Local Groundwater Management Studies in Ontario, Canada: A Case for Retaining a Role for the State in Community-Based Water Research**  
*Brent Taylor<sup>1</sup>, Rob de Loë<sup>1</sup>, Reid Kreutzwiser<sup>1</sup>, H. Bjornlund<sup>2</sup>*  
*<sup>1</sup>University of Guelph, Canada ; <sup>2</sup>University of South Australia, Australia*
- 1937      **Controlling Sediment Movement Following Bushfire — A Case Study in Managing Water Quality, Mount Bold, South Australia**  
*R. Morris<sup>1</sup>, S. Calliss<sup>2</sup>, J. Frizenschaf<sup>2</sup>, M. Blason<sup>2</sup>, D. Dragovich<sup>3</sup>, M. Henderson<sup>4</sup>, B. Ostendorf<sup>1</sup>*  
*<sup>1</sup>University of Adelaide, Australia ; <sup>2</sup>SA Water House, Australia; <sup>3</sup>University of Sydney, Australia; <sup>4</sup>SA DEH, Australia*

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## I1: Murray Darling Basin Sustainable Yields

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- 1948      **Integrated Assessment of the Likely Impacts of Climate Change and Future Development on Water Availability and Use in the Murray-Darling Basin**  
*W.J. Young, G.M. Podger, G.R. Walker, F.H.S. Chiew, CSIRO, Australia*
- 1957      **Estimation of Impact of Climate Change and Development on Runoff Across the Murray-Darling Basin**  
*F.H.S. Chiew<sup>1</sup>, J. Vaze<sup>2</sup>, Neil R. Viney<sup>1</sup>, J.-M. Perraud<sup>1</sup>, J. Teng<sup>2</sup>, P.W. Jordan<sup>3</sup>, D. Kirono<sup>1</sup>, W.J. Young<sup>1</sup>*  
<sup>1</sup>CSIRO, Australia; <sup>2</sup>NSW DWE, Australia; <sup>3</sup>Sinclair Knight Merz, Australia
- 1969      **Murray Darling Basin Sustainable Yields Project: Prioritisation and Assessment Framework for Groundwater**  
*S. Richardson<sup>1</sup>, G.R. Walker<sup>2</sup>, B. Barnett<sup>3</sup>, C.C. Daamen<sup>3</sup>, P. Davies<sup>2</sup>, Richard S. Evans<sup>3</sup>, W.R. Evans<sup>4</sup>, A. Goode<sup>3</sup>, J. Pritchard<sup>1</sup>, V. Waklawik<sup>1</sup>*  
<sup>1</sup>Resource & Environmental Management Pty. Ltd., Australia; <sup>2</sup>CSIRO, Australia; <sup>3</sup>Sinclair Knight Merz, Australia; <sup>4</sup>Salient Solutions, Australia
- 1980      **A Framework to Support the Modelling of Surface and Ground Water Resources Throughout the Murray Darling Basin**  
*G.M. Podger<sup>1</sup>, A.J. Davidson<sup>2</sup>, A. Yang<sup>1</sup>*  
<sup>1</sup>CSIRO, Australia; <sup>2</sup>NSW DWE, Australia
- 1992      **River Water Balance Accounting to Evaluate Model Adequacy and Uncertainty in Climate and Development Scenario Assessment**  
*M. Kirby, A.I.J.M. Van Dijk, Mohammed Mainuddin, J. Peña-Arancibia, J.-P. Guerschman, Y. Liu, S. Marvanek, D.L. McJannet, Z. Paydar, T.R. McVicar, T.G. Van Niel, L.T. Li, CSIRO, Australia*

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## I2: Climate Variability and Modelling

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- 2004      **Evaporation in a Warming World**  
*F.M. Johnson, Ashish Sharma, University of New South Wales, Australia*
- 2016      **Implications of the 1997–2006 Drought on Water Resources Planning for Melbourne**  
*K.S. Tan, B.G. Rhodes, Melbourne Water, Australia*
- 2028      **Social Impacts of Water Restrictions: Householders in the Ballarat Water Supply System**  
*J. Harman, D. Lynch, S. McEachern, University of Ballarat, Australia*
- 2042      **Incorporating Drought Management Planning into the Determination of Yield**  
*Brendan Berghout, Hunter Water Corporation, Australia*
- 2050      **Evaluating Drought Risk Dynamics: Comparison of a Climate-Informed Multi-Time Scale Stochastic (CIMSS) Framework to the AR(1) Model**  
*B.J. Henley, Mark A. Thyer, George Kuczera, S.W. Franks, University of Newcastle, Australia*

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### I3: Sustainability

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- 2062 **Water Banking — Crop Mixes Approach to Improve River Productivity and Environmental Performance**  
*A. Elmahdi<sup>1</sup>, Hector M. Malano<sup>2</sup>*  
<sup>1</sup>CSIRO, Australia ; <sup>2</sup>University of Melbourne, Australia
- 2074 **Adaptation of EU Water Framework Directive Principles for Integrated Management of Ganges-Brahmaputra-Meghna River Basin**  
*Shishutosh Barua<sup>1</sup>, Philippe Quevauviller<sup>2</sup>, A.W.M. Ng<sup>1</sup>, B.J.C. Perera<sup>1</sup>*  
<sup>1</sup>Victoria University, Australia ; <sup>2</sup>Vrije Universiteit Brussels, Belgium
- 2086 **Establishing Priorities for Irrigation Water Allocation Using Conjoint Analysis**  
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<sup>1</sup>University of Texas at Austin, USA ; <sup>2</sup>Sandia National Laboratories, USA

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<sup>1</sup>Flinders University, Australia ; <sup>2</sup>CSIRO, Australia
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<sup>1</sup>Sydney Catchment Authority, Australia ; <sup>2</sup>Parsons Brinckerhoff, Australia
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*C. Xu<sup>1</sup>, M. Martin<sup>1</sup>, R. Silberstein<sup>2</sup>, K. Smettem<sup>3</sup>*  
<sup>1</sup>Water Corporation, Australia ; <sup>2</sup>CSIRO, Australia ; <sup>3</sup>University of Western Australia, Australia

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*<sup>1</sup>University of Melbourne, Australia ; <sup>2</sup>Water Technology Pty. Ltd., Australia; <sup>3</sup>CSIRO, Australia*
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*<sup>1</sup>CSIRO, Australia ; <sup>2</sup>NSW DWE, Australia*
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*<sup>1</sup>University of Adelaide, Australia ; <sup>2</sup>IIT Kharagpur, India*
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*<sup>1</sup>Utsunomiya University, Japan ; <sup>2</sup>Oriental Consultants Co. Ltd., Japan*

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