

PROFESSOR PETER COOK CURRICULUM VITAE

PERSONAL DETAILS

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BIOGRAPHY

Professor Peter Cook is a Professorial Research Fellow with Flinders University and a leading international expert on groundwater. His research focusses on developing methods to better understand and manage groundwater resources, and the interaction between groundwater and the environment. As well as studies of groundwater flow and sustainability of groundwater use, his research has included studies of the interaction between groundwater and wetlands, groundwater exchange with rivers, submarine groundwater discharge, and vegetation – groundwater interaction, including interdisciplinary studies with plant physiologists, oceanographers and surface hydrologists.

Between 2009 and 2014 Professor Cook held a joint CSIRO – Flinders University position as Deputy Director of Australia's National Centre for Groundwater Research and Training (NCGRT), and leader of its Surface Water – Groundwater Interaction program. The NCGRT was a \$55 million Australian government initiative to develop research programs to tackle Australian water management problems. In 2009, Professor Cook was the U.S. National Ground Water Association's Henry Darcy Distinguished Lecturer in Ground Water Science, the first time this honour was awarded to a scientist from outside North America. He has received a number of other awards for his research including the Leadership Award at the Water Industry Alliance 10th Smart Water Awards as part of the team that developed the Australian Groundwater Modelling Guidelines (2013), and the CSIRO Chairman's Medal (2008), as part of the team who delivered CSIRO's Murray-Darling Basin Sustainable Yield project.

Professor Cook has published 96 papers in international journals, as well as 88 conference papers and 73 client reports. This includes 33 papers in leading international journals within the past three years. Of papers that he has published within the past ten years, more than half are in the top 20% of cited papers in their respective journals. He has also co-authored two of the four most cited papers ever published in Hydrogeology Journal. His h-index is 38, which is amongst the highest of groundwater researchers internationally. (The average h-index of groundwater researchers that have been awarded the Geological Society of America's Meinzer Award is 13.)

CAREER SUMMARY

Research Activities

- Dr Cook's research has spanned groundwater recharge, surface water – groundwater interaction, vegetation use of groundwater, flow in fractured rocks, and use of environmental and applied tracers. He has published 96 papers in international journals, and has written 13 book chapters, 88 conference papers and 73 reports.
- Dr Cook has written three text books: *Ecohydrology; Vegetation Function, Water and Resource Management*, published in 2006, is a major reference work spanning the disciplines of hydrology and ecology. *A Guide to Regional Groundwater Flow in Fractured Rock Aquifers*, published in 2003, is a practical guide aimed at hydrogeologists working in highly complex fractured rock systems. *Environmental Tracers in Subsurface Hydrology*, published in 2000, is now considered to be the preeminent reference work in its field.
- Dr Cook was the National Ground Water Association (USA) Darcy Lecturer for 2009. The Henry Darcy Distinguished Lecture Series in Ground Water Science was established in 1986, and each year a panel of scientists and engineers invite an outstanding ground water professional to share his or her work with their peers and students through a series of

lecturers. Dr Cook was the first scientist from outside North America to receive this honour. Through this lecture series, Dr Cook presented results of his work at 40 academic and research institutions in Australia, Northern America and Europe.

- Dr Cook was Deputy Director of the National Centre for Groundwater Research and Training (NCGRT) between 2009 and 2014, and also lead one of its five research programs. The NCGRT is a consortium of 20 university and industry partners, and was established to manage \$55 million of funding for groundwater research.

National and International Advisory Boards and Committees

Dr Cook regularly provides high level advice to national and international scientific organisations, including the Murray Darling Basin Authority, International Atomic Energy Agency, the United States National Science Foundation, the Canadian National Science and Engineering Research Council, the South African Water Research Commission, and the German Research Foundation. In particular:

- In 2014, Dr Cook provided advice to the Murray Darling Basin Authority in relation to disputes with the NSW and Victorian Governments concerning sustainable groundwater extraction limits for two key regions of the MDB.
- In 2012, Dr Cook reviewed a \$2 million proposal to create a large-scale observatory for interdisciplinary water science in the Saskatchewan River Basin, Canada, on behalf of the Canada Foundation for Innovation.
- In 2011, Dr Cook reviewed the joint German – Canadian proposal for a €4.2 million International Research Training Group on Integrated Hydrosystem Modelling on behalf of the German Research Foundation.
- Between 2010 and 2012, Dr Cook was a member of Scientific Advisory Committee for the German Water Science Alliance, an initiative that aims to strengthen water research in Germany and distributes more than €100 million per year of research funding.
- In 2009-2010 Dr Cook participated in the IAEA Coordinated Research Program on *Isotopic Techniques for Assessment of Hydrological Processes in Wetlands*, and in 2002-2003, he was a member of the IAEA working group on the *Application of Chlorofluorocarbon Methods in Hydrology*.
- In 2003, Dr Cook was commissioned by the United States National Research Council to review the deliberations of their Committee on Hydrologic Sciences on the interaction between groundwater and surface water resources. In the same year, he was also commissioned by the New Zealand Department of Health to review their proposed criteria for assessing the susceptibility of groundwater supplies to contamination.
- Dr Cook was a member of the Australian National Groundwater Committee between 2002 and 2007. The National Groundwater Committee was set up to facilitate knowledge sharing between States and between groundwater research and management agencies.
- Dr Cook was a member of the Victorian Government's Technical Audit Panel for water resources from its inception in 2002 until 2008. The Technical Audit Panel is charged with reviewing all the consultant reports commissioned by water authorities throughout Victoria that underlie water allocation decisions. This included a review of groundwater allocation and management in the Border Zone region between SA and Victoria, and review of a water resource development for the Geelong Water Supply - a \$73 million project that will supply 20% of the water needs for the Greater Geelong area.
- Dr Cook has been an Associate Editor of the international journal *Ground Water* since 1999. He also served terms as Associate Editor of *Journal of Hydrology* (2000-2004) and Associate Editor of *Hydrogeology Journal* (2000-2003)

WORK HISTORY

- Aug 2015 – Present: Professorial Research Fellow
Flinders University
- Jul 2014 – Jul 2014 : CSIRO Land and Water, Adelaide
Chief Research Scientist
- Jul 2009 – Jun 2014 : National Centre for Groundwater Research and Training
Deputy Director
CSIRO / Flinders University
- Oct 1994 – Jul 2009 : CSIRO Land and Water, Adelaide
Senior Principal Research Scientist
- Feb 1994 - Sep 1994 : University of Waterloo, Canada
Post-Doctoral Fellow
- Feb 1993 - Feb 1994 : Oak Ridge National Laboratory, USA
Post-Doctoral Fellow
- Aug 1992 - Feb 1993 : University of Waterloo, Canada
Post-Doctoral Fellow
- Jan 1989 - Aug 1992 : Flinders University of South Australia
PhD Student
- Dec 1986 - Jan 1989 : CSIRO Division of Water Resources
Experimental Scientist

TERTIARY EDUCATION

- 1989-1992 : PhD, School of Earth Sciences
Flinders University of South Australia
- 1983-1986 : BA, 1st Class Honours in Geography
Australian National University

AWARDS RECEIVED

- NGWA Henry Darcy Distinguished Lecturer (2009)
CSIRO Chairmans Medal (2008)
CSIRO 'Go for Growth' Award (2007)
CSIRO Teamwork Award (2005)
Canada International Fellowship (1994)
Flinders University Overseas Travelling Fellowship (1991)
State Bank Travelling Award (1991)
Amy Forwood Award (1991)
Australian National University Medallist (1986)

INTERNATIONAL CONFERENCES AND WORKSHOPS

Invited Papers at International Conferences

International Association of Hydrogeologists Conference, Perth (2013); International Association of Hydraulic Research International Symposium, Kuwait (2012); GDAT 2012 Groundwater Dating Workshop, Rennes (2012); 1st Water Research Horizon Conference, Berlin (2010); NGWA Ground Water Expo Darcy Lecture, New Orleans (2009); Geological Society of American Annual Meeting Darcy Lecture, Portland (2009); Midwest Ground Water Conference, St Louis (2009); NGWA Ground Water Summit Darcy Lecture, Tucson (2009); International Workshop on Groundwater Dating Using

Environmental Tracers, Leipzig (2007); Groundwater and Ecosystems, Lisbon (2007), Theis Conference on Ground Water Age: Estimation, Modeling and Water Quality Sustainability, California (2005); Groundwater in Fractured Rocks, Prague (2003); Dubai International Conferences on Water Resources and Integrated Management in the Third Millennium (2002); Keynote Opening Address at the New Zealand Hydrological Society Annual Congress (2002)

International Workshops Conducted

Groundwater Modelling (Manila, Philippines) 8 – 10 June 2006; Groundwater Investigation and Management (Ilocos Norte, Philippines) 22-24 February 2005; Groundwater Recharge in Fractured Aquifers (Cape Town, South Africa), 1 December 2000.

PUBLICATIONS

Books

Eamus D., Hatton T., Cook P.G. and Colvin C. (2006) Ecohydrology. Vegetation Function, Water and Resource Management. CSIRO Publishing, 348pp.

Cook P.G. (2003) A Guide to Regional Groundwater Flow in Fractured Rock Aquifers. Seaview Press, Henley Beach (South Australia), 108pp.

Cook P.G. and Herczeg A.L. (1999) Environmental Tracers in Subsurface Hydrology. Kluwer Academic Press, Boston, 529 pp.

Book Chapters

Love A.J., Simmons C.T., Cook P.G., Harrington G.A., Herczeg A.L., and Halihan T. (2007). Estimating Groundwater Flow Rates in Fractured Metasediments: Clare Valley, South Australia. In Krasny, J. and Sharp, J.M. (ed.) *Groundwater in Fractured Rocks*. IAH Selected Papers on Hydrogeology, Volume 9, pp 463-477.

Plummer L.N., Busenberg E. and Cook P.G. (2006). Principles of chlorofluorocarbon dating. In *Use of Chlorofluorocarbons in Hydrology. A Guidebook*. IAEA, Vienna, pp.17-29.

Cook P.G., Plummer L.N., Solomon D.K., Busenberg E. and Han L.F. (2006). Effects and processes that can modify apparent CFC age. In *Use of Chlorofluorocarbons in Hydrology. A Guidebook*. IAEA, Vienna, pp.31-58.

Solomon D.K., Cook P.G. and Plummer L.N. (2006). Models of groundwater ages and residence times. In *Use of Chlorofluorocarbons in Hydrology. A Guidebook*. IAEA, Vienna, pp.73-88.

Solomon D.K., Plummer L.N., Busenberg E. and Cook P.G. (2006). Practical applications of CFCs in hydrological investigations. In *Use of Chlorofluorocarbons in Hydrology. A Guidebook*. IAEA, Vienna, pp.89-103.

Plummer L.N., Busenberg E., Cook P.G., Oster H., Han L.F. and Groning M. (2006). Selected case studies using CFC data. In *Use of Chlorofluorocarbons in Hydrology. A Guidebook*. IAEA, Vienna, pp.135-182.

Busenberg E., Plummer L.N., Cook P.G., Solomon D.K., Han L.F., Groning M. and Oster H. (2006). Sampling and analytical methods. In *Use of Chlorofluorocarbons in Hydrology. A Guidebook*. IAEA, Vienna, pp.199-220.

Cook P.G., Jolly I.D., Walker G.R. and Robinson N.I. (2003) From drainage to recharge to discharge: some timelags in subsurface hydrology. In A.S. Alsharhan and W.W. Wood (ed.) *Water Resources Perspectives: Evaluation, Management and Policy*. Developments in Water Science 50. Elsevier, Amsterdam, pp.319-326.

Connor J., Cook P.G. and Miles M. (2003) Maximum Justified Investment in Revegetation as an Alternative to Salt Interception for the South Australian River Murray. In T. Graham, D. Pannell, B.

White (ed.) *Dryland Salinity: Economic Issues at Farm, Catchment and Policy Level*. Australian Agricultural and Resource Economics Society.

Cook P.G. and Simmons C.T. (2000) Using environmental tracers to constrain flow parameters in fractured rock aquifers: Clare Valley, South Australia. In B. Faybishenko (ed.) *Dynamics of Fluids in Fractured Rock*. Geophysical Monograph 122. American Geophysical Union, pp.337-347.

Solomon D.K. and Cook P.G. (1999) ^3H and ^3He . In P.G. Cook and A.L. Herczeg (ed.) *Environmental Tracers in Subsurface Hydrology*. Kluwer, Boston, pp.397-424.

Cook P.G. and Bohlke J.K. (1999) Determining timescales for groundwater flow and solute transport. In P.G. Cook and A.L. Herczeg (ed.) *Environmental Tracers in Subsurface Hydrology*. Kluwer, Boston, pp.1-30.

Solomon D.K., Cook P.G. and Sanford W.E. (1998) Dissolved gases in subsurface hydrology. In C. Kendall and J.J. McDonnell (ed.) *Isotope Tracers in Catchment Hydrology*. Elsevier, Amsterdam, pp.291-318.

Journals

Shanafield M, Cook PG, Gutierrez-Jurado HA, Cleverly J and Eamus D (2015) Field comparison of methods for estimating groundwater discharge by evaporation and evapotranspiration in an arid-zone playa. *Journal of Hydrology*, 527: 1073-1083.

Cook P.G. (2015) The role of tracers in hydrogeology. *Ground Water*, in press.

Burk L. and Cook P.G. (2015) A simple and affordable system for installing shallow drive point piezometers. *Groundwater Monitoring and Remediation*, in press.

Cranswick R.H. and Cook P.G. (2015) Scales and magnitudes of hyporheic, river-aquifer and bank storage exchange fluxes. *Hydrological Processes*, in press.

McCallum J.L., Cook P.G. and Simmons C.T. (2015) Limitations of the use of environmental tracers to infer groundwater age. *Groundwater*, 53: 56-70.

Welch C., Harrington G.A., Cook P.G. (2015) Influence of groundwater hydraulic gradient on bank storage metrics. *Ground Water*, in press.

Noorduijn S., Cook P.G., Wood C. and White N. (2015) Using sealed wells to measure water levels beneath streams and floodplains. *Ground Water* (in press).

Villeneuve S., Cook P.G., Shanafield M., Wood C. and White N. (2015) Groundwater recharge via infiltration through an ephemeral riverbed, central Australia. *Journal of Arid Environments*, 117, 47-58.

Bourke S.A., Cook P.G., Dogramaci S. and Kipfer R. (2015) Partitioning sources of recharge in environments with groundwater recirculation using carbon-14 and CFC-12. *Journal of Hydrology*, 525:418-428.

Banks E., Shanafield M. and Cook P.G. (2014) Induced temperature gradients to examine groundwater flowpaths in open boreholes. *Ground Water*, 52(6): 943-951.

Wood C., Cook P.G. and Harrington G.A. (2015) Vertical carbon-14 profiles for resolving spatial variability in recharge in arid environments. *Journal of Hydrology*, 520:134-142.

Bourke S.A., Harrington G.A., Cook P.G., Post V.E. and Dogramaci S. (2014) Carbon-14 in streams as a tracer of discharging groundwater. *Journal of Hydrology*, 519:117-130.

Bourke S.A., Cook P.G., Shanafield M., Dogramaci S. and Clark J.F. (2014) Characterisation of hyporheic exchange in a losing stream using radon-222. *Journal of Hydrology*, 519:94-105.

- Chen C., Eamus D., Cleverly J., Boulain N., Cook P., Zhang L., Cheng L. and Yu Q. (2014) Modelling vegetation water-use and groundwater recharge as affected by climate variability in an arid-zone Acacia savanna woodland. *Journal of Hydrology*, 519:1084-1096.
- Cranswick R.H., Cook P.G. and Lamontagne S. (2014) Hyporheic zone exchange fluxes and residence times inferred from riverbed temperature and radon data. *Journal of Hydrology*, 519: 1870-1881.
- Cranswick R.H., Cook P.G., Shanafield M. and Lamontagne S. (2014) The vertical variability of hyporheic fluxes inferred from riverbed temperature data. *Water Resources Research*, 50(5): 3994-4010.
- Kozuskanich J., Simmons C.T. and Cook P.G. (2014) Estimating recharge rate from groundwater age using a simplified analytical approach: Applicability and error estimation in heterogeneous porous media. *Journal of Hydrology*, 511:290-294.
- Lamontagne S., Taylor A.R., Cook P.G., Crosbie R.S., Brownbill R. and Williams R.M. (2014) Field assessment of surface water – groundwater connectivity in a semi-arid river basin (River Murray, Australia). *Hydrological Processes*, 28(4):1561-1572.
- McCallum J.L., Engdahl NB, Ginn, TR and Cook, PG (2014) Non-parametric estimation of groundwater residence time distributions: What can environmental tracer data tell us about groundwater residence time? *Water Resources Research*, 50(3):2022-2038.
- Noorduijn S.L., Harrington G.A., and Cook P.G. (2014) The representative stream length for estimating surface water – groundwater exchange using Darcy's Law. *Journal of Hydrology*, 513:353-361.
- Noorduijn S.L., Shanafield M., Trigg M.A., Harrington G.A., and Cook P.G. (2014) Estimating seepage flux from ephemeral stream channels using surface and ground water level data. *Water Resources Research*, 50(2);1474-1489.
- Sasidharan S., Torkzaban S., Bradford S.A., Dillon P.J. and Cook P.G. (2014) Coupled effects of hydrodynamic and solution chemistry on long-term nanoparticle transport and deposition in saturated porous media. *Colloids and Surfaces A-Physicochemical and Engineering Aspects*, 457:169-179.
- Shanafield M. and Cook P.G. (2014) Transmission losses, infiltration and groundwater recharge through ephemeral and intermittent streambeds: A review of applied methods. *Journal of Hydrology*, 511: 518-529.
- Short M., Cook P.G., Lamontagne S. and Cranswick R. (2014) Characterising the distribution of near-shore submarine groundwater discharge along a coastline using ²²²Rn and electrical conductivity. *Australian Journal of Earth Sciences*, 61(2): 319-331.
- Trigg M.A., Cook P.G. and Brunner P. (2014) Groundwater fluxes in a shallow seasonal wetland pond: The effect of bathymetry uncertainty on predicted water and solute balances. *Journal of Hydrology*, 517:901-912.
- Welch C., Harrington G.A., Leblanc M., Batlle-Aguilar J. and Cook P.G. (2014) Relative rates of solute and pressure propagation into heterogeneous alluvial aquifers following river flow events. *Journal of Hydrology*, 511:891-903.
- Wood C., Cook P.G., Harrington G.A., Meredith K. And Kipfer R. (2014) Factors affecting carbon-14 activity of unsaturated zone CO₂ and implications for groundwater dating. *Journal of Hydrology*, 519:465-475.
- Xie Y., Cook P.G., Brunner P., Irvine D.J. and Simmons C.T. (2014) When can inverted water tables occur beneath streams? *Ground Water*, 52(5):769-774.
- Batlle-Aguilar J., Harrington G.A., Leblanc M., Welch C. and Cook P.G. (2013) Chemistry of groundwater discharge inferred from longitudinal river sampling. *Water Resources Research*, 50(2); 1474-1489.

- Cleverly J., Boulain N., Villalobos-Vega R., Grant N., Faux R., Wood C., Cook P.G., Yu Q., Leigh A. and Eamus D. (2013) Dynamics of component carbon fluxes in a semi-arid Acacia woodland, central Australia. *Journal of Geophysical Research – Biogeosciences*, 118: 1 – 18, doi:10.1002/jgrg.20101.
- Cook P.G. (2013) Estimating groundwater discharge to rivers from river chemistry surveys. *Hydrological Processes*, 27:3694-3707. doi: 10.1002/hyp.9493.
- Stieglitz T., van Beek P., Souhaut M. and Cook P.G. (2013) Karstic groundwater discharge and seawater recirculation through sediments in shallow coastal Mediterranean lagoons, determined from water, salt and radon budgets. *Marine Chemistry*, 156:73-84.
- Welch C., Cook P.G, Harrington G.A. and Robinson N.I. (2013) Propagation of solutes and pressure into aquifers following river stage rise. *Water Resources Research*, 49, 5246-5259, doi:10.1002/wrcr.20408.
- Battle-Aguilar J. and Cook P.G. (2012) Transient infiltration from ephemeral streams: A field experiment at the reach scale. *Water Resources Research* 48, W11518, doi:10.1029/2012WR012009.
- Shanafield M., Cook P.G., Brunner P., McCallum J. and Simmons C.T. (2012) Aquifer response to surface water transience in disconnected streams. *Water Resources Research*, 48, W11510, doi:10.1029/2012WR012103.
- Simmons CT, Hunt RJ and Cook PG (2012) Using every tool in the toolbox. *Ground Water*, 50(3):323.
- McCallum J.L., Cook P.G., Berhane D., Rumpf C. and McMahon G. (2012) Quantifying groundwater flows to streams using differential flow gaugings and water chemistry. *Journal of Hydrology*, 416-417:118-132.
- Brunner P., Cook P.G., and Simmons C.T. (2011) Disconnected surface water and groundwater: from theory to practice. *Ground Water*, 49(4): 460-467.
- Doble R., Brunner P., McCallum J. and Cook P.G. (2011) An analysis of river bank slope and unsaturated flow effects on bank storage. *Ground Water*, 50(1):77-86.
- Gardner W.P., Harrington G.A., Solomon D.K. and Cook P.G. (2011) Using terrigenic ^4He to identify and quantify regional groundwater discharge to streams. *Water Resources Research*, 47, W06523, doi:10.1029/2010WR010276.
- Miotlinski K., Dillon P.J., Pavelic P., Cook P.G., Page D.W. and Levett K. (2011) Recovery of injected freshwater to differentiate fracture flow in a low-permeability brackish aquifer. *Journal of Hydrology*, 409: 273-282.
- Newman B.D., Osenbrück K., Aeschbach-Hertig, W., Solomon D.K., Cook P., Rozanski K. and Kipfer R. (2010) Dating of 'young' groundwaters using environmental tracers: advantages, applications, and research needs. *Isot. Environ. Health Stud.*, 46(3):259-278.
- McCallum J.L., Cook P.G., Brunner P. and Berhane D. (2010) Solute dynamics during bank storage flows and implications for chemical baseflow separation. *Water Resources Research*, 46, W07541, doi:10.1029/2009WR008539.
- Stieglitz T.C., Cook P.G. and Burnett W.C. (2010) Inferring coastal processes from regional-scale mapping of ^{222}Rn and salinity – examples from the Great Barrier Reef, Australia. *Journal of Environmental Radioactivity*, 101(7):544-552.
- Brunner P., Simmons C.T., Cook P.G. and Therrien R. (2010) Modeling surface water – ground water interaction with MODFLOW: some considerations. *Ground Water*, 48(2):174-180.
- Brunner P., Simmons C.T. and Cook P.G. (2009) Spatial and temporal aspects of the transition from connection to disconnection between rivers, lakes and groundwater. *Journal of Hydrology*, 376:159-169.
- Larocque M., Cook P.G., Haaken K. and Simmons C.T. (2009) Comparing tracers and pumping tests to estimate ground water flow in synthetic heterogeneous aquifers. *Ground Water*, 47(6):786-796.

- Gleeson T., Novakowski K., Cook P.G. and Kyser T.K. (2009) Constraining groundwater discharge in a large watershed: integrated isotopic, hydraulic and thermal data from the Canadian Shield. *Water Resources Research*, 45, W08402, doi:10.1029/2008WR007622.
- O'Grady A.P., Cook P.G., Eamus D., Duguid A. Wischusen J.D.H., Fass T. and Worledge D. (2009) Convergence of tree water use within an arid-zone woodland. *Oecologia*, 160(4):643-655.
- Brunner P., Cook P.G., and Simmons C.T. (2009) Hydrogeologic controls on disconnection between surface water and groundwater. *Water Resources Research*, 45, W01422, doi:10.1029/2008WR006953.
- Cook P.G., Wood C., White T., Simmons C.T., Fass T. and Brunner P. (2008) Groundwater inflow to a shallow, poorly-mixed wetland estimated from a mass balance of radon. *Journal of Hydrology*, 354:213-226.
- Weatherill D., Graf T., Simmons C.T., Cook P.G. and Therrien R. (2008) Discretising the fracture-matrix interface to simulate solute transport. *Ground Water*, 46(4):606-615.
- Tomlinson M., Boulton A.J., Hancock P.J. and Cook P.G. (2007) Deliberate omission or unfortunate oversight: should stygofaunal surveys be included in routine groundwater monitoring programs? *Hydrogeology Journal*, 15(7):1317-1320.
- Lamontagne S. and Cook P.G. (2007) Estimation of hyporheic water residence time *in situ* using ^{222}Rn disequilibrium. *Limnology and Oceanography Methods*, 5:407-416.
- Fass T., Cook P.G., Stieglitz T. and Herczeg A.L (2007) Development of saline ground water through transpiration of sea water. *Ground Water*, 45(6):703-710.
- Cook P.G., Lamontagne S., Berhane D. and Clark J. F. (2006) Quantifying groundwater discharge to Cockburn River, Southeastern Australia, using dissolved gas tracers ^{222}Rn and SF_6 . *Water Resources Research*, 42, W10411, doi:10.1029/2006WR004921.
- Weatherill D., Cook P.G., Simmons C.T. and Robinson N.I. (2006) Applied tracer tests in fractured rock: Can we predict natural gradient solute transport more accurately than fracture and matrix parameters? *Journal of Contaminant Hydrology*, 88: 289-305.
- Sanford W.E., Cook P.G., Robinson N.I., Weatherill D. (2006) Tracer mass recovery in fractured aquifers estimated from multiple well tests. *Ground Water*, 44(4):564-573.
- Cook P.G. and O'Grady A.P. (2006) Determining soil and groundwater use of vegetation from heat pulse, water potential and stable isotope data. *Oecologia* 148:97-106 (DOI 10.1007/s00442-005-0353-4).
- O'Grady A.P., Eamus D., Cook P.G. and Lamontagne S. (2006) Groundwater use by riparian vegetation in the wet-dry tropics of northern Australia. *Aust. J. Botany*, 54:145-154.
- O'Grady A.O., Cook P.G., Howe P. and Werren G. (2006) Groundwater use by dominant tree species in tropical remnant vegetation communities. *Aust. J. Botany*, 54:155-171.
- O'Grady A.P., Eamus D., Cook P.G. and Lamontagne S. (2006) Comparative water use by the riparian trees *Melaleuca argentea* and *Corymbia bella* in the wet/dry tropics of Northern Australia. *Tree Physiology*, 26:219-228.
- Lamontagne S., Cook P.G., O'Grady A. and Eamus D. (2005) Groundwater use by vegetation in a tropical savanna riparian zone (Daly River, Australia). *J. Hydrol.*, 310:280-293.
- Cook P.G., Love A.J., Robinson N.I. and Simmons C.T. (2005) Groundwater ages in fractured rock aquifers. *J. Hydrol.*, 308:284-301.
- Cook P.G., Favreau G., Dighton J.C. and Tickell S. (2003) Determining natural groundwater influx to a tropical river using radon, chlorofluorocarbons and ionic environmental tracers. *J. Hydrol.*, 277:74-88.
- Milton G.M., Milton J.C.D., Schiff S., Cook P.G., Kotzer T.G. and Cecil L.D. (2003) Evidence for chlorine recycling – hydrosphere biosphere, atmosphere – in a forested wet zone on the Canadian

Shield. *Applied Geochemistry*, 18(7):1027-1042.

Harrington G.A., Cook P.G. and Herczeg A.L. (2002) Spatial and temporal variability of ground water recharge in central Australia: a tracer approach. *Ground Water*, 40(5):518-527.

Sanford W.E., Cook P.G. and Dighton J.C. (2002) Analysis of a vertical dipole tracer test in highly fractured rock. *Ground Water*, 40(5):535-542.

Jolly I.D. and Cook P.G. (2002) Time lags in salinity control: controlling recharge and halting watertable rise. *Natural Resource Management*, 5(2):16-21.

Cook P.G. and Robinson N.I. (2002) Estimating groundwater recharge in fractured rock from environmental ^3H and ^{36}Cl ; Clare Valley, South Australia. *Water Resources Research*, 38(8):10.1029/2001WR000772.

Scanlon B.R., Healy R.W. and Cook P.G. (2002) Choosing appropriate techniques for quantifying groundwater recharge. *Hydrogeology Journal*. 10(1):18-39

Healy R.W. and Cook P.G. (2002) Using groundwater levels to estimate recharge. *Hydrogeology Journal*. 10(1):91-109.

Harrington G.A., Cook P.G. and Robinson N.I. (2000) Equilibration times of gas-filled diffusion samplers in slow-moving groundwater systems. *Groundwater Monitoring and Remediation*, 20(2):60-65.

Cook P.G., Love A.J., and Dighton J.C. (1999) Inferring ground water flow in fractured rock from dissolved radon. *Ground Water*, 37(4):606-610.

Cook P.G., Hatton T.J., Pidsley D., Herczeg A.L., Held A., O'Grady A. and Eamus D. (1998) Water balance of a tropical woodland ecosystem, northern Australia: a combination of micro-meteorological, soil physical and groundwater chemical approaches. *J. Hydrol.*, 210:161-177.

Tyler S.W., Cook P.G., Butt A.Z., Thomas J.M., Doran P.T. and Lyons W.B. (1998) Evidence of deep circulation in two perennially ice-covered Antarctic lakes. *Limnology and Oceanography*, 43(4):625-635.

Johnston C.T., Cook P.G., Frappe S.K., Plummer L.N., Busenberg E. and Blackport R.J. (1998) Groundwater age and nitrate distribution within a glacial aquifer beneath a thick unsaturated zone. *Groundwater*, 36(1):171-180.

Cook P.G. and Solomon D.K. (1997) Recent advances in dating young groundwater: $^3\text{H}/^3\text{He}$, chlorofluorocarbons and ^{85}Kr . *J. Hydrol.*, 191:245-265.

Cook P.G., Kennett-Smith A.K., Walker G.R., Budd G.R., Williams R.M. and Anderson R. (1997) The impact of dryland agriculture on land and river salinisation in south-western New South Wales. *Aust. J. Soil Water Cons.*, 10(1): 29-36.

Cook P.G., Solomon D.K., Sanford W.E., Busenberg E., Plummer L.N. and Poreda R.J. (1996) Inferring shallow groundwater flow in saprolite and fractured rock using environmental tracers. *Water Resour. Res.*, 32:1501-1509.

Solomon D.K., Poreda R.J., Cook P.G. and Hunt A. (1995) Site characterization using $^3\text{H}/^3\text{He}$ ground water ages, Cape Cod, MA. *Ground Water*, 33:988-996.

Cook P.G., Solomon D.K., Plummer L.N., Busenberg E. and Schiff S.L. (1995) Chlorofluorocarbons as tracers of groundwater transport processes in a shallow, silty sand aquifer. *Water Resour. Res.*, 31: 425-434.

Cook P.G. and Solomon D.K. (1995) The transport of atmospheric trace gases to the water table: implications for groundwater dating with chlorofluorocarbons and krypton-85. *Water Resour. Res.*, 31:263-270.

Cook P.G., Jolly I.D., Leaney F.W., Walker G.R., Allan G.L., Fifield L.K. and Allison G.B. (1994) Unsaturated zone tritium and chlorine-36 profiles from southern Australia: their use as tracers of soil

water movement. *Water Resour. Res.*, 30, 1709-1719.

Kennett-Smith A., Cook P.G. and Walker G.R. (1994) Factors affecting groundwater recharge following clearing in the South Western Murray Basin. *J. Hydrol.*, 154:85-105.

Cook P.G. and Kilty S. (1992) A helicopter-borne electromagnetic survey to delineate groundwater recharge rates. *Water Resour. Res.*, 28:2953-2961.

Cook P.G., Edmunds W.M. and Gaye C.B. (1992) Estimating paleorecharge and paleoclimate from unsaturated zone profiles. *Water Resour. Res.*, 28:2721-2731.

Cook P.G. and Walker G.R. (1992) Depth profiles of electrical conductivity from linear combinations of electromagnetic induction measurements. *Soil Sci. Soc. Am. J.*, 56:1015-1022.

Cook P.G., Walker G.R., Buselli G., Potts I. and Dodds A.R. (1992) The application of electromagnetic techniques to groundwater recharge investigations. *J. Hydrol.*, 130:201-229.

Lees B.G. and Cook P.G. (1991) A conceptual model of lake barrier and compound lunette formation. *Palaeogeog., Palaeoclim., Palaeoecol.*, 84:271-284.

Walker G.R., Jolly I.D. and Cook P.G. (1991) A new chloride leaching approach to the estimation of diffuse recharge following a change in land use. *J. Hydrol.*, 128:49-67.

Walker G.R. and Cook P.G. (1991) The importance of considering diffusion when using carbon-14 to estimate groundwater recharge. *J. Hydrol.*, 128:41-48.

Allison G.B., Cook P.G., Barnett S.R., Walker G.R., Jolly I.D. and Hughes M.W. (1990) Land clearance and river salinisation in the Western Murray Basin, Australia. *J. Hydrol.*, 119:1-20.

Jolly I.D., Cook P.G., Allison G.B. and Hughes M.W. (1989) Simultaneous water and solute movement through an unsaturated soil following an increase in recharge. *J. Hydrol.*, 111:391-396.

Cook P.G., Walker G.R. and Jolly I.D. (1989) Spatial variability of groundwater recharge in a semi-arid region. *J. Hydrol.*, 111:195-212.

Cook P.G., Hughes M.W., Walker G.R. and Allison G.B. (1989) The calibration of frequency-domain electromagnetic induction meters and their possible use in recharge studies. *J. Hydrol.*, 107:251-265.

Conference Papers

Shanafield M and Cook P (2014) The advantages, and challenges, in using multiple techniques in the estimation of surface water – groundwater fluxes. Invited Paper. Abstract H23Q-07 presented at AGU Fall Meeting, San Francisco, 15-19 December 2014. (Abstract)

Shanafield M, Rigosi A, Wood C, White N, Liu Y, Brookes J and Cook P (2014) Influences on water quality in a groundwater dependent wetland system. Abstract H23H-0979 presented at AGU Fall Meeting, San Francisco, 15-19 December 2014. (Abstract)

Banks E and Cook P (2014) Hydraulic characteristics of fault zones and their impact on groundwater flow. Abstract H51P-04 presented at AGU Fall Meeting, San Francisco, 15-19 December 2014. (Abstract)

Post V, Cook P and Banks E (2014) Multi-tracer characterisation of saline groundwater bodies in coastal areas and implications for paleo-hydrology. Abstract H23D-0911 presented at AGU Fall Meeting, San Francisco, 15-19 December 2014. (Abstract)

Cook PG (2014) Groundwater interaction with rivers: Current understanding and research needs. Keynote Presentation at Australian Hydrographers Association Conference, 28-31 October, Sydney. (Abstract)

Wood C, Cook PG, Harrington GA, Meredith K and Kipfer R (2013) Unsaturated zone $^{14}\text{CO}_2$: implications for groundwater dating. Abstract H52F-02 presented at AGU Fall Meeting, San Francisco, 9-13 December 2013. (Abstract)

Shanafield M, Cook PG, McCallum J and Noorduijn S (2013) Capturing medium scale heterogeneity in surface water-groundwater interactions: challenges and advantages of high resolution temperature data. AGU Fall Meeting, 9-13 December 2013, San Francisco. (Abstract)

Suckow A, Burk L, Mathouchanh E, Cook PG (2013) A system for field gas-extraction for 85Kr, 39Ar and 81Kr using superphobic membrane contactors. AGU Fall Meeting, 9-13 December 2013, San Francisco. (Poster)

McCallum JL, Engdahl NB, Cook PG and Simmons CT (2013) What can environmental tracer concentrations tell us about groundwater residence time? Abstract H52F-06 presented at AGU Fall Meeting, San Francisco, 9-13 December 2013. (Abstract)

Cook P (2013) Groundwater interaction with rivers: current understanding and research needs. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Battle-Aguilar J, Harrington GA, Leblanc M, Welch C, Cook PG (2013) Determining chemistry of groundwater discharge from multiple aquifers by longitudinal river sampling. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Noorduijn SL, Harrington GA and Cook PG (2013) Using stream stage variability and groundwater response to estimate steady state discharge to streams. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Shanafield M and Cook P (2013) Determining the contributions of regional groundwater flow and direct recharge to the water balance in Stirling Swamp, Northern Territory, Australia. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Welch C, Harrington GA, Leblanc M, Cook PG (2013) Interpreting aquifer pressure and solute responses to river flood events in the presence of alluvial heterogeneity. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Irvine ML, Harrington GA, Cook PG, Smith SD and Hendry MJ (2013) Quantifying upward and downward vertical flux through a leaky aquitard. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Bourke S, Harrington GA, Cook PG, Post, V and Dogramaci S (2013) Carbon-14 as a tracer of groundwater discharge to streams. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Wood C, Cook PG, Harrington GA, Meredith K and Kipfer R (2013) Carbon-14 in unsaturated zone gases: implications for groundwater dating. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Villeneuve S, Cook PG, Wood C and White N (2013) Fate of shallow groundwater in a perched aquifer following a flood wave in an arid zone ephemeral stream: evapotranspiration and drainage to the regional aquifer. Carbon-14 as a tracer of groundwater discharge to streams. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Banks EW, Shanafield M and Cook PG (2013) Using heat as a tracer to characterise preferential groundwater flowpaths in open boreholes. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Cranswick R, Cook PG and Lamontagne S (2013) Disentangling hyporheic exchange from surface water – groundwater exchanges. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Lamontagne S, Taylor AR, Suckow A, Battle-Aguilar J, Cook PG, Morgenstern U and Stewart M (2013) Intercomparison of age-dating environmental tracers to evaluate river infiltration in a semi-arid alluvial aquifer (Namoi River, NSW). Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Kozuskanich J, Simmons C and Cook PG (2013) Estimating groundwater recharge using the Vogel (1967) model: Applicability and error estimation in fractured geologic media. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Yueqing X, Cook PG and Simmons C (2013) Flow controls on solute transport in streams. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Gerke K, Mallants D, Edde A and Cook P (2013) Characterizing infiltration into arid soils by means of fluorescent dye tracer tests and numerical modeling. Solving the Groundwater Challenges of the 21st Century. IAH Conference, Perth, 15-20 September 2013. (Abstract)

Yueqing X, Cook PG and Simmons C (2013) Hydrogeologic and flow controls on solute transport in streams. NGWA Summit, San Antonio, 28 April – 2 May 2013. (Abstract)

Mallants D, Gerke K and Cook P (2012) Non-isothermal water flow in the vadose zone of arid and semi-arid environments. In: European Geosciences Union General Assembly 2012; 22–27 April 2012. Vienna. Vienna, Austria. (Abstract)

Battle-Aguilar J and Cook PG (2012) An experimental study of infiltration processes and groundwater recharge in ephemeral streams. European Geosciences Union General Assembly 2012; 22–27 April 2012. Geophysical Research Abstracts, Vol. 14, 1153. Vienna. (Poster)

Battle-Aguilar J, Harrington GA, Leblanc M and Cook PG (2012) Geologic controls on groundwater discharge in large tropical rivers: An environmental tracers approach. European Geosciences Union (EGU). Geophysical Research Abstracts, Vol. 14, 1154. Vienna. (Abstract)

Battle-Aguilar J, Harrington G, LeBlanc M and Cook PG (2012) Determining origin and chemistry of groundwater discharge to the Mitchell River, Australia. 2012 GSA Annual Meeting and Exposition, 4-7 November, Charlotte NC. (Abstract)

Shanafield M, Cook P, Brunner P, Gianni G (2012) Exploring the state of connection between surface water and groundwater using transient stream and well data. Geological Society of America. 2012 GSA Annual Meeting and Exposition, 4-7 November, Charlotte NC. (Abstract)

Noorduijn SL, Shanafield MA, Trigg MA, Harrington G and Cook PG (2012) Seepage flux estimation using flood front velocities coupled with surface and groundwater data. 2012 GSA Annual Meeting and Exposition, 4-7 November, Charlotte NC. (Abstract)

Battle-Aguilar J, Harrington GA, Leblanc M and Cook PG (2012) Determining groundwater discharge in large tropical rivers using environmental tracers: The example of the Mitchell River. NGWA Groundwater Summit, 6 – 10 May 2012, Garden Grove, CA. (Abstract)

Cook PG and Battle-Aguilar J (2012) An experimental study of infiltration processes and groundwater recharge in ephemeral losing streams. NGWA Groundwater Summit, 6 – 10 May 2012, Garden Grove, CA. (Abstract)

Welch C, Cook PG, Harrington G and Robinson N (2012) Estimating aquifer parameters from time series EC and pressure data collecting during river flow events. NGWA Groundwater Summit, 6 – 10 May 2012, Garden Grove, CA. (Abstract)

Bourke S, Cook PG, Shanafield M and Dogramaci S (2012) Transient storage models underestimate the extent of the hyporheic zone. NGWA Groundwater Summit, 6 – 10 May 2012, Garden Grove, CA. (Abstract)

Short M, Cook PG and Lamontagne S (2012) Spatial evaluation of submarine groundwater discharge from the Willunga Basin, South Australia, using field measurements of ²²²Rn and electrical conductivity. 34th International Geological Congress, 5 – 10 August 2012, Brisbane. (Abstract)

Mallants D, Gerke K, Jacques D, Simunek J, Cook P and van Genuchten M (2012) Coupled water flow and chemical transport in the vadose zone of arid and semi-arid environments. In: Yabusaki, Steve, editor/s. Subsurface Environmental Simulation Benchmarks Workshop; 29 October–1 November 2012. Graduate Institute of Applied Geology, National Science Council, Taiwan.

Shanafield M, Cook PG, Brunner P and Simmons CT (2011) The influence of disconnection on aquifer response to surface water transience. 2011 GSA Annual Meeting. Minneapolis, 12 – 14 October 2011. (Abstract)

Cook PG (2011) Quantifying surface water – groundwater exchange. Paper presented at 11th Australasian Environmental Isotope Conference and 4th Australasian Hydrogeology Research Conference. Cairns, 12 - 14 July 2011. (Abstract)

Battle-Aguilar J and Cook PG (2011) Infiltration processes and groundwater recharge estimate in ephemeral losing streams at the transect scale. Paper presented at 11th Australasian Environmental Isotope Conference and 4th Australasian Hydrogeology Research Conference. Cairns, July 12 – 14, 2011. (Abstract)

Welch C and Cook PG (2011) Effects of bank storage on near-stream groundwater – an investigation of the hydraulics and chemistry in the Cockburn River, NSW. Paper presented at 11th Australasian Environmental Isotope Conference and 4th Australasian Hydrogeology Research Conference. Cairns, July 12 – 14, 2011. (Abstract)

Stieglitz TC, Hancock G, Clark JF and Cook PG (2011) Radioisotopes and coastal research in the Great Barrier Reef. Paper presented at 11th Australasian Environmental Isotope Conference and 4th Australasian Hydrogeology Research Conference. Cairns, July 12 – 14, 2011. (Abstract)

Doble RC, Palmer, D, Cook P and McCallum J (2010) Sampling for stream-aquifer connections by helicopter in a remote, inaccessible area. Groundwater 2010: The Challenge of Sustainable Management. Canberra, 31 October – 4 November, 2010, 4pp.

Lamontagne S, Cook PG, Taylor AR and Brownbill R (2010) Field assessment of the connection status and recharge rate in losing streams. Groundwater 2010: The Challenge of Sustainable Management. Canberra, 31 October – 4 November, 2010, 4pp.

Cook PG, Brunner P, Simmons CT and Lamontagne S (2010) What is a disconnected stream? Groundwater 2010: The Challenge of Sustainable Management. Canberra, 31 October – 4 November, 2010.

Taylor A, Lamontagne S and Cook P (2010) Comparison of techniques to measure the matric potential in sediment profiles below losing streams. Groundwater 2010: The Challenge of Sustainable Management. Canberra, 31 October – 4 November, 2010. (Poster)

Cook P.G. (2008) Groundwater ages in fractured rock aquifers. Western Pacific Geophysics Meeting, American Geophysical Union, Cairns, 29 July – 1 August 2008. (Abstract)

Guan H., Simmons C. and Cook P. (2008) Examination of aerial evaporation and wetland evaporation based on the complementary concept and its implications for irrigation and wetland sustainability. Western Pacific Geophysics Meeting, American Geophysical Union, Cairns, 29 July – 1 August 2008. (Abstract)

Lindsay H.B., Isaac P., Beringer J., Cook P.G. and Weinmann R. (2008) Seasonal patterns of evapotranspiration from cleared and uncleared tropical savanna: implications for catchment water balance in the wet-dry tropics. Western Pacific Geophysics Meeting, American Geophysical Union, Cairns, 29 July – 1 August 2008. (Poster)

Lamontagne S. and Cook P.G. (2008) Estimation of hyporheic water residence time *in situ* using Rn-222 disequilibrium. Western Pacific Geophysics Meeting, American Geophysical Union, Cairns, 29 July – 1 August 2008. (Abstract)

Weatherill D., Simmons C.T. and Cook P.G. (2008) Using dipole tracer tests to predict solute transport in fractured rocks. Western Pacific Geophysics Meeting, American Geophysical Union, Cairns, 29 July – 1 August 2008. (Abstract)

Cook P.G. (2008) Groundwater mixing and apparent ages in fractured aquifer systems. Invited paper presented at the International Workshop on 'Groundwater Dating Using Environmental Tracers: Current Problems, Recent Developments and Beyond', Leipzig, Germany, 5 - 7 March, 2008.

- Brunner P., Cook P. and Simmons C. (2008) A method to assess the state of disconnection between surface water and groundwater. Paper presented at HydroPredict2008, Prague 15-18 September 2008. (Abstract)
- Cook P.G., Wood C., Powell L., Watt E., White T., Brunner P. and Simmons, C.T. (2008) Estimating groundwater inflow to a shallow, poorly-mixed wetland using environmental tracers. Paper presented at 'Water Down Under 2008', Adelaide 14-17 April 2008.
- Brunner P., Simmons C. and Cook P. (2008) The transition from connected to disconnected losing streams - conceptual approaches and numerical simulations. Paper presented at 'Water Down Under 2008', Adelaide, 14-17 April 2008.
- Cook P.G., Wood C., White T. and Simmons C.T. (2007) Estimating groundwater discharge to lake and wetland ecosystems using environmental tracers. Keynote Presentation at *Groundwater and Ecosystems*, XXXV IAH Congress, Lisbon, 17-21 September 2007. (Abstract)
- Evans R.S., Cook P.G., Howe P. and Clifton C.A. (2007) A Toolbox for Assessing the Environmental Water Requirements of Groundwater Dependent Ecosystems in Australia. Keynote Presentation at *Groundwater and Ecosystems*, XXXV IAH Congress, Lisbon, 17-21 September 2007.
- Wood C., Cook P.G., Simmons C.T. and White T. (2007) The combined use of seepage meters and radon-222 to quantify groundwater fluxes in a wetland. AWA Ozwater Convention and Exhibition, Sydney, 4-8 March 2007.
- Wood C., Cook P.G., Simmons C.T., and White T., (2006) The use of seepage meters to quantify groundwater fluxes in a wetland, Joint congress of the 9th Australasian Environmental Isotope Conference and the 2nd Australasian Hydrogeology Research Conference, Adelaide, 13-15 December 2006.
- Leaney F.W., Barnett S.R., Cook P.G., Miles M., Munday T.J. and Tan K.P. (2004) Field studies towards improving estimates of salt load to the River Murray due to dryland agriculture. 9th Murray-Darling Basin Groundwater Workshop, Bendigo, 6-9 February 2004.
- Munday T. Walker G., Cresswell R.G., Wilford J., Barnett S., Cook P. (2003) South Australian Salt Mapping and Management Support Project – An example of the considered application of airborne geophysics in natural resource management. ASEG 16th Geophysical Conference and Exhibition, February 2003, Adelaide.
- Cook P.G. and Lamontagne L. (2002) Assessing and protecting water requirements for groundwater dependent ecosystems. In *The Science of Environmental Water Requirements in South Australia*. The Hydrological Society of South Australia. Seminar Proceedings, 24 September 2002, Adelaide, South Australia. p.49-54.
- Cook P.G., Böhlke J.K. and Solomon D.K. (2002) Measuring groundwater recharge and discharge using environmental tracers. In *Balancing the Groundwater Budget*. International Association of Hydrogeologists Groundwater Conference, Darwin 12-17 May 2002.
- Dillon P., Benyon R., Cook P., Hatton T.J., Stadter F., Marvanek S. and Gillooly J. (2002) Plantation forest water use in relation to groundwater balance in the southeast of South Australia. In *Balancing the Groundwater Budget*. International Association of Hydrogeologists Groundwater Conference, Darwin 12-17 May 2002.
- O'Grady A.P., Cook P.G., Lamontagne S. and Eamus D. (2002) Water use by riparian vegetation along the Daly River in the Northern Territory. In *Balancing the Groundwater Budget*. International Association of Hydrogeologists Groundwater Conference, Darwin 12-17 May 2002.
- Cook P.G., Herczeg A.L. and Harrington G.A. (2001) Is groundwater sustainability possible? In 2001 Water Odyssey. AWA 19th Federal Convention, Canberra, 1-5 April 2001.
- Cook P.G. and Dighton J.C. (2000) Dissolved radon concentrations in fractured rock aquifers. Groundwater: Past Achievements and Future Challenges. In O.Sililo et al. (ed.) *Groundwater: Past Achievements and Future Challenges*. Proc. 30th IAH Congress, Cape Town, South Africa, 26 November - 1 December 2000. Balkema, Rotterdam. pp.475-480.

Simmons C.T., Hee Hong Wye D. and Cook P.G. (1999) Modeling signal propagation and well response in porous and fractured rock aquifers. Int. Symp. Dynamics of Fluids in Fractured Rocks: Concepts and Recent Advances. Berkeley, California, February 10-12, 1999.

Cook P.G., Love A.J. and Simmons C.T. (1999) Measuring groundwater flow in fractured rocks with environmental isotopes, Clare Valley, South Australia. Int. Symp. Dynamics of Fluids in Fractured Rocks: Concepts and Recent Advances. Berkeley, California, February 10-12, 1999.

Love A.J., Cook P.G., Halihan T. and Simmons C.T. (1999) Estimating groundwater flow rates in a fractured rock aquifer, Clare Valley, South Australia. Water 99 Joint Congress, Handbook and Proceedings. Brisbane, Queensland, July 6-8, 1999, pp.1070-1075. The Institution of Engineers, Australia.

Simmons C.T., Hee Hong Wye D., Cook, P.G. and Love A.J. (1999) Signal propagation and periodic response in aquifers: the effect of fractures and signal measurement methods. Water 99 Joint Congress, Handbook and Proceedings. Brisbane, Queensland, July 6-8, 1999, pp.727-732. The Institution of Engineers, Australia.

Cook P.G., Love A.J., Halihan T. and Cresswell R. (1999) Measuring groundwater flow in fractured rocks with environmental isotopes, Clare Valley, South Australia. Water 99 Joint Congress, Handbook and Proceedings. Brisbane, Queensland, July 6-8, 1999, pp.417-422. The Institution of Engineers, Australia.

Harrington G.A., Herczeg A.L. and Cook P.G. (1998) Groundwater sustainability in the Ti-Basin, Central Australia: inferences from environmental isotopes and hydrochemistry. Int. Assoc. Hydrogeologists International Groundwater Conference. Melbourne, 8-13 February 1998.

Cook P.G. and Walker G.R. (1995) An evaluation of the use of ^3H and ^{36}Cl to estimate groundwater recharge in arid and semi-arid environments, IAEA International Symposium on Isotopes in Water Resources Management, Vienna, 20-24 March 1995.

Cook P.G. and Herczeg A.L. (1995) Chlorofluorocarbon dating of groundwaters. Murray Darling 1995 Workshop, Wagga Wagga, 11-13 September 1995. Murray-Darling Basin Commission, Record No. 1995/61, p.280. (Poster)

Solomon D.K. and Cook P.G. (1994) Site characterization using tracers: some examples, Spectrum 94, Vol. 1. Nuclear and Hazardous Waste Management, International Topical Meeting, Atlanta, August 1994, pp.219-224.

Cook P., Walker G., Kilty S., Potts I., Buselli J. and Dodds S. (1992) Using air-borne fixed-frequency electromagnetic induction devices to map spatial variability of recharge in the South Australian Mallee. Third Murray-Darling Basin Groundwater Workshop, Renmark, October 1992.

Kennett-Smith A.K., Walker G.R. and Cook P.G. (1992) Factors affecting recharge in the Murray Mallee. Third Murray-Darling Basin Groundwater Workshop, Renmark, October 1992.

Cook P.G. and Walker G.R. (1992) Use of electromagnetic induction meters to map spatial variability of recharge. Australian Soil Science Society. National Soils Conference, Adelaide, April 1992. p.40.

Kennett-Smith A.K., Budd G.R., Cook P.G. and Walker G.R. (1992) The effect of land use on groundwater recharge in south-western NSW. Australian Soil Science Society. National Soils Conference, Adelaide, April 1992. p.39.

Budd G.R., Walker G.R., Williams R.M., Kennett-Smith A.K. and Cook P.G. (1990) Recharge studies of south west NSW. Murray-Darling 1990 Workshop: Groundwater Research and Management. Mildura, November 1990. Proceedings, pp.148-154.

Cook P.G., Walker G.R. and Barrs H.D. (1990) Mapping the spatial distribution of groundwater recharge. Murray-Darling 1990 Workshop: Groundwater Research and Management. Mildura, November 1990. Proceedings, pp.15-21.

Cook P.G., Jolly I.D. and Walker G.R. (1989) Changes in groundwater recharge resulting from clearance of mallee vegetation. In J.C. Noble, P.J. Joss and G.K. Jones (ed.) The Mallee Lands: A Conservation Perspective. Proceedings of the National Mallee Conference, Adelaide, April 1989.

Budd G.R., Williams R.M., Cook P.G. and Walker G.R. (1989) Impact of clearing and subsequent cropping practices on rainfall recharge to the groundwater in far south west N.S.W. Aust. Soc. Soil Sci., Riverina Branch, Conference, Albury, September 1989.

Budd G., Williams R.M., Cook P.G. and Walker G.R. (1989) Impact of mallee clearing on rainfall accession to groundwater in far southwestern New South Wales: implications for management. In J.C. Noble, P.J. Joss, and G.K. Jones (ed.) *The Mallee Lands: A Conservation Perspective*. Proceedings of the National Mallee Conference, Adelaide, April 1989.

Jolly I.D., Walker G.R. and Cook P.G. (1988) Diffuse discharge/recharge under native vegetation in the western Murray Basin. Murray Basin 88 Conference, Canberra, May 1988. Bureau of Mineral Resources, Record 1988/7.

Cook P.G., Jolly I.D., Walker G.R. and Walker C.D. (1988) Localised recharge in the western Murray Basin. Murray Basin 88 Conference, Canberra, May 1988. Bureau of Mineral Resources, Record 1988/7.

Greacen E.L., Walker G.R. and Cook P.G. (1987) Evaluation of the filter paper method for measuring soil water suction. *Proc. Int. Conf. Meas. Soil and Plant Water Status*, Utah State Univ., July 1987.

Reports

Harrington N. and Cook P. (2014) *Groundwater in Australia*, National Centre for Groundwater Research and Training, Australia.

Wallis I., Froend R., Sommer B., Herckenrath D., Cook P., Villeneuve S. and Keppel M. (2012) Independent Expert Study on the Arrow and Santos Coal Seam Gas Proposals to fulfil the Requirements of Section 255AA of the Water Act (2007) – Phase 2. National Centre for Groundwater Research and Training, Australia, 50p.

Wallis I., Herckenrath D., Cook P. and Keppel M. (2012) Independent Expert Study on the Arrow and Santos Coal Seam Gas Proposals to fulfil the Requirements of Section 255AA of the Water Act (2007) – Phase 1. National Centre for Groundwater Research and Training, Australia, 26p.

Harrington N. and Cook P.G. (2012) *Willunga research update October 2012*. National Centre for Groundwater Research and Training, Australia.

Harrington N., Noorduijn S. and Cook P.G. (2012) *Evaluation of approaches to modelling surface water – groundwater interactions around drains in the South East of South Australia - Phase 1*. Goyder Institute for Water Research Technical Report Series No. 12/1, Adelaide.

Cook PG, Lamontagne S, Stieglitz T, Cranswick R and Hancock G (2011) *A re-evaluation of groundwater discharge from the Burdekin floodplain aquifer using geochemical tracers*. National Centre for Groundwater Research and Training, Australia, 105p.

Brownbill R.J., Lamontagne S., Williams R.M., Cook P.G., Simmons C.T., Merrick N. (2011) *Interconnection of surface and groundwater systems – river losses from losing-disconnected streams*. Technical final report, June 2011, NSW Office of Water, Sydney.

Lamontagne S., Taylor A.R., Cook P.G. and Brownbill R. (2011) *Interconnection of surface and groundwater systems – river losses from losing/disconnected streams*. Billabong Creek Site Report. Water for a Healthy Country Flagship: Adelaide.

Lamontagne S., Taylor A.R., Crosbie R., Cook P.G. and Kumar P. (2011) *Interconnection of surface and groundwater systems – river losses from losing/disconnected streams*. Lachlan River Site Report. Water for a Healthy Country Flagship: Adelaide.

Lamontagne S., Taylor A.R., Cook P.G. and Hamilton S. (2011) *Interconnection of surface and groundwater systems – river losses from losing/disconnected streams*. Macquarie River Site Report. Water for a Healthy Country Flagship: Adelaide.

Lamontagne, S., Taylor, A.R., Cook, P.G., and Smithson, A. (2011) *Interconnection of surface and*

groundwater systems – river losses from losing/disconnected streams. Namoi River Site Report. Water for a Healthy Country Flagship: Adelaide.

Lamontagne, S., Taylor, A.R., Cook, P.G., and Barrett, C. (2011) Interconnection of surface and groundwater systems – river losses from losing/disconnected streams. Gwydir River Site Report. Water for a Healthy Country Flagship: Adelaide.

Lamontagne, S., Taylor, A.R., Cook, P.G., Gardner, W.P and O'Rourke, M. (2011) Interconnection of surface and groundwater systems – river losses from losing/disconnected streams. Border Rivers Site Report. Water for a Healthy Country Flagship: Adelaide.

Harrington G., Stelfox L., Gardner P., Davies P., Doble R. and Cook P. (2011) Surface water – groundwater interactions in the lower Fitzroy River, Western Australia. CSIRO: Water for a Healthy Country National Research Flagship.

Cook P.G., McCallum J., Hoban M., Evans R., McMahon G., and Rumpf C. (2010) Methods for estimating groundwater discharge to streams – Summary of Field Trials. Report to National Water Commission, 68p.

Evans R., Cranswick R., Hoban M., and Cook P. (2010) Approaches for the assessment of surface water – groundwater interaction. Report to National Water Commission, 45p.

McCallum J, Hoban M, Cook PG, Evans R and McMahon G (2010) Surface water – groundwater interactions in the Barron catchment. Report to National Water Commission, 74p.

McCallum J, Hoban M, Cook PG, Evans R and Rumpf C (2010) Surface water – groundwater interactions in the Belubula catchment. Report to National Water Commission, 59p.

McCallum J, Hoban M, Cook PG, Evans R and McMahon G (2010) Surface water – groundwater interactions in Cattle Creek catchment. Report to National Water Commission, 66p.

McCallum J, Hoban M, Cook PG, Evans R, Berhane D and Rumpf C (2010) Surface water – groundwater interactions in the Cockburn catchment. Report to National Water Commission, 68p.

McCallum J, Hoban M, Cook PG, Evans R and McMahon G (2010) Surface water – groundwater interactions in the Elliott catchment. Report to National Water Commission, 78p.

McCallum J, Hoban M, Cook PG, Evans R and McMahon G (2010) Surface water – groundwater interactions in the Logan catchment. Report to National Water Commission, 82p.

McCallum J, Hoban M, Cook PG, Evans R and Rumpf C (2010) Surface water – groundwater interactions in the Nambucca catchment. Report to National Water Commission, 54p.

McCallum J, Hoban M, Cook PG, Evans R and Rumpf C (2010) Surface water – groundwater interactions in the Ourimbah catchment. Report to National Water Commission, 73p.

McCallum J, Hoban M, Cook PG, Evans R and Rumpf C (2010) Surface water – groundwater interactions in the Tarcutta catchment. Report to National Water Commission, 68p.

McCallum J, Hoban M, Cook PG, Evans R, deVoil R, Harris M, Silburn M and McMahon G (2010) Surface water – groundwater interactions in the Hodgson catchment. Report to National Water Commission, 58p.

Cook P, Leaney F, Kumar PB and Caputo M (2010) Time-Series Comparison of Carbon-14 Groundwater Ages in Heavily Pumped Confined Aquifers, Lower Murrumbidgee, Southern NSW. CSIRO Water for a Healthy Country National Research Flagship.

Vanderzalm J, Dillon P, Page D, Marvanek S, Lamontagne S, Cook P, King H, Dighton J, Sherman B and Adams L (2009) Protecting the Blue Lake from land use impacts. CSIRO Water for a Healthy Country National Research Flagship.

Cook PG (2009) Inferring groundwater inflow to the Roper River (N.T.) from environmental Tracers. NRETAS Report 37/2003D.

Liddle DT, Boggs D, Hutley L, Yin Foo D, Boggs G, Pearson D, Cook PG and Elliott LP (2008) Biophysical modelling of water quality in a Darwin rural area groundwater dependent ecosystem. Report to Natural Resource Management Board (NT), NHT Project 2005/133. Northern Territory Government Department of Natural Resources, Environment, The Arts and Sport, Palmerston, 120p.

Cook PG, O'Grady AP, Wischusen JDH, Duguid A, Fass T and Eamus D (2008) Ecohydrology of sand plain woodlands in central Australia. Report to Natural Heritage Trust (Project number 2005/147).

Pavelic P, Dillon P, Cook, P, Barry K, and Mimoso J (2008) Characterization of the weathered bedrock aquifer at the Rosedale Golf Club to assess the feasibility of ASR. Water for a Healthy Country Flagship Report, September 2008 CSIRO.

Tickell S, Cook P, Sumner J, Knapton A and Jolly P (2007) Evaluating the potential for irrigation induced salinisation of the Keep River Plains. Executive Summary. Northern Territory Department of Natural Resources the Environment and the Arts, Report WRD13/2007D. 9p.

Tickell S, Cook P, Sumner J, Knapton A and Jolly P (2007) Evaluating the potential for irrigation induced salinisation of the Keep River Plains. Northern Territory Department of Natural Resources the Environment and the Arts, Report WRD30/2006D. 78p.

Clifton C, Cossens B, McAuley C, Evans R, Cook P, Howe P and Boulton A (2007) A Framework for Assessing the Environmental Water Requirements of Groundwater Dependent Ecosystems. Report 1: Assessment Toolbox. Land and Water Australia.

Howe P, O'Grady A, Cook P and Fass T (2007) A Framework for Assessing the Environmental Water Requirements of Groundwater Dependent Ecosystems. Report 2: Field Studies. Land and Water Australia.

Howe P, Pritchard J, Cook P, Evans R, Clifton C and Cooling M (2007) A Framework for Assessing the Environmental Water Requirements of Groundwater Dependent Ecosystems. Report 3: Implementation. Land and Water Australia.

Wilson D, Cook P, Hutley L, Tickell S and Jolly P (2006) Water Quality in the Daly River – A multidisciplinary management approach. Northern Territory Department of Natural Resources the Environment and the Arts. Technical Report No. 18/2006D. 11p.

Wilson D, Cook P, Hutley L, Tickell S and Jolly P (2006) Effect of land use on evapotranspiration and recharge in the Daly River catchment. Northern Territory Department of Natural Resources the Environment and the Arts. Technical Report No. 17/2006D. 147p.

Wang E, Miles M, Schultz T, Cook P, Maschmedt D, Munday T, Leaney F, Walker G and Barnett S (2005) Targeting dryland areas in the mallee for controlling groundwater recharge and salt load to the Murray River. CSIRO Water for a Healthy Country, Report. 55p.

Fass T and Cook PG (2005) Sources of groundwater discharging to Black Swamp, south-eastern Mount Lofty Ranges, South Australia. CSIRO Australia, 23p.

Howe P, Cook PG, O'Grady A and Hillier J (2005) Pioneer Valley Groundwater Consultancy. Report 3: Analysis of Groundwater Dependent Ecosystem Water Requirements. (Two volumes.) Report to Queensland Department of Natural Resources and Mines, October 2005.

Cook PG, O'Grady A, Lamontagne S and Howe P (2005) Pioneer Valley Groundwater Consultancy. Report 2: Identifying Groundwater Dependent Ecosystem Condition and Processes. Report to Queensland Department of Natural Resources and Mines, October 2005.

Cook PG, Stieglitz T and Clark J (2004) Groundwater discharge from the Burdekin floodplain aquifer, North Queensland. CSIRO Land and Water, Tech. Rep. 26/04.

Cook PG, Leaney FW and Miles M (2004) Groundwater recharge in the north-east Mallee region. CSIRO Land and Water, Tech. Rep. 25/04.

Love AJ, Cook PG, Harrington GA and Simmons CT (2002) Groundwater Flow in the Clare Valley. South Australian Department for Water Resources, Report DWR02.03.0002, 43pp.

O'Grady A, Eamus D, Cook P, Lamontagne S, Kelley G and Hutley L (2002) Tree water use and sources of transpired water in riparian vegetation along the Daly River, Northern Territory. Report to Environment Australia.

Cook PG and Connor J (2002) REVEG. A model for predicting costs and benefits of recharge reduction strategies in the Mallee Region of South Australia. CSIRO Land and Water, Tech. Rep. 26/02.

Cook PG, McEwan KL and Marvanek S (2002) Groundwater recharge in the Murray-Darling Basin rangelands – a scoping study. Murray-Darling Basin, Strategic Investigations and Education, Report D2017.

Cook PG, Leaney FW and Jolly ID (2001) Groundwater recharge in the Mallee Region, and salinity implications for the Murray River. CSIRO Land and Water, Tech. Rep. 45/01.

Cook PG, Stauffacher M, Therrien R, Halihan T, Richardson P, Williams RM and Bradford A (2001) Groundwater recharge and discharge in a saline, urban catchment; Wagga Wagga, New South Wales. CSIRO Land and Water, Tech. Rep. 39/01.

Cook PG, Herczeg AL and McEwan KL (2001) Groundwater recharge and stream baseflow, Atherton Tablelands, Queensland. CSIRO Land and Water, Tech. Rep. 08/01.

Dillon P, Benyon R, Cook P, Hatton T, Marvanek S, and Gillooly J (2001) Review of research on plantation forest water requirements in relation to groundwater resources in the southeast of South Australia. Centre for Groundwater Studies Report 99.

Harrington GA, Herczeg AL and Cook PG (1999) Groundwater sustainability and water quality in the Ti-Tree Basin, central Australia. CSIRO Land and Water, Tech. Rep. 53/99.

Morton D, Love AJ, Clarke D, Martin R, Cook PG and McEwan K (1998) Clare Valley Groundwater Resources. Progress Report 1. Hydrogeology, Drilling and Groundwater Monitoring. Primary Industries and Resources SA, Report Book 98/00015.

Cook PG, Hatton TJ, Eamus D, Hutley L and Pidsley D (1998) Hydrological Investigation at Howard East, N.T. 4. Executive Summary and Recommendations. CSIRO Land and Water, Tech. Rep. 41/98.

Hatton TJ, Cook PG, Kelley G, O'Grady A, Hutley L, Reece P, Farrow R, Eamus D and Pidsley D (1998) Hydrological Investigation at Howard East, N.T. 3. Paperbark Swamp Site: Ecophysiology, Soil Physics and Groundwater chemistry. CSIRO Land and Water, Tech. Rep. 37/98.

Cook PG, Herczeg AL, Pidsley D and Farrow R (1998) Hydrological Investigation at Howard East, N.T. 2. Eucalypt Savanna Site: Soil Physics and Groundwater Geochemistry. CSIRO Land and Water, Tech. Rep. 13/98.

Cook PG and Williams BG (1998) Electromagnetic Induction Techniques. Part 8 of L Zhang and G Walker (ed.) The Basics of Recharge and Discharge. CSIRO Publishing.

Cook PG and Herczeg AL (1998) Groundwater Chemical Methods for Recharge Studies. Part 2 of L Zhang and G Walker (ed.) The Basics of Recharge and Discharge. CSIRO Publishing.

Cook PG, Kennett-Smith AK, Walker GR, Budd GR, Williams RM and Anderson R (1996) Impact of dryland agriculture on land and river salinisation in the Western Lands, New South Wales. CSIRO Division of Water Resources, Tech. Mem. 96.16, 35p.

Kennett-Smith AK, Cook PG and Thorne R (1992) Comparison of recharge under native vegetation and dryland agriculture in the Big Desert region of Victoria. Centre for Groundwater Studies. Report No. 46.

Cook PG and Telfer AL (1992) Potential for salinisation of the groundwater beneath mallee areas of the Murray Basin. Centre for Groundwater Studies. Report No. 42.

Cook PG, Barrs HD and Walker GR (1992) Inferring spatial variations in deep drainage and

groundwater recharge from Landsat Thematic Mapper Imagery. CSIRO Division of Water Resources. Divl. Rep. No. 92/5, 28pp.

Walker GR and Cook PG (1991) Interpretation of water and salt profiles in the Horsham area. CSIRO Division of Water Resources. Consultancy Report No. 91/31.

Cook PG, Jolly ID, Walker GR and Allison GB (1990) Localised recharge in the vicinity of the Woolpunda Groundwater Mound. Centre for Groundwater Studies. Report No. 30.

Cook PG and Walker GR (1990) The effect of soil type on groundwater recharge in the mallee region. Centre for Groundwater Studies. Report No. 28.

Kennett-Smith AK, Budd GR, Cook PG and Walker GR (1990) The effect of lucerne on the recharge to cleared mallee lands. Centre for Groundwater Studies. Report No. 27.

Walker GR, Budd GR, Pavelic P, Kennett-Smith AK and Cook PG (1990) Groundwater recharge beneath open woodlands in south western New South Wales. Centre for Groundwater Studies. Report No. 22.

Walker GR, Jolly ID, Stadter MH, Stone WJ and Cook PG (1990) Estimation of diffuse recharge in the Naracoorte Ranges Region, South Australia. Centre for Groundwater Studies. Report No. 21.

Greacen EL, Walker GR and Cook PG (1989) Procedure for the filter paper method of measuring soil water suction. CSIRO Division of Soils. Divl. Rep. No. 108, 7pp.

Cook PG (1989) Estimating regional groundwater recharge in the Western Murray Basin for inclusion in a groundwater model. Centre for Research in Groundwater Processes. Report No. 11.

Cook PG and Walker GR (1989) Groundwater Recharge in South Western New South Wales. Centre for Research in Groundwater Processes. Report No. 9.