# **DRI Bibliography:**

Refereed Journal Articles:

- a) Journal papers (refereed)
- Agboma C.O., Yirdaw, S.Z. and Snelgrove, K.R. (2009) *Intercomparison of the Total Storage Deficit Index in two Canadian Prairie Catchments*. Journal of Hydrology, 10.1016/j.jhydrol.2009.06.034
- Agboma C.O., Snelgrove, K.R., Yirdaw, S.Z. and G. van der Kamp (2009) Moisture Storage Patterns Derived from a Hydrologic Model Validated with Outputs from GRACE and Geological Weighing Lysimeters. Journal of Hydrology
- Armstrong, R.N., J.W. Pomeroy, and L.W. Martz, 2008: Evaluation of three evaporation estimation methods in a Canadian prairie landscape. *Hydrol. Processes*, **22**, 2801-2815.
- Armstrong, R.N., J.W. Pomeroy, and L.W. Martz, 2010: Estimating evaporation in a Prairie landscape under drought conditions. *Can. Wat. Resour. J.*, **35**, 173-186.
- Anochikwa, C., G. van der Kamp and L.S. Barbour, 2010. Use of a coupled flow and stress model to simulate the effects of mechanical loading by surface moisture on pore pressures in saturated media. Submitted to Canadian Geotechnical Journal, December 2010.
- Barr, A. G., G. van der Kamp, T. A. Black, J. H. McCaughey, N. Hedstrom and Z. Nesic, A. G. 2010. Comparing Water and Energy Balance Closure at the BERMS Flux Towers 1999-2009. Submitted to Agr and Forest Meteorology, December 2010.
- Bonsal, B.R., and M. Regier, 2007: Historical comparison of the 2001/2002 drought in the Canadian Prairies. *Climate Res.*, **33**, 229-242.
- Bonsal, B.R., and A. Shabbar, 2008: Impacts of large-scale circulation variability on low streamflows over Canada: A review. *Can. Wat. Resour. J.*, **33**, 137-154.
- Bonsal, B.R., and E.E. Wheaton, 2005: Atmospheric circulation comparisons between the 2001 and 2002 and the 1961 and 1988 Canadian Prairie droughts. *Atmos.-Ocean*, **43**, 163-172.
- Bonsal, B.R., E.E. Wheaton, A. Chipanshi, C. Lin, D.J. Sauchyn, and L. Wen, 2010: Drought research in Canada: A Review. *Atmos.-Ocean*, in press.
- Bonsal, B.R., E.E. Wheaton, A. Meinert, and E. Siemens, 2010: Characterizing the surface features of the 1999-2005 Canadian Prairie drought in relation to previous severe 20<sup>th</sup> century events. *Atmos.-Ocean*, submitted.
- Brimelow, J.C., J.M. Hanesiak, and W. Burrows, 2010: On the surface-convection feedback during drought periods on the Canadian Prairies. *Earth Interact.*, accepted.

- Brimelow, J.C., J.M. Hanesiak, R.L. Raddatz, and M. Hayashi, 2010: Validation of ET estimates from the Canadian prairie agrometeorological model for contrasting vegetation types and growing seasons. *Can. Wat. Resour. J.*, **35**, 209-230.
- Bruneau, J, D.R. Corkal, E. Pietroniro, B. Toth, and G. van der Kamp , 2009. Human activities and water use in the South Saskatchewan river basin. *Prairie Forum-Special Climate Change Issue*, 34 (1), 129-152.
- Burns, E.R., L.R. Bentley, M. Hayashi, S.E. Grasby, A.P. Hamlin, and D.G. Smith, 2010:
  Hydrogeological implications of paleo-fluvial architecture for the Paskapoo Formation,
  SW Alberta, Canada: A stochastic analysis. *Hydrogeol. J.*, 18, 1375-1390.
- Carmichael, H., W. Henson, and R.E. Stewart, 2010: Extreme precipitation events occurring during the recent drought (1999-2005) over the Canadian Prairies. *Atmos. Res.*, sumitted.
- Evans, E., R.E. Stewart, W. Henson, and K. Saunders, 2009: On precipitation and virga over three locations during the 1999-2004 Canadian Prairie drought. *Atmos.-Ocean*, accepted.
- The Expert Panel on Groundwater, 2009: *The Sustainable Management of Groundwater in Canada*. Council of Canadian Academies, Ottawa, 254 pp.
- Fang, X., and J.W. Pomeroy, 2007: Snowmelt runoff sensitivity analysis to drought on the Canadian prairies. *Hydrol. Processes*, **21**, 2594-2609.
- Fang, X., and J.W. Pomeroy, 2008: Drought impacts on Canadian prairie wetland snow hydrology. *Hydrol. Processes*, **22**, 2858-2873.
- Fang, X., and J.W. Pomeroy, 2009: Modelling blowing snow redistribution to prairie wetlands. *Hydrol. Processes*, **23**, 2557-2569.
- Fang, X., J.W. Pomeroy, C.J. Westbrook, X. Guo, A.G. Minke, and T. Brown, 2010: Prediction of snowmelt derived streamflow in a wetland dominated prairie basin. *Hydrol. Earth Syst. Sci.*, 14, 991-1006.
- Gervais, M.D., P.R. Bullock, M. Mkhabela, G.J. Finlay, and R. Raddatz, 2010: Improvements to the accuracy of modelled soil water content from the 2nd generation Prairie agrometeorological model. *Can. J. Soil Sci.*, **90**, 527-542.
- Gervais, M.D., M. Mkhabela, P.R. Bullock, R.L. Raddatz, and G.J. Finlay, 2010: Comparison of standard and actual crop evapotranspiration estimates derived from different methods on the Canadian Prairie. *Hydrol. Processes*, in review.
- Greene, H., H. Leighton, and R.E. Stewart, 2009: Drought and associated cloud fields over the Canadian Prairies. *Atmos.-Ocean*, accepted.

- Grieef, L.A., and M. Hayashi, 2007: Establishing a rural groundwater monitoring network using existing wells: West Nose Creek pilot study, Alberta. *Can. Wat. Res. J.*, **32**, 303-314.
- Guo, S., and H. Leighton, 2008: Satellite-derived aerosol radiative forcing from the 2004 British Colombia wildfires. *Atmos.-Ocean*, **46**, 203-212.
- Hayashi, M., J.F. Jackson, and L. Xu, 2010: Application of the Versatile Soil Moisture Budget model to estimate evaporation from prairie grassland. *Can. Wat. Res. J.*, **35**, 187-208.
- King, J.C., J.W. Pomeroy, D.M. Gray, C. Fierz, P. Föhn, R.J. Harding, R.E. Jordan, E. Martin, and C. Plüss, 2008: Snow-atmosphere energy and mass balance. *Snow and Climate, Physical Processes, Surface Energy Exchange and Modelling*, R. Armstrong and E. Brun, Eds., Cambridge University Press, 70-124.
- Knowland, K.E., J.R. Gyakum, and C.A. Lin, 2010: A study of the meteorological conditions associated with anomalously early and late openings of a Northwest Territories winter road. *Arctic*, **63**, 227-239.
- Lin, C.A. L. Wen, G. Lu, Z. Wu, J. Zhang, Y. Yang, Y. Zhu, and L. Tong, 2010: Real-time forecast of the 2005 and 2007 summer severe floods in the Huaihe River Basin of China. *J. Hydrol.*, **381**, 33-41, DOI 10.1016/j.jhydrol.2009.11.017.
- Loukili, Y., A.D. Woodbury and K.R. Snelgrove (2008) SABAE-HW An enhancement of the water balance prediction in the Canadian Land Surface Scheme. Submitted to Vadose Zone Journal, 7: 865-877.
- MacDonald, J., and J.W. Pomeroy, 2008: Gauge undercatch of two common snowfall gauges in a prairie environment. *Proc. of the Eastern Snow Conference*, 64, 119-126.
- Marin, S., G. van der Kamp, A. Pietroniro, B. Davidson, and B. Toth, 2011 : Use of observation well records for confined aquifers to evaluate modelling of areal evapotranspiration, Saul Marin, Garth van der Kamp, Alain Pietroniro, Bruce Davison and Brenda Toth. *J. Hydrol.*, accepted.
- Minke, A.G., Westbrook, C.J., and van der Kamp, G., 2010. Simplified volume-area-depth method for estimating water storage of prairie potholes. Wetlands 30, 541-551.
- Mkhabela, M.S., P.R. Bullock, M.D. Gervais, G.J. Finlay, and H.D. Sapirstein, 2010: Assessing indicators of agricultural drought impacts on spring wheat yield and quality on the Canadian prairies. *Agric. For. Met.*, **150**, 399-410.
- Mkhabela, M.S., P.R. Bullock, S. Raj, S. Wang, and Y. Yang, 2010: Crop yield forecasting in the Canadian prairies using MODIS NDVI data. *Agric. For. Met.*, in review.
- Pomeroy, J.W., R.J. Granger, N.R. Hedstrom, D.M. Gray, J. Elliott, A. Pietroniro, and J.R Janowicz, 2005: The process hydrology approach to improving prediction to ungauged

basins in Canada. *Prediction in Ungauged Basins, Approaches for Canada's Cold Regions*, C. Spence, J. Pomeroy, and A. Pietroniro, Eds., Canadian Water Resources Association, 67-95.

- Pomeroy, J.W., 2007: Cold regions hydrology, snow and PUB. *Predictions in Ungauged Basins: PUB Kick-off*, IAHS Publ. No. 309, IAHS Press, 85-91.
- Pomeroy, J.W., D. de Boer, and L. Martz, 2007: Hydrology and water resources. Saskatchewan: Geographic Perspectives, B. Thraves, M. Lewry, J. Dale, and H. Schlichtmann, Eds., Canadian Plains Research Centre, 63-80.
- Pomeroy, J.W., D.M. Gray, T. Brown, N.H. Hedstrom, W.L. Quinton, R.J. Granger, and S.K. Carey, 2007: The cold regions hydrological model: A platform for basing process representation and model structure on physical evidence. *Hydrol. Processes*, 21, 2650-2667.
- Roberge, A., J.R. Gyakum, and E. Atallah, 2009: Analysis of intense poleward water vapor transports into high latitudes of western North America. *Wea. Forecasting*, 24, 1732-1747.
- Saiyed, I., P.R. Bullock, H.D. Sapirstein, G.J. Finlay, and C.K. Jarvis, 2009: Thermal time models for estimating wheat phenological development and weather-based relationships to wheat quality. *Can. J. Plant Sci.*, 89, 429-439.
- Shabbar, A., B.R. Bonsal, and K. Szeto, 2010: Atmospheric and oceanic variability associated with growing season droughts and pluvials on the Canadian Prairies. *Atmos.-Ocean*, in press.
- Shaw D. A., G. van der Kamp, and M. Conly, 2010: The fill-spill hydrology of prairie pothole complexes during drought and deluge. For submission to Hydrologic Processes
- Shaw, D., L.W. Martz, and A. Pietroniro,2011 : Topographic analysis for the Prairie pothole region. *Hydrol. Processes*, accepted with revisions.
- Shook, K.R., and J.W. Pomeroy, 2010: Hydrological effects of the temporal variability of the multiscaling of snowfall on the Canadian prairies. *Hydrol. Earth Syst. Sci.*, 14, 1195– 1203, doi:10.5194/hess-14-1195-2010.
- Shook, K.R., and J.W. Pomeroy, 2011: Synthesis of incoming shortwave radiation for hydrological simulation. J. of *Hydrology Research*, in press.
- Small, D., E. Atallah, and J.R. Gyakum, 2010: Wind regimes at Tuktoyaktuk conducive for high wind events. *J. Climatology and Appl. Meteorology*, submitted.

- Sonnentag O, van der Kamp G, Barr AG, Chen JM, 2010. On the relationship between water table depth and water vapor and carbon dioxide fluxes in a minerotrophic fen. Global Change Biology, 16, 1762-1776. [doi: 10.1111/j.1365-2486.2009.02032].
- Spence, C., J.W. Pomeroy, and A. Pietroniro, 2006: Canadian PUB planning and implementation. *Predictions in Ungauged Basins: Promise and Progress*, Proc. of Symposium S7, IAHS Publ. 303, 2006, IAHS Press, 487-491.
- Stewart, R., J.W. Pomeroy, and R. Lawford, 2008: A drought research initiative for the Canadian Prairies. *CMOS Bull.*, **36**, 87-96.
- Szeto, K., 2007: Accessing water and energy budgets for the Saskatchewan River Basin. J. Met. Soc. Jap., **85A**, 167-186.
- Szeto, K., W. Henson, R.E. Stewart, and G. Gascon, 2011: The catastrophic June 2002 Prairie rainstorm: an extreme rain event that occurred during an extreme drought. Atmos-Ocean, submitted.
- Szeto, K., 2010: Water cycling and hydroclimate extremes in the Canadian Prairies. J. *Hydromet.*, submitted.
- Toth, B., D.R.Corkall, D.J. Sauchyn, G.van der Kamp, E. Pietroniro, 2009. The Natural Characteristics of the South Saskatchewan River Basin, Climate, Geography and Hydrology. *Prairie Forum-Special Climate Change Issue*, 34 (1), 95-127
- Turner, J.K., and J.R. Gyakum, 2010: The development of Arctic air masses in Northwest Canada and their behavior in a warming climate. *J. Climate*, submitted.
- Turner, J., and J.R. Gyakum, 2010: Trends in Canadian surface temperature variability in the context of climate change. *Atmos.-Ocean*, 48, 147-162.
- van der Kamp, G., and M. Hayashi, 2009: Groundwater-wetland ecosystem interaction in the semiarid glaciated plains of North America. *Hydrogeol. J.*, **17**, 203-214.
- Wen, L., C.A. Lin, Z. Wu, G. Lu, J. Pomeroy, and Y. Zhu, 2010: Reconstructing sixty year (1950-2009) daily soil moisture over the Canadian Prairies using the Variable Infiltration Capacity model. *Can. Wat. Resour. J.*, in press.
- Wu, Z., G. Lu, L. Wen, and C.A. Lin, 2010: Reconstructing and analyzing China's fifty-nine year (1951-2009) drought history using hydrological model simulation. *Science in China Series E: Technological Sciences*, under revision.
- Yang, J., M.K. Yau, X. Fang, and J.W. Pomeroy, 2010: A triple-moment blowing snowatmospheric model and its application in computing the seasonal wintertime snow mass budget. *Hydrol. Earth Syst. Sci.*, 14, 1063-1079.

- Yirdaw, S.Z., Snelgrove, K.R., Seglenieks, F.R., Agboma, C.O. and Soulis, E.D. (2009). Assessment of the WATCLASS Hydrological Model Result of the Mackenzie River Basin Using the GRACE Satellite Total Water Storage Measurement. Hydrologic Processes, DOI: 10.1002/hyp.7450.
- Yirdaw, S.Z., K.R. Snelgrove and C.O. Agboma (2008) *GRACE satellite observations of terrestrial moisture changes for drought characterization in the Canadian Prairie*, Journal of Hydrology, 356 (1), 84-92
- Yirdaw, S.Z., and K.R. Snelgrove, Groundwater Storage from GRACE Over the Assiniboine Delta Aquifer (ADA) of Manitoba. Submitted to DRI Special Issue.
- Zaitlin, B., M. Hayashi, and J. Clapperton, 2007: Distribution of northern pocket gopher burrows, earthworms and effects on infiltration in a prairie landscape in Alberta, Canada. *Appl. Soil Ecol.*, **37**, 88-94.
- Zha, T., A.G. Barr, G. van der Kamp, T.A. Black, J. H. McCaughey and L. B. Flanagan, 2010. Interannual variability in evapotranspiration from forest and grassland ecosystems in western Canada in relation to drought. Agricultural and Forest Meteorology, 150, 1476-1484. [doi:10.1016/j.agrformet.2010.08.003].
- b) Books and Book Chapters
- Hopkinson, C., A. Pietroniro, and J.W. Pomeroy, 2008: *HYDROSCAN: Airborne Laser Mapping* of Hydrological Features and Resources. Canadian Water Resources Association, 376 pp.
- \*Sauchyn, D., and S. Kulshreshtha, E. Barrow, D., Blair, J. Byrne, D. Davidson, P. Diaz, N. Henderson, D. Johnson, M. Johnston, S. Kienzle, J. Klaver, J. Thorpe, and E. Wheaton, 2008: *From Impacts to Adaptation: Canada in a Changing Climate 2007*, D.S. Lemmen, F.J. Warren, J. Lacroix, and E. Bush, Eds., Government of Canada, 275-328.
- Spence, C., J.W. Pomeroy, and A. Pietroniro, 2005: *Prediction in Ungauged Basins, Approaches for Canada's Cold Regions*. Canadian Water Resources Association, 218 pp.
- Stewart, R.E., 2010: Drought over the Canadian Prairies. Contribution to the Canadian Version of Meteorology Today. Brooks Cole Publishing (In press)
- Stewart, R.E. and B. Bonsal, 2010: Prairie Drought. Contribution to the Canadian Encyclopedia (Web Site).
- Turner, J.K., and J.R. Gyakum, 2010: The development of Arctic air masses in Northwest Canada and their behavior in a warming climate. *J. Climate*, submitted.

Yilmaz, K., I. Yucel, H.V. Gupta, T. Wagener, D. Yang, H. Savenijie, C. Neale, H. Kunstmann, and J.W. Pomeroy, 2009: New Approaches to Hydrological Prediction in Data Sparse Regions. IAHS Publ. No.333, IAHS Press, 342 pp.

c) Featured articles

Bonsal, B.R., 2008: Droughts in Canada: An Overview. CMOS Bull., 36, 79-86.

- Bonsal, B.R., 2010: Large-Scale Atmospheric Circulation Patterns and Severe Droughts on the Canadian Prairies, in: *The 1999-2005 Canadian Prairies Drought: Science, Impacts and Lessons*.
- Brimelow, J.C., J.M. Hanesiak, R.L. Raddatz, and M. Hayashi, 2010: Validation of ET estimates from the Canadian prairie agrometeorological model for contrasting vegetation types and growing seasons. *Can. Wat. Resour. J.*, **35**, 209-230.
- Harder, P., P. Conatanza, C. Saad, R. Lawford and R.E. Stewart, 2011: Experiences in the management, archiving and visualization of data for drought research in DRI. *CMOS Bulletin* (Submitted)
- Hayashi, M., J.F. Jackson, and L. Xu, 2010: Application of the Versatile Soil Moisture Budget model to estimate evaporation from prairie grassland. *Can. Wat. Resour. J.*, **35**, 187-208.
- Lawford, R., H. Hill, E. Wheaton, I. Hanuta, A. Warkentin, B. Girling and R. Stewart, (2008). A review of some requirements for drought information on the Canadian Prairies. CMOS Bulletin, Vol. 36, No. 3, 97-102.
- \*Marchildon, G.P., S. Kulshreshtha, E. Wheaton, D. Sauchyn, 2008: Drought and institutional adaptation in the Great Plains of Alberta and Saskatchewan, 1914-1939. *Nat. Hazards* **45**, 391-411.
- Shabbar, A., B. Bonsal, and K. Szeto, 2010: Atmospheric and oceanic variability associated with growing season droughts and pluvials on the Canadian Prairies. *Atmos.-Ocean*, in press.
- Stewart, R.E., 2008: The driest of times, the wettest of times. Cat Tales Newsletter of the Institute for Catastrophic Loss Reduction. 2, 2, 3-4
- Stewart, R.E., J. Pomeroy and R. Lawford, 2008: A Drought Research Initiative for the Canadian Prairies. *CMOS Bulletin*, 36, 87-102.
- Stewart, R., W. Henson, H. Carmichael, J., and K. Szeto, 2011: Precipitation events during the recent drought. The 1999-2005 Canadian Prairies Drought: Science, Impacts, and Lessons 43-46.

Szeto, K., 2011: Water cycling and hydroclimate extremes in the Canadian Prairies. The 1999-2005 Canadian Prairies Drought: Science, Impacts, and Lessons. R. Stewart and R. Lawford (Eds.) 35-40.

## **General Reports:**

- Anochikwa, C.I., G. van der Kamp and S. L. Barbour, 2009. Numerical Simulation of Observed Pore-Pressure Changes in an Aquitard due to Changes of Total Soil Moisture.
   Proceedings of the 10th Joint Groundwater Conference of the Canadian Geotechnical Society and the Canadian National Chapter of the International Association of Hydrogeologists (CGS/IAH-CNC), Halifax NS, September 20-24, 2009, 1600-1606.
- Bruneau, J., D. R. Corkal, E Pietroniro, B Toth, and G van der Kamp, 2008. Human Activities and Water Use in the South Saskatchewan River Basin, Climate 2008/Klima 2008 Online conference, Germany, Nov 3-7, 2008.
- Meinhart, A., B. Bonsal, E. Wheaton, and E. Siemens,XXX : An assessment of various drought indices associated with the 1999-2005 Canadian Prairie Drought. CFCAS, Saskatchewan Research Council, pp.XXX
- Pomeroy, J., C. Westbrook, X. Fang, A. Minke, and X. Guo, 2008: *Prairie Hydrological Model Study Progress Report, April 2008.* Centre for Hydrology Report No. 3, Centre for Hydrology, University of Saskatchewan, 18 pp.
- Pomeroy, J., C. Westbrook, C., X. Fang, A. Minke, and X. Guo, 2008: Prairie Hydrological Model Study Progress Report, December 2008. Centre for Hydrology Report No. 4., Centre for Hydrology, University of Saskatchewan, 35 pp.
- Pomeroy, J.W., X. Fang, and B. Williams, 2009: Impact of Climate Change on Saskatchewan's Water Resources. Centre for Hydrology Report No. 6., Centre for Hydrology, University of Saskatchewan, 46 pp.
- Pomeroy, J., X. Fang, C. Westbrook, A. Minke, X. Guo, and T. Brown, 2010. Prairie Hydrological Model Study Final Report. Centre for Hydrology Report No. 7, Centre for Hydrology, University of Saskatchewan, 127 pp.
- Sauchyn, D., J. Byrne, N. Henderson, D. Johnson, M. Johnston, S. Keinzle, and E. Wheaton, 2008: Alberta vulnerability assessment: Assessment of biophysical vulnerability. Prairie Adaptation Research Collaborative, University of Regina, 75 pp.
- Sauchyn, D., E. Barrow, X. Fang, N. Henderson, M. Johnston, J.W. Pomeroy, J. Thorpe, E. Wheaton, and B. Williams, 2009: Saskatchewan's natural capital in a changing climate:

An assessment of impacts and adaptation. Report to Saskatchewan Ministry of Environment from the Prairie Adaptation Research Collaborative, 162 pp.

- Wheaton, E., V. Wittrock, S. Kulshreshtha, B. Bonsal, G. Koshida, C. Grant, P. Adkins, A. Chipanshi, G. Bell, A. Howard, B. MacGregor, and G. Brown, 2006: Impacts of the 2001 and 2002 droughts in Canada: Some highlights, *Prairie Water News*, 16, 6-7.
- Wheaton, E., 2008: Scenarios of future climates: Characteristics relevant to stakeholders of the Boreal Plains Ecozone. Climate Change Impacts and Adaptation Program, Project A1383, Government of Canada, 21 pp.
- Wheaton, E., S. Kulshreshtha, V. Wittrock, and G. Koshida, 2008: Dry Times: Lessons from the Canadian Drought of 2001 and 2002. *Can. Geogr.*, 52, 241-262.
- Wittrock, V., S. Kulshreshtha, and E. Wheaton, 2008: A Prairie community's exposure and sensitivity to climatic extremes: Case study of the Blood Indian Reserve, Alberta. Progress Report for April 2007 to March 2008, 3pp.
- Wittrock, V., S. Kulshreshtha, L. Magzul, and E. Wheaton, 2008: *Adapting to impacts of climatic extremes: Case study of the Kainai Blood Indian Reserve, Alberta.* Institutional Adaptation to Climate Change: A Project of SSRHC MCRI Program, 108 pp.

#### **Thesis**

- Armstrong, R.N., 2011: Spatial variability of Prairie evapotranspiration in droughts. Ph.D dissertation, University of Saskatchewan, in progress.
- Evans, E., 2008: Precipitation events during the recent drought over the Canadian Prairies. MSc., McGill University
- Fang, X., 2007: Snow hydrology of Canadian Prairie droughts: Model development and application. M.Sc. thesis, University of Saskatchewan, 172pp.
- Greene, H., 2008: Clouds and precipitation during the recent drought over the Canadian Prairies. MSc, McGill University.
- McCormick, T., 2009: Radiation fields over the Canadian Prairies during drought. MSc., McGill University.
- Shaw, D., 2010: The influence of contributing area on the hydrology of the prairie pothole region of North America. Department of Geography, University of Saskatchewan, 167 pp.

## **Conference and Scientific Meeting Presentations:**

- a) Conference Presentations
- Agboma, C.O., K.R. Snelgrove, and S.Z. Yirdaw, 2009: Intercomparison of the Total Storage Deficit Index (TSDI) over two Canadian Prairie catchments. *J. Hydrol.*, **374**, 351-359.
- Agboma, C.O., K.R. Snelgrove, S.Z. Yirdaw, and G. van der Kamp, 2009: Moisture storage patterns derived from a hydrologic model validated with outputs from GRACE and geological weighing lysimeters. *J. Hydrol.*, accepted.
- Agboma C.O., Snelgrove, K.R., Lye L.M and Yirdaw, S.Z., 2009: Assessment of the soil moisture patterns over the Canadian Prairie during extended period of dryness. Canadian Society of Civil Engineers Conference (CSCE), St. John's, NL, Canada. May, 2009 (Abstract and poster)
- Agboma, C.O. and K.R. Snelgrove, 2008: Patterns Of Moisture Storage During Canadian Prairie Drought, Eos Transactions. AGU, 89(53), Fall Meeting Supplement, Abstract H11E-0817.
- Anochikwa, C.I., G. van der Kamp and S. L. Barbour, 2009. Numerical Simulation of Observed Pore-Pressure Changes in an Aquitard due to Changes of Total Soil Moisture.
   Proceedings of the 10th Joint Groundwater Conference of the Canadian Geotechnical Society and the Canadian National Chapter of the International Association of Hydrogeologists (CGS/IAH-CNC), Halifax NS, September 20-24, 2009.
- Bullock, P.R., 2006: Moisture stress: a plant's perspective. *1st Annual Drought Research Initiative Workshop*, Saskatoon, Saskatchewan.
- Bullock, P.R., 2007: Agricultural drought indices. *Drought Research Initiative Evaporation Workshop*, Saskatoon, Saskatchewan.
- Bullock, P.R., G.J. Finlay, C.K. Jarvis, H.D. Sapirstein, H. Naeem, and I. Saiyed, 2007: Quantifying agricultural drought: An assessment using western Canadian spring wheat. 2nd Annual Drought Research Initiative Workshop, Winnipeg, Manitoba.
- Bullock, P.R., 2008: Agricultural drought. *Drought Research Initiative Theme 1 Workshop*, Winnipeg, Manitoba.
- Bullock, P.R., 2008: Agricultural drought assessment: An update. *3rd Annual Drought Research Initiative Workshop*, Calgary, Alberta.
- Bullock, P.R., 2008: Quantifying Drought: How dry is it, really? *Department of Entomology Seminar Series*, University of Manitoba, Winnipeg, Manitoba.

- Bullock, P.R., 2009: Assessing agricultural drought in Western Canada with census agricultural region crop data. *4th Annual Drought Research Initiative Workshop*, Regina, Saskatchewan.
- Bullock, P.R., M.S. Mkhabela, M.D. Gervais, G.F. Finlay, and S. Wang, 2010: Agricultural drought. *Drought Research Initiative Manitoba Users' Workshop*, Winnipeg, Manitoba.
- Carmichael, H., W. Henson, and R.E. Stewart, 2009: Extreme precipitation events and the recent drought over the Canadian Prairies. *CMOS Congress*, Halifax, Nova Scotia.
- Comeau, E.L., A. Pietroniro, and M.N. Demuth, 2009: Glacier contribution to the North and South Saskatchewan Rivers., *Hydrol. Processes*, **23**, .
- Ehsanzadeh, E., C. Spence and G.van der Kamp, 2010. Use of available hydrometric data to characterize depressional storage and ever-changing effective drainage areas in North American Prairie watersheds, CGU-CMOS conference, May 30-June 4, 2010, Ottawa.
- Gervais, M., P.R. Bullock, and R. Raddatz, 2007: A soil water budget approach to improving evapotranspiration estimates from the 2nd generation prairie agrometeorological model. *Drought Research Initiative Evaporation Workshop*, Saskatoon, Saskatchewan.
- Gervais, M., P.R. Bullock, and R. Raddatz, 2008: Prairie agrometeorological model (PAM2nd): Calibration of modeled soil water for Spring wheat. *Canadian Society of Soil Science Annual Meeting*, Prince George, British Columbia.
- Greene, H., H.G. Leighton, and R. Stewart, 2008: Analysis of cloud fields during the recent Prairie drought. *CMOS Congress*, Kelowna, British Columbia.
- Gyakum, J., 2010: Diagnosing meteorological drought mechanisms with global and regional reanalysis data. *DRI Workshop*, Winnipeg, MB.
- Hryciw, L., 2010: Meteorological analysis of the 1999-2005 Canadian Prairie Drought. American Geological Union meeting, San Francisco, CA (?), .
- Hryciw, L., 2010: Meteorological analysis of the 1999-2005 Canadian Prairie Drought. CMOS Congress, Toronto.
- Hryciw, L., 2010: Meteorological analysis of the 1999-2005 Canadian Prairie Drought. DRI Workshop,, Winnipeg, MB.
- Lawford, R, 2010: Drought research in western Canada: a critical step in bringing climate services to users, CMOS Congress, Ottawa, Ontario, June 1, 2010
- Lawford, R., 2010: Canadian Contributions to Drought Science and GEO through the Drought Research Initiative (DRI), Asheville Drought Workshop. April 22, 2010

- Lawford, R.G. and P. Harder, 2009: Assessment of apportionment and measured streamflows as possible drought indicators, DRI Prairie Hydrology Workshop, Saskatoon. SK, November, 2009.
- Lawford, R.G., Ronald Stewart, John Pomeroy, 2009: Canadian Drought Research and its Contribution to Sustainable Development In western Canada, Spring CGU Meeting, Toronto, Ontario, May 26, 2009
- McCormack, T., and H.G. Leighton, 2009: Evaluation of the CRCM output during the 1999-2004 Canadian Prairie drought. *CMOS Congress*, Halifax, Nova Scotia.
- \*Marchildon, G.P., S. Kulshreshtha, E. Wheaton, D. Sauchyn, 2008: Drought and institutional adaptation in the Great Plains of Alberta and Saskatchewan, 1914–1939. *Nat. Hazards*, 45, 391-411.
- Mkhabela, M., P.R. Bullock, M.D. Gervais, G.J. Finlay, and H.D. Sapirstein, 2009: Evaluation of meteorological indicators of agricultural drought impacts on spring wheat yield and quality in the Canadian Prairies. *Canadian Society of Soil Science Annual Meeting*, Guelph, Ontario.
- Mkhabela, M., P.R. Bullock, M.D. Gervais, G.F. Finlay, S. Raj, S. Wang, and Y. Yang, 2010: Development of agricultural drought indices, evaluation of PAMII moisture and ET estimates and crop yield forecasting on the Canadian Prairies using MODIS-NDVI data. *5th Annual Drought Research Initiative Workshop*, Winnipeg, Manitoba.
- Mkhabela, M., P.R. Bullock, S. Raj, S. Wang, and Y. Yang, 2009: Predicting crop yield in the Canadian Prairies using MODIS NDVI data. *Canadian Society of Soil Science Annual Meeting*, Guelph, Ontario.
- Pozzi, W., M. Santoro, S. Nativi, C.Fugazza, J. Lieberman, G. Percivall, J. Sheffield, R. Heim, M. Brewer, R. Pulwarty, J. Verdin, J. Vogt, S. Niemeyer, K. Korporal, D. Cripe, C. Yang, B. Sonntag, R.Lawford, Allan Howard, Liping Di, and B. Lee, 2010: The GEO Global Drought Monitor and its implementation through the Architectural Implementation Pilot, 16 Sept 2010
- Roberts, J., K.R. Snelgrove and M. Organ (2008) Climate Change Studies for Hydroelectric Utilities, Eos Transactions. AGU, 89(53), Fall Meeting Supplement, Abstract GC31A-0741
- Stewart, R.E., 2009: Drought and related extremes today and tomorrow. *Manitoba Watersheds Conference*, Brandon, Manitoba,
- Stewart, R.E., 2009: Drought over the Canadian Prairies. Environment Canada, Toronto.
- Stewart, R.E., 2009: Drought over the Canadian Prairies. University of Northern British Columbia, Prince George.

- Stewart, R.E., J. Pomeroy, and R. Lawford, 2010: The Drought Research Initiative: What has been accomplished. *Can. Meteor. Ocean. Soc. Conf.*, Ottawa.
- van der Kamp, G. and M. Hayashi, 2010. An overview of the processes that control the water balance and salinity of prairie wetlands. Invited Keynote Presentation, Symposium on Wetlands: Transfers and Transformations, Canadian Society of Soil Science Conference, June 20-24, 2010, Saskatoon SK.
- van der Kamp G. and A. G. Barr, 2010. The CCP-Fluxnet Canada network and the interplay between energy, water and carbon uptake in the landscape. Invited presentation, Session on carbon cycling of Canadian forests and peatlands, CGU-CMOS conference, May 30-June 4, 2010, Ottawa.
- van der Kamp, G. and M. Hayashi, 2010. Groundwater and drought in the prairies what observation well data can tell us. Session on Drought and society, CGU-CMOS conference, May 30-June 4, 2010, Ottawa.
- van der Kamp, G., 2010. The Groundwater connection. Invited presentation, CFCAS-EC Symposium on Water Security, Ottawa, May 27-28, 2010.
- van der Kamp, G. 2010. Hydrology, Climate and the Threat to Wetlands. Invited Keynote Presentation. International workshop on Wetlands Management, Economics and Policy, Victoria, BC, January 13-15, 2010.
- van der Kamp, G., 2009. Long-term water-level changes of prairie lakes century scale variations of water availability. Invited presentation. DRI Prairie Hydrology workshop, Saskatoon, Nov 18, 2009
- van der Kamp G. 2009. Ecohydro(geo)logy of the southern boreal forest in Saskatchewan: From piezometers to eddy-flux towers and everything between. Invited seminar, Dept of Earth and Environmental Sciences, U of Waterloo, Sept 18, 2009.
- van der Kamp, G., 2009. Long-term water level changes in closed-basin lakes of the Canadian prairies and the role of groundwater. Invited keynote presentation at the Annual Conference of Alberta Environment Provincial Water Act held in Banff, AB, March 22-24, 2009.
- van der Kamp, G., M. Hayashi, 2009. Prairie Wetlands and their Catchments: Hydrological Understanding and Management Implications for Drainage and Groundwater Recharge. Invited keynote presentation at the Annual Conference of Alberta Environment Provincial Water Act held in Banff, AB, March 22-24, 2009.Wang, S., Y. Yang, A. Trishchenko, Y. Luo, X. Geng, P. Bullock, and N. Mi, 2009: Drought impact characterization using remote sensing and ecosystem modeling. 2009 Joint Assembly, American Geophysical Union, Toronto, Ontario.

- Venema,H., R. Lawford, M. McCandless, D. Roy, K.Zubrycki, D. Medeiros, 2010: Lake Winnipeg Basin – confronting cultural eutrophication with new narratives for socioecological transformation, GCI Conference, Bonn, Germany, December 7, 2010
- Wen, L., C.A. Lin, Z. Wu, G. Lu, J. Pomeroy, and Y. Zhu, 2010: Analysis of real-time Prairie drought monitoring and forecasting system. CMOS-CGU Congress, Toronto, .
- \*Wheaton, E., S. Kulshreshtha, V. Wittrock, and G. Koshida, 2008: Dry Times: Lessons from the Canadian Drought of 2001 and 2002. *Can. Geog.*, **52**, 241-262.
- Wu, Z., G. Lu, L. Wen, and C.A. Lin, 2010: A real-time drought monitoring and forecasting system in China. 5<sup>th</sup> International Symposium on Integrated Water Resources Management and 3<sup>rd</sup> International Symposium on Methodology in Hydrology, Nanjing, China; in press.
- Yirdaw, S.Z., K.R. Snelgrove, F.R. Seglenieks, C.O. Agboma, and E.D. Soulis, 2009: Assessment of the WATCLASS hydrological model result of the MacKenzie River Basin using the result of the GRACE satellite total water storage measurement. *Hydrol. Processes*, 23, 3391-3400.

#### Presentations in major national and international conferences:

- Agboma, C. O. and K.R. Snelgrove, 2006: Non-Parametric Approach for Trend Delineation in the Canadian Prairie. Eos Transactions. AGU, 87(52), Fall Meeting Supplement, Abstract GC41A-1034.
- Armstrong, R., J.W. Pomeroy, and L. Martz, 2007: Problems in estimating evaporation in Prairie environments. *DRI Evaporation Workshop*, Saskatoon, Saskatchewan.
- Armstrong, R., J.W. Pomeroy, and L. Martz, 2008: Examining the spatial variability of actual evaporation under clear skies. *Canadian Geophysical Union Meeting*, Banff, Alberta.
- Armstrong, R., J.W. Pomeroy, and L. Martz, 2009: Progress towards calculating actual evaporation over the Canadian Prairie region during drought. *DRI Drought Characterization Workshop*, Winnipeg, Manitoba, 2009.
- Armstrong, R., J.W. Pomeroy, and L. Martz, 2009: Spatial variability of actual evapotranspiration across the Canadian Prairies during drought. *Canadian Geophysical Union Meeting*, Toronto, 2009.
- Armstrong, R., J.W. Pomeroy, and L. Martz, 2009: Variations in growing season actual evapotranspiration across climatological gradients in the Prairie region of Western Canada. AGU Ecohydrology Chapman Conference, Sun Valley, Idaho, October 2009.

- Armstrong, R., J.W. Pomeroy, and L. Martz, 2010: Surface hydrological components of Prairie drought. *DRI Saskatchewan Users Workshop*, Regina, Saskatchewan, 2010.
- Bonsal B.R., 2006: Droughts in Canada: An Overview. *Annual American Geophysical Union Meeting*, December 11-15, 2006, San Francisco, California.
- Bonsal B.R., 2007: Droughts in Canada: An overview. *Annual CMOS/CGU Meeting*, May 28 Jun 1, 2007, St. John's, Newfoundland.
- Bonsal, B.R., 2008: The drivers of hydro-climate variability in Western Canada. *Past and Future Hydroclimatic Variability: Applications to Water Resource Management in the Prairie Provinces*, March 17-18, 2008, Canmore, Alberta.
- Bonsal, B.R., and A. Shabbar, 2008: Large-scale SST patterns and teleconnections associated with the 1999 to 2005 Canadian Prairie drought. *Drought Research Initiative Annual Workshop*, January 17-19, 2008, Calgary, Alberta.
- Bonsal, B.R., 2009: Droughts in Canada. Research for Disaster-reduction from Extremes (REDE) Workshop, May 20-21, 2009, Winnipeg, Manitoba.
- Bonsal, B.R., and C. Cuell, 2009: An assessment of the 500mb synoptic types associated with the 1999-2004 Canadian Prairie drought. *Drought Research Initiative Annual Workshop*, January 26-28, 2009, Regina, Saskatchewan.
- Bonsal, B.R., and C. Cuell, 2009: An assessment of mid-tropospheric circulation patterns associated with Canadian Prairie droughts. *CMOS Annual Workshop*, June 1-4, 2009, Halifax, Nova Scotia.
- Bonsal, B.R. 2010: Droughts in Canada: A review. *AMS Annual Meeting*, January 20-21, 2010, Atlanta, Georgia.
- Bonsal, B.R., A. Shabbar, and K. Szeto, 2010: Atmospheric and oceanic variability associated with growing season droughts and pluvials on the Canadian Prairies. *CMOS Annual Workshop*, June 1-4, 2010, Ottawa, Ontario.
- Burns, E.R., L.R. Bentley, M. Hayashi, S.E. Grasby, and D.G. Smith, 2006: A new paradigm for the Paskapoo aquifer system: Evidence, implications, and modeling. *Joint annual meeting of the Canadian Geophysical Union and the Canadian Society of Soil Science*, Banff, Alberta, May 14-17, 2006.
- Comeau, E. L., ,A. Pietroniro and M.N. Demuth, 2009: Glacier contribution to the North and South Saskatchewan Rivers., *Hydrol. Process*, 23.
- \*Diaz, P., S. Kulshreshtha, B. Matlock, E. Wheaton, and V. Wittrock, 2008: Rural Community and Vulnerability to Climate Change: Case Studies of Cabri and Stewart Valley in

Southwestern Saskatchewan. *Klima* 2008/*Climate* 2008 *Web* Conference, http://www.climate2008.net/index.html?a1=pap&cat=4&e=38

- Fang, X., 2006: Spatially distributed modelling of snow redistribution, melt, infiltration and runoff. St. Denis NWA Wetland Workshop, National Hydrology Research Centre, Saskatoon, Saskatchewan, January 31, 2006.
- Fang, X., 2007: Snow accumulation, snowmelt and snowmelt runoff to Prairie ponds. St. Denis NWA Science and Planning Workshop, National Hydrology Research Centre, Saskatoon, Saskatchewan, April 3, 2007.
- Fang, X., and J.W. Pomeroy, 2007: Effects of drought on Canadian Prairie wetland snowmelt hydrology. CMOS-CGU-AMS Congress 2007: Air Ocean, Earth and Ice on the Rock, Canadian Geophysical Union 33<sup>rd</sup> Annual Meeting, St. John's, Newfoundland, May 28 – June 1, 2007.
- Fang, X., and J.W. Pomeroy, 2007: Model scale comparison for wind redistribution of snow in the Canadian Prairies. *Canadian Geophysical Union – Hydrology Section 6<sup>th</sup> Annual Student Meeting Prairie Regions*, Calgary, Alberta, January 27, 2007.
- Fang, X., and J.W. Pomeroy, 2009: Drought impacts on Prairie snow hydrology. Drought Research Initiative Hydrology Workshop, Saskatoon, Saskatchewan, November 18, 2009.
- Fang, X., J.W. Pomeroy, T. Brown, C. Westbrook, X. Guo, and A. Minke, 2009: Using field surveys and LiDAR to derive parameters for uncalibrated spring streamflow prediction using the cold regions hydrological model. *IP3 & WC2N Networks Joint Annual Workshop*, Lake Louise, Alberta, October 14-17, 2009.
- Hayashi, M., and G. van der Kamp, 2007: Using prairie pothole analogues to understand the hydrological response of closed lake systems. *Annual Meeting of the Geological Society of America*, Denver, Colorado, October 28-31, 2007.
- Hayashi, M., and G. van der Kamp, 2008: Effects of depth-permeability distribution on groundwater exchange and water balance of prairie wetlands. *Ninth Joint Groundwater Specialty Conference of the International Association of Hydrogeologists - Canadian National Chapter and the Canadian Geotechnical Society*, Edmonton, September 21-24, 2008.
- Hayashi, M., and G. van der Kamp, 2008: Groundwater-wetland ecosystem interaction in the semiarid glaciated plains of North America. *Annual Meeting of the Canadian Geophysical Union*, Banff, Alberta, May 11-14, 2008.
- Hayashi, M., and G. van der Kamp, 2008: Interaction of groundwater with prairie wetland ecosystems in Canada. *36th Congress of the International Association of Hydrogeologists*, Toyama, Japan, October 26-31, 2008.

- Hayashi, M. and L. Xu, 2009: Watershed-scale modelling of depression-focussed groundwater recharge in the Canadian Prairies. *Joint Assembly of American Geophysical Union, Canadian Geophysical Union, Geological Association of Canada, Mineralogical Association of Canada, and International Association of Hydrogeologists-Canadian National Chapter*, Toronto, May 24-27, 2009.
- Jackson, J., R. Chen, and M. Hayashi, 2007: Testing the Versatile Soil Moisture Budget model for groundwater recharge estimation in a northwest Canadian Prairie setting. *Joint Annual Meeting of the Canadian Meteorological and Oceanographic Society, Canadian Geophysical Union, and American Meteorological Society*, St. John's, Newfoundland, May 28 - June 1, 2007.
- Koshida, G., E. Wheaton, and V. Wittrock, 2008: The 2001-2002 Canadian Drought Experience: Lessons Learned. North American Drought Monitor-Canadian Workshop, October 15, 2008, Ottawa, Ontario, 27 pp.
- Koshida, G., E. Wheaton, V. Wittrock, E. Stratton, and S. Butt, 2008: Before the tap runs dry: Identifying user needs and designing better drought products. *North American Drought Monitor-Canadian Workshop*, March 5-6, 2008 Guelph, Ontario, 38 pp.
- Loukili, Y., A.D. Woodbury, and K.R. Snelgrove, 2006: SABAE-HW an enhancement of the water balance prediction in the Canadian Land Surface Scheme. 2006 San Francisco, AGU Fall Meeting, December 11-15, 2006.
- Marin, S.,G.van der Kamp, A. Pietroniro, B. Davison and B.Toth, 2011: Use of Observation Well Records for Confined Aquifers to Evaluate Modelling of Areal Evapotranspiration,. *Journal of Hydrology.(Accepted)*
- Meinert, A., B.R. Bonsal, and E. Wheaton, 2009: Capturing the dynamics of the 1999-2005 Canadian Prairie drought using the SPI and PDSI. *DRI Precipitation and Drought Indices Workshop*, April 30, 2009, Toronto, Ontario.
- Pomeroy, J.W., R. Granger, N. Hedstrom, T. Brown, A. Pietroniro, L. Martz, R. Armstrong, and X. Fang, 2006: Land surface hydrological processes and modelling. *Drought Research Initiative 1st Annual Workshop*, Saskatoon, Saskatchewan, January 11, 2006.
- Pomeroy, J.W., R. Armstrong, X. Fang, T. Brown, L. Martz, A. Pietroniro, and R. Granger, 2007: Land surface hydrological processes and modelling. *Drought Research Initiative 2<sup>nd</sup> Annual Workshop*, Winnipeg, Manitoba, January 12, 2007.
- Pomeroy, J.W., and X. Fang, 2007: Recent advances in modelling the sublimation of blowing snow on the Canadian Prairies. *Drought Research Initiative Evaporation Workshop*, University of Saskatchewan, May 17, 2007.

- Pomeroy, J.W., X. Fang, R. Armstrong, and K. Shook, 2007: Prairie drought hydrology prediction using the Cold Regions Hydrological Model. *Drought Research Initiative Prediction Workshop*, McGill University, Montreal, Quebec, September 20, 2007.
- Pomeroy, J.W., X. Fang, A. Minke, C. Westbrook, and X. Guo, 2008: Prairie wetland hydrology processes and modelling. *Prairie Habitat Joint Venture (PHJV) Science & Policy Forum* 2008, Saskatoon, Saskatchewan, April 8-9, 2008.
- Pomeroy, J.W., K. Shook, R. Armstrong, and X. Fang, 2008: Hydrology of Prairie droughts. Drought Research Initiative 4<sup>th</sup> Annual Workshop, Regina, Saskatchewan, January 27, 2008.
- Pomeroy, J.W., K. Shook, R. Armstrong, X. Fang, T. Brown, and L. Martz, 2008: Canadian hydrological drought: Processes and modelling. *Drought Research Initiative 3<sup>rd</sup> Annual Workshop*, Calgary, Alberta, January 17, 2008.
- Pomeroy, J.W., X. Fang, C. Westbrook, A. Minke, X. Guo, K. Shook, and T. Brown, 2009: Impact of Prairie wetland drainage and land use change on spring streamflow. *Drought Research Initiative Hydrology Workshop*, Saskatoon, Saskatchewan, November 18, 2009.
- Pomeroy, J.W., 2010: Water prescriptions for a dry land How the West can prepare for drought. *Partnership Group on Sciences and Engineering "Bacon and Eggheads"*, invited talk to MPs and Senators, Parliament of Canada, Ottawa, May 2010.
- Pomeroy, J.W., 2010: Canadian Prairie Drought. *ISAC3 workshop*, Lanzhou, China. September 2010.
- Pomeroy, J.W., K.R. Shook, R.N. Armstrong, and X. Fang, 2010: Drought, climate variability and water resources in Western Canada. *The 3<sup>rd</sup> International Symposium on Arid Climate Change and Sustainable Development (ISACS)*, Lanzhou, China, September 8-10, 2010.
- Shaw, D., L.W. Martz and A.Pietroniro, 2011: Topographic Analysis for the Prairie Pothole Region, *Hydrological Processes*, (Accepted with revision)
- Shook, K.R., and J.W. Pomeroy, 2008: Stationarity analyses of historical Canadian Prairie weather data. Why do statistical tests give differing answers?, *CGU*, May 2008.
- Shook, K.R., and J.W. Pomeroy, 2009: Trends in the multiscaling of precipitation on the Canadian prairies. *Joint International Convention of the International Association of Hydrological Sciences and International Association of Hydrogeologists (IAH)*, Hyderabad, India, October 2009.
- Shook, K.R., and J.W. Pomeroy, 2007: Prairie drought hydrology prediction using the Cold Regions Hydrological Model. *DRI Prediction Workshop*, Montreal, Quebec, September 20, 2007.

- Shook, K.R., and J.W. Pomeroy, 2007: Prairie flood and drought mitigation. *National Workshop* on Watershed Conservation, Winnipeg, Manitoba, November 9, 2007.
- Shook, K.R., and J.W. Pomeroy, 2008: Evaluating gridded datasets for physically based hydrologic modelling of drought. *Second DRI Workshop on Prediction*, Montreal, Quebec, September 28, 2008.
- Shook, K.R., and J.W. Pomeroy, 2008: Testing the stationarity of historical meteorological data on the Canadian Prairies. *DRI Workshop* #3, Calgary, Alberta, January 17-19 2008.
- Shook, K.R., and J.W. Pomeroy, 2009: Determining Prairie hydrological drought. *4th Annual DRI Workshop*, Regina, Saskatchewan, January 2009.
- Shook, K.R., and J.W. Pomeroy, 2009: Drought impacts on Prairie land surface hydrological dynamics. *Prairie Hydrological Workshop*, Saskatoon, Saskatchewan, November 18, 2009.
- Shook, K.R., and J.W. Pomeroy, 2010: Determining prairie hydrological drought by modeling. *CGU*, Ottawa, Ontario, May 2010.
- Shook, K.R., and J.W. Pomeroy, 2010: Modelling drought in prairie watersheds. 2010 DRI Annual Workshop, Winnipeg, Manitoba, May 12-14, 2010.
- Shook, K.R., and J.W. Pomeroy, 2010: Modelling surface water responses to drought. *Alberta DRI User's Workshop*, Edmonton, Alberta, April 6, 2010.
- Siemens, E., B.R. Bonsal, E. Wheaton, and N. Nicolichuk, 2009: Drought characterizations. *Climate Hazards Workshop*, November 25, 2009, Saskatoon, Saskatchewan.
- Snelgrove, K.; and Yirdaw-Zeleke, S. (2005) GRACE satellite observations of terrestrial moisture changes and drought measurement in Western Canada. 39th Annual Congress: Sea to Sky. Canadian Meteorological and Oceanographic Society. May 31-June 3, 2005. Vancouver, British Columbia.
- Snelgrove, K. R., S. Yirdaw-Zeleke, E.D. Soulis, F.R. Seglenieks (2005) GRACE (Gravity Recovery and Climate Experiment) Measurements for Drought Monitoring?, Observational and Modeling Requirements for Predicting Drought on Seasonal to Decadal Time Scales, Adelphi, MD, May 17-19, 2005
- Stewart, R.E., 2008: Extremes around the world and their impacts. *Extremes and Ecosystems Symposium, AGU*, San Francisco, California.
- Stewart, R.E., 2009: Drought and heavy precipitation: Unique and common features. *Research for Disaster Reduction for Extremes Workshop*, Winnipeg, Manitoba.

Stewart, R.E., 2010: The structure of drought. WCRP Extremes Workshop, Paris.

Stewart, R.E., 2010: RHP perspectives and CEOP Extremes. GEWEX SSG, New Delhi.

- Stewart, R.E., 2010: Drought, climate change and the Canadian Prairies. *European Geosciences Union Conf.*, Merida, Mexico.
- van der Kamp, G., and M. Hayashi, 2006: A watershed-scale approach to groundwater-surface water fluxes in prairie wetlands. *Annual Meeting of the Geological Society of America*. *Philadelphia*, October 22-25, 2006.
- Wheaton, E., 2008: Agriculture in a Changing Climate. Saskatchewan Research Council Agriculture, Biotechnology and Food Division, Saskatoon, Saskatchewan, 47 pp.
- Wheaton, E., 2008: Climate Change and Agriculture: Risks and Opportunities. 2008 Saskatchewan Institute of Agrologists' Conference, Saskatoon, Saskatchewan, April 4, 2008, 47 pp.
- Wheaton, E., 2008: Risks and Rewards: Global Warming and Prairie Agriculture. 2008 Saskatchewan Assessment Appraisers' Association's Annual Professional Development Workshop, June 18-20, 2008, Saskatoon, Saskatchewan, 50 pp.
- Wheaton, E., 2008: Weathering the warming: Prairies and the world. Saskatchewan Research Council's Business Development Lunch and Learn, Saskatoon, Saskatchewan, 40 pp.
- Wheaton, E., C. Beaulieu, J. Thorpe, and V. Wittrock, 2008: Agriculture in a warming climate. University of Saskatchewan, 78 pp.
- Wittrock, V., P. Diaz, S. Kulshreshtha, B. Matlock, and E. Wheaton, 2008: Rural Community Vulnerability to Climate Change: Saskatchewan Case Studies. Adaptation to Climate Change in the Canadian Plains, Saskatchewan Institute of Public Policy and Institutional Adaptation to Climate Change Project, Regina, Saskatchewan, April 22, 2008, 19 pp.
- Wittrock, V., S. Kulshreshtha, L., Magzul, and E. Wheaton, 2008: Droughts and Floods of the late 20<sup>th</sup> and early 21<sup>st</sup> Centuries on the Kainai Blood Indian Reserve. *Blood Tribe Chief and Council*, Standoff, Kainai Blood Indian Reserve, Alberta, October 21, 2008, 34 pp.
- Wittrock, V., S. Kulshreshtha, L. Magzul, and E. Wheaton, 2008: Floods and Droughts / Friends or Foe? *Saipoyi Elementary School*, Standoff, Kainai Blood Indian Reserve, Alberta, October 22, 2008, 20 pp.
- Wittrock, V., S. Kulshreshtha, and E. Wheaton, 2008: Vulnerability of Prairie Communities to Drought: Comparing Outlook, Taber, Hanna, and Kainai Nation. *Annual Meeting of the Institutional Adaptation to Climate Change Project*, Regina, Saskatchewan, 15 pp.

- Wittrock, V., and E. Wheaton, 2008: Large and small communities and climate change. University of Saskatchewan, 109 pp.
- Wittrock, V., E. Wheaton, and S. Kulshreshtha, 2008: Six Prairie Communities' Susceptibility to Drought. *61<sup>st</sup> Annual National Conference of the Canadian Water Resources Association*, June 17-19, 2008, Gimli, Manitoba, 31 pp.
- Woodbury, A.D., K.R. Snelgrove, Y. Loukili, and S. Yirdaw-Zeleke, 2005: Climate change assessment over the Assiniboine Delta Aquifer. *Geological Society America*, 2005 Salt Lake City Annual Meeting, October 16–19, 2005.
- Wozniak P.R.J., M. Hayashi, L.R. Bentley, S.E. Grasby, and M. Eckfeldt, 2008: Characterization of the Paskapoo for sustainable groundwater development: A modeling approach. *Ninth Joint Groundwater Specialty Conference of the International Association of Hydrogeologists - Canadian National Chapter and the Canadian Geotechnical Society*, Edmonton, September 21-24, 2008.
- Xu, L., M. Hayashi, J. Jackson, and L.R. Bentley, 2008: Estimating groundwater recharge under upland and depression using a simple soil water balance model. *Annual Meeting of the Canadian Geophysical Union*, Banff, Alberta, May 11-14, 2008.
- Yirdaw S.Z. and K.R. Snelgrove, 2007: Groundwater Storage from GRACE Over the Assiniboine Delta Aquifer (ADA) of Manitoba: Early Result, Canadian Meteorological and Oceanographic Society and Canadian Geophysical Union Joint Meeting. May 28-June 1, 2007. St. John's, NL.
- Yirdaw, S.Z.; and Snelgrove, K.R.,2006: Validation of regional precipitation minus evaporation using a coupled GRACE driven moisture storage and measured basin runoff. Eos Transactions. AGU, 87(52), Fall Meeting Supplement, Abstract GC41A-1031.

#### Journal Articles Accepted but Pending Changes:

Agboma C.O., Snelgrove, K.R., Yirdaw, S.Z. and G. van der Kamp (2009) Moisture Storage Patterns Derived from a Hydrologic Model Validated with Outputs from GRACE and Geological Weighing Lysimeters. Journal of Hydrology.

Journal Articles in Review:

- Yirdaw, S.Z., and K.R. Snelgrove, Groundwater Storage from GRACE Over the Assiniboine Delta Aquifer (ADA) of Manitoba. Submitted to DRI Special Issue.
- Shaw, D., L.W. Martz and A.Pietroniro,2011: The influence of surface water connectivity on runoff in a prairie pothole region, *Journal of Hydrology*, (Under review)

At each DRI Annual Workshop investigators and collaborators are expected to give presentations on their latest scientific result. These presentations are available on the DRI web site (drinetwork.ca) and have not been listed here.

## **Posters:**

- Armstrong, R., J.W. Pomeroy, and L. Martz, 2007: Evaluation of evaporation estimation methods during a summer drying period. *Canadian Geophysical Union Meeting*, St. John's, Newfoundland, 2007.
- Fang, X., and J.W. Pomeroy, 2006: Prairie snowmelt runoff sensitivity analysis to drought. *Joint Meeting of the Canadian Geophysical Union and the Canadian Society of Soil Science, Canadian Geophysical Union 32<sup>nd</sup> Annual Meeting*, Banff, Alberta, May 14-17, 2006.
- Fang, X., and J.W. Pomeroy, 2007: Prairie snowmelt runoff sensitivity analysis to drought. Drought Research Initiative Annual Workshop 2, Winnipeg, Manitoba, January 12, 2007.
- Fang, X., and J.W. Pomeroy, 2008: Spatial scale for modelling blowing snow. *Drought Research Initiative Annual Workshop 3*, Calgary, Alberta, January 17, 2008.
- Fang, X., J.W. Pomeroy, T. Brown, X. Guo, and C. Westbrook, 2009: Hydrological modelling of a Canadian Prairie wetland basin. *American Geophysical Union and Canadian Geophysical Union Joint Assembly*, Toronto, Canada, May 24-27, 2009.
- Gervais, M., P.R. Bullock, and R. Raddatz, 2008: Modeled evapotranspiration for spring wheat from the 2nd generation prairie agrometeorological model. *Canadian Society of Soil Science Annual Meeting*, Prince George, British Columbia, July 2008
- Gervais, M., and P.R. Bullock, 2008: Calibration of the 2nd generation Prairie agrometeorological model for spring wheat. *3rd Annual Drought Research Initiative Workshop*, January 17-18, Calgary, Alberta.
- Mkhabela, M., P.R. Bullock, and M.D. Gervais, 2009: Environmental indicators of agricultural drought impacts on spring wheat in Western Canada. *4th Annual Drought Research Initiative Workshop*, Regina, Saskatchewan, January 2009.
- Pomeroy, J.W., and X. Fang, 2007: Spatial scale for modelling blowing snow. American Geophysical Union 2007 Fall Meeting, San Francisco, California, December 10-14, 2007.