7. PUBLICATIONS

7.1 Submitted or Under Revision (Various)

Anisimov, O. et al. 2014. Chapter 28, Polar Regions (Arctic and Antarctica). In: Climate Change 2013: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. (to be released in 2014).

Bawden, A., Linton, H., Burn, D.H. and Prowse, T.D. 201x. Recent changes in patterns of western Canadian river flow and association with climatic drivers. *Hydrological Processes* (submitted.).

Bawden, A., Burn, D.H. and Prowse, T.D. 201x. A spatiotemporal analysis of hydrological trends in Athabasca River region, Canada. *Journal of Hydrology* (submitted).

Eum, H., Dibike, Y., Prowse, T. and Bonsal, B. 201x. Inter-comparison of high-resolution gridded climate data sets and their implication on hydrological model simulation over the Athabasca Watershed, Canada. *Hydrological Processes* (submitted).

Eum, H., Dibike, Y. and Prowse, T. 201x. Uncertainty in modelling the hydrologic responses of a large watershed: A case study of the Athabasca River Basin, Canada. *Hydrological Processes* (submitted).

Jarret, T., Prowse, T.D. and Smith, D.J. 201x. A 616-year reconstruction of May-July precipitation variability on southern Vancouver Island, British Columbia, Canada. *Dendrochronologia* (submitted).

Linton, H., Prowse, T., Dibike, Y. and Bonsal, B. 201x. Spatial and temporal analysis of hydroclimatic variables affecting streamflow in western Canada from 1950-2010. Hydrological Processes (submitted, HYP-13-0687).

Moquin, P.A., Mesquita, P.S., Wrona, F.J. and Prowse, T.D. 201x. Responses of benthic invertebrate communities to shoreline retrogressive thaw slumps in Arctic upland lakes. *Freshwater Science* (submitted).

- Callaghan, T.V., Johansson, M. Key, J., Prowse, T., Ananicheva, M. and Klepikov, A. 2011. Feedbacks and Interactions: From the cryosphere to the climate system. *Ambio* 40:75–86. DOI 10.1007/s13280-011-0215-8.
- Olsen, M.S., Callaghan, T.V., Reist, J.D., Reiersen, L.O.. Dahl-Jensen, D., Granskog, M.A., Goodison, B., Hovelsrud, G.K., Johansson, M., Kailenborn, R., Key, J., Klepikov, A., Meier, W., Overland, J.E., Prowse, T.D., Sharp, M., Vincent, M.F. and Walsh, H. M.S., 2011. The Changing Arctic Cryosphere and likely Consequences: an Overview. *Ambio* 40: 111-118.
- Dibike, Y., Prowse, T., Saloranta, T. and Ahmed R. 2011. Response of Northern Hemisphere lake-ice cover and lake-water thermal structure patterns to a changing climate. *Hydrological Processes*, **25**, 2942–2953; doi: 10.1002/hyp.8068.
- Dibike, Y., Prowse, T., Bonsal, B., de Rham, L. and Salronata, T. 2011. Simulation of North American Lake-ice Cover Characteristics under Contemporary and Future Climate Conditions. *International Journal of Climatology*, doi: 10.1002/joc.2300.
- Dibike, Y., Prowse, T., Shrestha, R. and Ahmed, R. 2011. Observed trends and future projections of precipitation and temperatures in the Lake Winnipeg Watershed. *Journal of Great Lakes Research*, doi:10.1016/j.jglr.2011.04.005.
- Kääb, A. and Prowse, T.D. 2011. Cold regions river flow observed from space. *Geophysical Research Letters*, 38, L08403, doi:10.1029/2011GL047022.
- Olsen, M.S., Callaghan, T., Reist, J., Reiersen, L.O., Ananicheva, M., Dahl-Jensen, D. Gerland, S/. Goodison, B., Granskog, M.A., Hovelsrud, G.K., Johansson, M., Kallenborn, R., Key, J., Klepikov, A., Macdonald, R., Meier, W., Overland, J.E., Poppel, B., Prowse, T., Rachold, V., Sharp, M. Steffen, K., van Oort, B., Vincent, W.F., Walsh, J. 2011. The changing Arctic cryosphere and likely consequences: an overview. *Ambio* 40:111–118. DOI 10.1007/s13280-011-0220-y.
- Prowse, T., Alfredsen, K., Beltaos, S., Bonsal, B., Duguay, C., Korhola, A., McNamara, J. Vincent, W.F., Vuglinsky, V. and Weyhenmeyer, G.A. 2011. Arctic freshwater ice and its climatic role. *Ambio* 40:46–52. DOI 10.1007/s13280-011-0214-9.
- Prowse, T., Alfredsen, K., Beltaos, S., Bonsal, B., Duguay, C., Korhola, A., McNamara, J., Pienitz R., Vincent, W.F., Vuglinsky, V. and Weyhenmeyer, G.A. 2011. Past and future changes in Arctic lake and river ice. *Ambio* 40:53–62. DOI 10.1007/s13280-011-0216-7.
- Prowse, T., Alfredsen, K., Beltaos, S., Bonsal, B., Bowden, W.B., Duguay, C., Korhola, A., McNamara, J. Vincent, W.F., Vuglinsky, V., Walter Anthony, K.M. and Weyhenmeyer, G.A. 2011. Effects of changes in Arctic river and lake ice. *Ambio* 40:63–74. DOI 10.1007/s13280-011-0217-6.

Shrestha, R.R., Dibike, Y.B. and Prowse, T.D. 2011. Modelling of climate-induced hydrologic changes in the Lake Winnipeg Watershed. *Journal of Great Lakes Research*, doi:10.1016/j.jglr.2011.02.004.

Vincent, W.F., Callaghan, T.V., Dahl-Jensen, D., Johansson, M., Kovacs, K.M., Michel, C., Prowse, T., Reist, J.D. and Sharp, M. 2011. Ecological implications of changes in the Arctic cryosphere. *Ambio* 40:87–99. DOI 10.1007/s13280-011-0218-5.

Bennett, K.E. and Prowse, T.D. 2010. Northern-Hemisphere Geography of Ice-Covered Rivers. *Hydrological Processes*, 24: 235-240.

Prowse, T.D. and Furgal, C. 2009. Northern Canada in a changing climate: major findings and conclusions. *Ambio*, 38(5): 290-292.

Prowse, T.D., Furgal, C., Bonsal, B.R. and Edwards, T.W.D. 2009. Climate conditions in northern Canada: Past and future. *Ambio*, 38(5): 257-265.

Prowse, T.D., Furgal, C., Bonsal, B.R.

Bonsal, B.R., Prowse, T.D., Duguay, C.R. and Lacroix, M.P. 2006. Impacts of large-scale teleconnections on freshwater-ice duration over Canada. *Journal of Hydrology*, 330: 340-353.

- Prowse, T.D., Wrona, F.J., Reist, J., Hobbie, J.E., Lévesque, L.M.J., and Vincent, W. 2006. General features of the Arctic relevant to climate change in freshwater ecosystems. *Ambio*, 35(7): 330-338.
- Prowse, T.D., Wrona, F.J., Reist, J., Gibson, J.J., Hobbie, J.E., Lévesque, L.M.J., and Vincent, W. 2006. Historical changes in arctic freshwater ecosytems. *Ambio*, 35(7): 339-346.
- Prowse, T.D., Wrona, F.J., Reist, J., Gibson, J.J., Hobbie, J.E., Lévesque, L.M.J., and Vincent, W. 2006. Climate change effects on hydroecology of arctic freshwater ecosystems. *Ambio*, 35(7): 347-358.
- Reist, J., Wrona, F.J., Prowse, T.D., Power, M., Dempson, J.B., Beamish, D., King, J.R., Carmichael, T.J. and Sawatsky, C.D. 2006. General effects of climate change on arctic fishes and fish populations. *Ambio*, 35(7): 370-380.
- Reist, J.D., Wrona, F.J., Prowse, T.D., Power, M., Dempson, J.B., King, J.R. and Beamish, R.J. 2006. An overview of effects of climate change on selected arctic freshwater and anadromous fishes. *Ambio*, 35(7): 381-387.
- Reist, J.D., Wrona, F.J., Prowse, T.D., Dempson, J.B., Power, M., Köck, G., Carmichael, T.J., Sawatsky, C.D., Lehtonen, H. and Tallman, R.F. 2006. Effects of climate change and UV radiation on fisheries for arctic freshwater and anadromous species. *Ambio*, 35(7): 402-410.
- Romolo, L.A., Prowse, T.D., Blair, D., Bonsal, B., Marsh, P. and Martz, L.W. 2006. The synoptic climate controls on hydrology in the upper reaches of the Peace River basin. Part I: Snow accumulation. *Hydrological Processes*, 20(19): 4097-4111.
- Romolo, L.A., Prowse, T.D., Blair, D., Bonsal, B., Marsh, P. and Martz, L.W. 2006. The synoptic climate controls on hydrology in the upper reaches of the Peace River basin. Part II: Snow ablation. *Hydrological Processe*, *s* 20(19): 4113-4129.
- Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Lévesque, L.M.J. and Vincent, W.F. 2006. Climate impacts on arctic freshwater ecosystems and fisheries: Background, rationale and approach of the Arctic Climate Impact Assessment (ACIA). *Ambio*, 35(7): 326-329.
- Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Lévesque, L.M.J. and Vincent, W.F. 2006. Climate change effects on aquatic biota, ecosystem structure and function. *Ambio* 35(7): 359-369.

- Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Lévesque, L.M.J., Macdonald, R.W. and Vincent, W.F. 2006. Effects of ultraviolet radiation and contaminant-related stressors on arctic freshwater ecosystems. *Ambio*, 35(7): 388-401.
- Wrona, F.J., Prowse, T.D., Reist, J.D., Hobbie, J.E., Lévesque, L.M.J. and Vincent, W.F. 2006. Key findings, science gaps and policy recommendations. *Ambio*, 35(7): 411-415.
- Bobba, A.G., Prowse, T.D., Diiwu, J.Y. and Milburn, D. 2005. Sensitivity of hydrological variables in the arctic watershed, Coppermine River, NWRI, Canada due to hypothetical climate change. Journal of Environmental Hydrology, 13, Paper 22: 1-14; http://www.hydroweb.com.
- Overpeck, J.T., Sturm, M., Francis, J.A., Perovich, D.K., Serreze, M.C., Benner, R., Carmack, E.C., Chapin III, F.S., Gerlach, S.C., Hamilton, L.C., Hinzman, L.D., Holland, M., Huntington, H.P., Key, J.R., Lin, J., Lloyd, A.H., MacDonald, G.M., McFadden, J., Noone, D., Prowse, T.D., Schlosser, P. and Vorosmarty, C. 2005. Arctic System on Trajectory to New State. *EOS* 86(34): 309-311.
- St. Amour, N.A., Gibson, J.J., Edwards, T.W.D., Prowse, T.D. and Pietroniro, A. 2005. Isotopic time-series partitioning of streamflow components in wetland-dominated catchments, lower Liard River Basin, Northwest Territories, Canada. *Hydrological Processes*, 19 (17): 3357-3381.
- Prowse, T.D. and Bonsal, B.R. 2004. Historical trends in river-ice break-up: A review. *Nordic Hydrology*, 35(4): 281-293.
- Bonsal, B.R., Prowse, T.D. and Pietroniro, A. 2003. An assessment of global climate model-simulated climate for the western cordillera of Canada (1961-90). *Hydrological Processes*, 17(18):3703-3716.
- Bonsal, B.R. and Prowse, T.D. 2003. Trends and variability in spring and autumn 0°C-isotherm dates over Canada. *Climatic Change*, 57:341-358.
- Flanagan, K., McCauley, E., Wrona, F. and Prowse, T. 2003. Climate change: the potential for latitudinal effects on algal biomass in aquatic ecosystems. *Canadian Journal of Fisheries and Aquatic Sciences* 60: 635-639.
- Prowse, T.D. and Culp, J.M. 2003. Ice breakup: a neglected factor in river ecology. *Canadian Journal of Civil Engineering*, 30:128-144.
- Gibson, J.J. and Prowse, T.D. 2002. Stable isotopes in river ice: identification of primary over-winter streamflow signals and their hydrological significance. *Hydrological Processes*, 16(4): 873-890.

Milburn, D. and Prowse, T.D. 2002. Under-ice hydraulics and the movement of cohesive sediments before river-ice breakup. *Hydrological Processes*, 16(4):823-834.

Pietroniro, A. and Prowse, T.D. 2002. Preface: Applications of remote sensing in hydrology. *Hydrological Processes*, 16(8): 1537-1541.

Prowse, T.D. and Beltaos, S. 2002. Climatic control of river-ice hydrology: a review. *Hydrological Processes*, 16(4): 805-822.

Prowse, T.D. and Carter, T. 2002. Significance of ice-induced hydraulic storage to spring runoff: a case study of the Mackenzie River. *Hydrological Processes*, 16(4): 779-788.

Prowse, T.D. and Ferrick M.G. 2002. Hydrology of ice-covered rivers and lakes: Scoping the subject. *Hydrological Processes*, 16(4): 759-762.

Prowse, T.D., Conly, F.M., Church, M., English, M.C. 2002. A review of hydroecological results of the "Northern River Basins Study", Canada: Part 1, Peace and Slave Rivers. *River Research and Application*, 18: 429-446.

Prowse, T.D. and Conly, F.M. 2002. A review of hydro-ecological studies of the "Northern River Basins Study", Canada: Part 2, Peace-Athabasca Delta. *River Research and Application*, 18: 447-460.

Prowse, T.D., Peters, D., Beltaos, S., Pietroniro, A., Romolo, L., Töyrä, J., and Leconte, R. 2002. Restoring ice-jam floodwater to a drying delta ecosystem. *Water International*, 27(1): 58-69.

Töyrä, J., Pietroniro, A., Martz, L.W. and Prowse, T.D. 2002. A multi-sensor approach to wetland flood monitoring. *Hydrological Processes*, 16(8): 1569-1581.

Beltaos, S. and Prowse, T.D. 2001. Climate impacts on extreme ice jam events in Canadian rivers. *Hydrological Sciences Journal*, 46(1): 157-181.

Gummer, Wm.D., Cash, K.J., Wrona, F.J. and Prowse, T.D. 2001. The Northern River Basins Study: context and design. *Journal of Aquatic Ecosystem Stress and Recovery*, 8(1): 7-16.

Leconte, R., Pietroniro, A., Peters, D.L. and Prowse, T.D. 2001. Effect of flow regulation and hydroclimatic conditions on the Peace-Athabasca Delta 1996 summer flood. *Regulated Rivers: Research & Management*, 17:51-65.

Peters, D.L and Prowse, T.D. 2001. Regulation effects on the lower Peace River, Canada. *Hydrological Processes*, 15(16): 3181-3194.

Prepas, E.E., Planas, D., Gibson, J.J., Vitt, D.H., Prowse, T.D., Dinsmore, W.P., Halsey, L.A., McEachern, P.M., Paquet, S., Scrimgeour, G.J., Tonn, W.M., Paszkowski, and Wolfstein, K., 2001. Landscape variables influencing nutrients and phytoplankton communities in Boreal Plain lakes of northern Alberta: a comparison of wetland- and upland-dominated catchments. *Canadian Journal of Fisheries and Aquatic Sciences*, 58: 1286-1299.

Prowse, T.D. 2001. River-ice ecology: Part A) Hydrologic, geomorphic and water-quality aspects. *Journal of Cold Regions Engineering*, 15.[Engineeri: 1-16..58-1.8.88TD0 Tc0 Tw[(L.A., T2 1

integration across scales. *Canadian Journal of Fisheries and Aquatic Sciences*, 55(Suppl.1):303-311.

Cunjak, R.A., Prowse, T.D. and Parrish, D.L. 1998. Atlantic salmon in winter; "the season of parr discontent". *Canadian Journal of Fisheries and Aquatic Sciences*, 55(Suppl.1):161-180.

Hamlin, L., Pietroniro, L., Prowse, T.D., Soulis, R. and Kouwen, N. 1998. Application of indexed snowmelt models to the lower Liard River valley. *Hydrological Processes*, Vol. 12 (10-11): 1641-1658.

Milburn, D. and Prowse, T.D. 1998. Sediment bound contaminants in a remote northern delta. *Nordic Hydrology*, Vol. 29(4/5): 397-414.

Prowse, T.D. and Conly, M. 1998. Effects of climatic variability and flow regulation on ice-jam flooding of a northern delta. *Hydrological Processes*, 12(10-11): 1589-1610.

Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1996. Evaporation from a small lake in the continental Arctic: mass balance, energy balance, and aerodynamic profile studies. *Nordic Hydrology*, 27(1/2):1-24.

Gibson, J.J., Prowse, T.D. and Edwards, T.W.D. 1996. Development and validation of an isotopic method for estimation of lake evaporation. *Hydrological Processes*, 10: 1369-1382.

Milburn, D. and Prowse, T.D. 1996. The effect of river-ice break-up on suspended sediment and select trace-element fluxes. *Nordic Hydrology*, 27(1/2): 69-84.

Pietroniro, A., Prowse, T.D., Hamlin, L., Kouwen, N. and Soulis, R. 1996. Application of a grouped response unit hydrologic model in a discontinuous permafrost region. *Hydrological Processes*, 10: 1245-1261.

Prowse, T.D. and Lalonde, V. 1996. Open-water and ice-jam flooding of a northern delta. *Nordic Hydrology*, 27(1/2): 85-100.

Prowse, T.D. and Demuth, M.N. 1996. Using ice to flood the Peace-Athabasca Delta, Canada. *Regulated Rivers*, 12: 447-457.

Prowse, T.D., Aitken, B., Demuth M.N. and Peterson, M. 1996. Strategies for restoring spring flooding to a drying northern delta. *Regulated Rivers*, 12: 237-250.

Lawford, R.G., Prowse, T.D., Hogg, W.D., Warkentin, A.A. and Pilon, P.J. 1995. Hydrometeorological aspects of flood hazards in Canada. *Atmosphere-Ocean*, 33(1): 303-328.

Moore, R.D. and Prowse, T.D. 1988. Snow Hydrology of the Waimakariri Catchment, South Island, New Zealand.

Prowse, T.D. 2011. Lake and River Ice in Canada. In: Changing Cold Environments, H. French and O. Slaymaker (eds.). John Wiley and Sons Inc. p. 163-181.

Prowse, T., Alfredsen, K., Beltaos, S., Bonsal, B., Duguay, C., Korhola, A., McNamara, J., Vincent, W., Vuglinsky, V., Weyhenmeyer, G., Walter Anthony, K., Bowden, B., Buzin, V., Dibike, Y., Gantner, N., Hinzman, L., Lia, L., Ouarda, T., Pientiz, R., Reist, J.D., Stickler, M., Weckström, J. and Wrona, F. 2011. Changing lake and river ice regimes: trends, effects, and implications. In: SWIPA, Snow, Water, Ice Permafrost in the

Wrona, F.J., Culp, J.M. and Prowse, T.D. 2009. Basin Management Approaches Used in a High-Latitude Northern Catchment - The Mackenzie River Basin. *In*: Handbook of Catchment Management, R. Ferrier and S.

- of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Perry, OF. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 653-685.
- Prowse, T.D., Bonsal, B., Duguay, C.R., Hessen, D.O. and Vuglinsky, V.S. 2007. Chapter 8: River and Lake Ice. In: Global Outlook for Ice & Snow. United Nations Environment Programme, DEW/0924/NA, available from Earthprint.com: 201-214.
- Prowse, T.D., Bøggild, C.E., Glazovsky, A.F., Hagen, J.O.M., Hinzman, L.D., Killingtveit, Å., Lettenmaier, D.P., Nelson, F.E., Rouse, W.R., Shiklomanov, I.A., Young, K.L. 2006. Terrestrial cryospheric & hydrologic processes and systems, Science Plan. Second International Conference on Arctic Research Planning II, The Arctic System in a Changing World, http://www.iasc.se/news/ICARP_II_Science_Plan_07.pdf.
- Culp, J.C., Prowse, T.D. and Luiker, E.A. 2005. The Mackenzie River. In: *Rivers of North America*. A.C. Benke and C.E. Cushing (Eds), Elsevier, p. 805-850..
- Prowse, T.D. 2005. River-ice hydrology. *Encyclopedia of Hydrological Sciences*, M.G. Anderson (Ed.), John Wiley and Sons Ltd., West Sussex, England, Vol. 4: 2657-2677.
- Walsh, J., Anisimov, O., Hagen, J.O., Jakobsson, T., Oerlemans, J., Prowse, T.D., Romanovsky, V., Savelieva, N., Serreze, M., Shiklomanov, A., Shiklomanov, I. and Solomon, S. 2005. Crysophere and Hydrology. Chapter 6 in Arctic Climate Impact Assessment, Cambridge University Press, Cambridge, UK, p. 183-242.
- Weller, G., Bush, E., Callaghan, T.V., Corell, R., Fox, S., Furgal, C., Hoel, A.H., Huntington, H., Källén, E., Kattsov, V.M., Klein, D.R., Loeng, H., Martello, M.L., MacCrackern, M., Nuttall, M., Prowse, T.D., Reiersen, L-0., Reist, J., Tanskanen, A., Walsh, J.E., Weatherhead, B. and Wrona, F.J. 2005. Summary and Synthesis of the ACIA. Chapter 19 in Arctic Climate Impact Assessment, Cambridge University Press, Cambridge, UK, p. 989-1020.
- Wrona, F.J., Prowse, T.D., Reist, J.D., Beamish, R., Gibson, J.J., Hobbie, J., Jeppesen, E., King, J., Koeck, G., Korhola, A., Levesque, L., Macdonald, R., Power, M., Skvortsov, V., and Vincent, W. 2005. Chapter 8: Freshwater Ecosystems and Fisheries. Arctic Climate Impact Assessment, Cambridge University Press, Cambridge, UK, p. 353-452.
- Brown, R.D., Demuth, M.N., Goodison, B.E., Marsh, P., Prowse, T.D., Smith S.L. and Woo, M.K. 2004. Climate variability & change cryosphere. In: Threats to Water Availability in Canada. National Water Research Institute, Environment Canada, NWRI Scientific Assessment Report No. 3, p.107-116.

Prowse, T.D., Wrona, F.J. and Power, G. 2004. Dams, reservoirs and flow regulation. In: Threats to Water Availability in Canada. National Water Research Institute, Environment Canada, NWRI Scientific Assessment Report No. 3, p. 9-18.

Anisimov, O., Fitzharris, B., Hagen, J.O., Jeffries, R., Nelson, F., Prowse, T.D., and Vaughan, D., 2001. Polar Regions (Arctic and Antarctic). Chapter 16, In: Climate Change 2001, Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK, p. 801-841.

Gitay, H., Brown, S., Easterling, W., Jallow, B., Antle, J., Apps, M., Beamish, R., Chapin, T., Cramer, W., Frangi, J., Laine, J., Erda, L., Magnuson, J., Noble, I., Price, J., Prowse, T., Sirotenko, O., Root, T., Schulze, E.-D., Sohngen, B., and Sousssana, J.-F. 2001. Ecosystems and their goods and services. Chapter 5. In: Climate Change 2001, Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK, p. 235-342.

Beltaos, S. and Prowse, T.D. 2000. Climate impacts on extreme ice jam events in Canadian rivers. In: Contributions to IHP-V by Canadian Experts, UNESCO-IHP-V Technical Documents in Hydrology, No. 33, p. 22-46.

Prowse, T.D. 2000. *River Ice Ecology*. National Water Research Institute, Environment Canada. Monograph, 64p.

Prowse, T.D. and Flegg, P.O. 2000. Arctic River Flow: A review of contributing areas. In: E.L. Lewis, E.P. Jones, P. Lemke, T.D. Prowse and P. Wadhams (eds.), *The Freshwater Budget of the Arctic Ocean*, Kluwer Academic Publishers, Dordrecht, p. 269-280.

Milburn, D., MacDonald, D.D., Prowse, T.D., and Culp, J.M. 1999. Ecosystem Maintenance Indicators for the Slave River Delta, Northwest Territories. In: *Environmental Indices, Systems Analysis Approach*, Pykh, Y.A., Hyatt, D.E. and Lenz, R.J.M. (Editors), EOLSS Publishers Co. Ltd., Oxford, U.K., p. 329-348.

Milburn, D. and Prowse, T.D. 1998a. Observations on the role of an ice cover in sediment deposition in a northern delta. In: *Ice in Surface Waters*, H.T. Shen (ed.), IAHR-Ice, Potsdam, New York, p. 189-196.

Prowse, T.D. 1996. Chapter 2: River ice processes. In: *A Primer on Hydraulics of Ice Covered Rivers*, Davar, K.S., Beltaos, S., and Pratte, B. (Editors). Canadian Committee on River Ice Processes and the Environment, Hydrology Section, Canadian Geophysical Union, p. 15-37.

Prowse, T.D. and Conly, M. with Aitken, B., Andres, D. Chabaylo, R., Chen, X., Church, M., English, M.C., Hey, M., Hicks, F., Hill, B., Keller, R., MacLock, B., McLoughlin, N., North, M., Ormson, R., Sapach, R., Stone, M.A., Styranko, G., Walder, G., Wolfe, P.M., and Yasmin, N.(,)]TlP 12 108 88.5601 Tm()Tj0eR05Andres, D. Cheeone

Prowse, T.D. and Scrimgeour, G.J. 1993. Section 2.7:Effects of ice on substrate. In: *Environmental Aspects of River Ice*. T.D. Prowse and N.C. Gridley (Editors), NHRI Science Report No. 5, National Hydrology Research Institute, Environment Canada, p. 55-60

Beltaos, S., Gerard, R., Petryk, S. and Prowse, T.D. 1990. Working Group on River Ice

Prowse, T.D. (ed.) 1997. Special Issue: Canadian Geophysical Union. *Hydrological Processes*, 11(13): 1683-1775.

Prowse, T.D. (ed.) 1996. Canadian Geophysical Union Issue. *Hydrological Processes*, 10(10):1245-1426.

Prowse, T.D. (ed.) 1994. *Proceedings of Workshop on Environmental Aspects of River Ice*. NHRI Symposium Series No. 12, National Hydrology Research Institute, Environment Canada, 390 pp.

Prowse, T.D., Ommanney, C.S.L. and Watson, L.E. (eds) 1994. *Northern Hydrology: International Perspectives*, Environment Canada, NHRI Science Report No. 3, 215 pp.

Prowse, T.D. (ed.) 1993. Selected Papers from 9th Northern Research Basins Symposium/Workshop. *Nordic Hydrology*, 24(2/3): 65-224.

Prowse, T.D. and Gridley, N.C. (eds) 1993. *Environmental Aspects of River Ice*. NHRI Science Report No. 5, National Hydrology Research Institute, Environment Canada, 155 pp.

Prowse, T.D. and Ommanney, C.S.L. and Ulmer, K. (eds) 1993. *Proceedings of the Ninth International Northern Research Basins Symposium Workshop.* NHRI Symposium Series No. 10, National Hydrology Research Institute, Environment Canada, Vol. 1 and 2, 918 pp.

Prowse, T.D. and Ommanney, C.S.L. (eds) 1991. *Canadian Hydrology, Selected Perspectives*. NHRI Symposium No. 6, National Hydrology Research Institute, Environment Canada, 532 pp.

Prowse, T.D. and C.S.L. Ommanney, C.S.L. (eds) 1990. *Northern hydrology: Canadian Perspectives*. NHRI Science Report No. 1, National Hydrology Research Institute, Environment Canada, 324 pp.

7.5 Proceedings-Refereed

Dibike, Y., Prowse, T., Saloranta, T. and Ahmed, R. 2010. Evolution of Northern Hemisphere lake-ice characteristics and thermal structures in a changing climate. In: 20th International Association for Hydraulic Research (IAHR), International Symposium on Ice, Lahti, Finland, June 14 to 18, 2010, (in press).

Prowse, T.D. and Brown, K. 2009. Hydro-ecological effects of changing Arctic river and lake ice covers: a review. Proc. 17th Northern Research Basins, International Symposium and Workshop, 12-18 August, Iaquit-Pangnirtung-Kuujjuaq, Canada, Eds. K.L. Young and W. Quinton, York University, York, Canada, p. 249-260.

Mesquita, P.S., F.J. Wrona and T.D. Prowse. 2008. Effects of retrogressive thaw slumps on sediment chemistry, submerged macrophyte biomass, and invertebrate abundance of upland tundra lakes.

Gibson, J. and Prowse, T.D. 1998. Water balance trends across northern treeline inferred from isotopic enrichment in lakes. IAEA/UNESCO Symposium on the Use of Isotopes in Water Resources Management, Vienna, Austria, April 1997. IAEA-SM-349/22, p. 204-224.

Pietroniro, A., Prowse, T.D. and Peters, D.L. 1997. Environmental monitoring of an inland freshwater delta. Proceedings of International Conference on Remote Sensing of Marine and Coastal Environments, March 17-19, 1997, Vol 2., pp 287-303.

Milburn, D. and Prowse, T.D. 1996. Open-water versus under-ice rating curves for suspended sediment: an example from a large northern river. In: *Proceedings of the IAHR-Ice Symposium*, Vol. III, Beijing, China, p. 873-880.

Prowse, T.D. 1996. Significance of river ice to environmental processes and aquatic systems. (invited lecture). In: *Proceedings of the IAHR-Ice Symposium*, Vol. III, Beijing, China, p. 865-872.

Conly, F.M. and Prowse, T.D. 1996. Hydrologic response to freeze-up on large northern rivers (case study). Proceedings, Workshop on River Ice, Kamloops, British Columbia, p. 23-42.

Gibson, J.J., Prowse, T.D. and Edwards, T.W.D. 1995. Development and validation of an isotopic method for estimation of lake evaporation. *Canadian Geophysical Union*, *Hydrology Conference*, Banff, Alberta, Winner of Student Paper Award: D.M. Gray Award, 10 p. (published abstract of 10 p. paper only), p. 109.

Prowse, T.D., Aitken, B., Demuth M.N. and Peterson, M. 1994. Attempts to restore a delta ecosystem using hydraulic structures and artificial ice jams. Proceedings of the 1st International Symposium on Habitat-Hydraulics, IAHR, Trondheim, Norway, p. 430-444.

Prowse, T.D. 1993. Suspended sediment concentration during river ice break-up. *Proceedings of the 49th Eastern Snow Conference*, Oswego, New York, 3-4 June 1992, p. 263-267.

Prowse, T.D., Demuth M.N. and Peterson, M. 1993. Proposed artificial river ice damming to induce flooding of a delta ecosystem. *Proceedings of the 50th Eastern Snow Conference*, Quebec City, Quebec, p. 331-339.

Demuth, M.N. and Prowse, T.D. 1992. The Borehole Jack Indentor Test, Recent advances at NHRI. *Proceedings of the 49th Eastern Snow Conference*, Oswego, New York, 3-4 June 1992, p. 247-253.

Demuth, M.N. and Prowse, T.D. 1992. Estimating the effective strain modulus of deteriorating freshwater ice using the borehole jack indentor. In: *Proceedings of the IAHR-Ice Symposium*, Banff, Alberta, 15-19 June 1992, p. 828-840.

Prowse, T.D. and Demuth, M.N. 1992. Application of the borehole jack indentor in river ice break-up research. In: *Proceedings of the IAHR-Ice Symposium*, Banff, Alberta, 15-19 June 1992, p. 787-801.

Demuth, M.N. and Prowse, T.D. 1991. A physical model of ice overthrust during the

Shrestha, R.R, Dibike, Y., Prowse, T.D. (2009). Application of SWAT in Hydrologic and Nutrient Transport Modelling of the Lake Winnipeg Watershed, in Twigg, K., Swyden, C., Srinivasan, R. (Eds.), 2009 International SWAT Conference, Boulder, Colorado. Texas Water Resources Institute technical Report no. 356. 243-251.

Goulding, H. and Prowse, T. 2008. Spatial and temporal patterns of break-up and ice jam flooding in the Mackenzie Delta, inferred from historical hydrometric data and remotely sensed imagery. Proc. 19th IAHR International Symposium on Ice, 6-11 July, Vancovuer, Canada, Ed. M. Jasek, p. 241-252.

Prowse, T.D., de Rham, L. and Dibike, Y. 2008. Predicting lake and river ice: modelling of historical and future conditions. World Climate Research Project, Climate and Cryosphere Project Office, Tromso, Norway, *Ice and Climate News* 10: 8-9.

Beltaos, S. Prowse, T., Bonsal, B., Carter, T. MacKay, R., Romolo, L., Pietroniro, A. and Toth, B., 2006. Climate impacts on ice-jam floods in northern rivers with specific focus on the hydroelectric industry in western Canada. Proceedings of the Mackenzie GEWEX Study (MAGS): Proceedings of the Final (11th) Annual Scientific Meeting, P. di Cenzo (ed.), 22-25 November 2005, Ottawa, Canada, Mackenzie GEWEX special publication p. 463 -475.

Bennet, K. and Prowse, T.D. 2005. Defining the geography of ice-covered rivers. Environment Canada, National Water Research Institute, Burlington/Saskatoon, NWRI Contribution No. 05-305.

Bonsal, B.R., Prowse, T.D., Duguay, C.R., and Lacroix, M.P. 2005. Impacts of large-scale teleconnections on river-ice duration over Canada. 13th Workshop on the Hydraulics of Ice Covered Rivers, September 5-16, Hanover, NH (in press).

Duguay, C.R., Prowse, T.D., Bonsal, B., Brown, R.D., Lacroix, M. and Ménard, P. 2005. Recent trends in Canadian lake ice covers. Proceedings of the 61st

Kane, D.L., Yang, D., Prowse, T., Shiklomanov, I., Marsh, P., Ohata, T., Killingtveit, Å. 2005. Syntheis of high latitude hydrologic water balances. Proceedings: 15th International Northern Research Basins Symposium and Workshop, Luleå to Kvikkjokk, Sweden, 29 Aug – 2 Sept 2005.

Prowse, T.D., Bøggild, C.E., Glazovsky, A.F., Hagen, J.O.M., Hinzman, L.D., Killingtveit, Å., Lettenmaier, D.P., Nelson, F.E., Rouse, W.R., Shiklomanov, I.A., Young, K.L. 2005. Terrestrial cryospheric & hydrologic processes and systems. Second International Conference on Arctic Research Planning II, The Arctic System in a Changing World, Conference Proceedings, Copenhagen, Denmark, 10-12 November 2005, p. 20-21.

Lacroix, M.P., Prowse, T.D., Bonsal, B.R., Duguay, C.R. and Ménard, P. 2005. River ice trends in Canada. 13th Workshop on the Hydraulics of Ice Covered Rivers, Canadian Geophysical Union, Committee on River Ice Processes and the Environment, September 5-16, Hanover, NH, CD-Rom: 41-55.

Beltaos, Prowse, T., Bonsal, B. Pietroniro, A., Carter, T., Mackay, R., Romolo, L., and Toth, B. 2004. Climate impacts on ice-jam floods in northern rivers with specific focus on the hydroelectric industry in Western Canada. Proceedings of the 9th Annual Scientific Meeting of the Mackenzie GEWEX Study (MAGS), held at Montreal, November 12-14, 2003 (edited by Peter di Cenzo), Saskatoon, Canada, 115-123.

Duguay, C.R., Prowse, T.D., Bonsal, B.R., and Lacroix, M.P. 2004. Recent trends in Canadian lake ice covers. Proceedings, 61st Annual Eastern Snow Conference, Portland, ME, June 9-11, 2004.

Prowse, T.D., Beltaos, S., Bonsal, B., Carter, T., English, M.C., Gardner, T., Gibson, J.J., Peters, D.L., Romolo, L., 2004. Hydro-climatic impacts affecting the Peace-Athabasca-Slave catchments and deltas, In: Environment Canada, Northern Rivers Ecosystem Initiative: Collective Findings (CD ROM). Compiled by F.M. Conly, Saskatoon, SK, 2004. (With Alberta Environment), pp.1-44.

Pietroniro, A., Gibson, JJ., Wassenar, L., Koehler, G. and Prowse, T.D. 2003. Isotope tracing for process studies and water cycle model developments in the Mackenzie Basin, Final report 2003. Technical report for the IAEA Isotope Hydrology Section, Vienna, under Contract #12042, 24 pp.

Milburn, D., Prowse, T. and Bonsal, B.R. 2003. Effects of climate variability and the ice cycle of northern rivers. Northern Research Basins, 14th International Symposium and Workshop, August 2003, Kangerlussuaq/Sdr. Strømfjord, Greenland. Web publication: "http://www.geogr.ku.dk/projects/nrb14/proceedings.htm"

Prowse, T.D. and Bonsal, B.R. 2003. Historical trends in river-ice break-up: A review. Northern Research Basins, 14th International Symposium and Workshop, August 2003, Kangerlussuaq/Sdr. Strømfjord, Greenland. Web publication: "http://www.geogr.ku.dk/projects/nrb14/proceedings.htm"

Beltaos, S., Prowse, T., Bonsal, B., Pietroniro, A., Carter, T., Mackay, R., Romolo, L. and Toth, B. 2003. Climate impacts on ice-jams floods in northern rivers with specific focus on the hydroelectric industry in western Canada. Mackenzie GEWEX Study Progress Report, 27 October 2003.

Gibson, J.J., Prowse, T.D., Pietroniro, A., Wassenaar, L., and Koehler, G. 2003. Isotope tracing of water balance and climatic variability along the Mackenzie River, *Isotope hydrology and integrated water resources management*, 40th Anniversary International Symposium, 19-23 May 2003, IAEA, Vienna Austria.

Beltaos, S., Prowse, T.D. and Pietroniro, A. 2002. Climate impacts on ice-jam floods in northern rivers with special focus on the hydroelectric industry in Western Canada. Proceedings of the 7th Mackenzie Annual Scientific Meeting of the Mackenzie GEWEX Study (MAGS), November 7-9, 2001 (edited by P. di Cenzo), Hamilton, ON, p. 108-114.

Pietroniro, A., Conly, M., Mackay, M., Soulis, E.D., Kouwen, N., Leconte, R., Bullas, J., Beltaos, S., Prowse, T.D., Bonsal, B., Martz, L. and Peters, D.L. 2002. Evaluation of ecosensitive operational strategies for the WAC Bennett dam relative to hydro-climatic relationships affecting northern deltas. Proceedings of the 7th Mackenzie Annual Scientific Meeting of the Mackenzie GEWEX Study (MAGS), November 7-9, 2001 (edited by P. di Cenzo), Hamilton, ON, p. 146-151.

Pietroniro, A. Leconte, R. Peters, D.L. and Prowse, T.D. 2001. Application of a hydrodynamic model in a freshwater delta using remote sensing. p. 519-525. *In* M. Owe, K. Brubaker, J. Ritchie and A. Rango (eds.), Proceedings of the Remote Sensing and Hydrology 2000, IAHS Publ. 267, Santa Fe, NM, U.S.A..

Pietroniro, A., Quinton, W., Hayashi, M., Gibson, J.J., Prowse, T.D. and Soulis, E.D. 2001. Assessment of global land-cover data for atmospheric and hydrologic model applications in the Mackenzie Basin, Canada. 334-365. *In* G.S. Strong (ed.) Phase 1: Final Reports and Proceedings, 6th Scientific Workshop, The Mackenzie GEWEX Study (MAGS), 15-17 November, 2000, Saskatoon, SK.

Prowse, T.D., Buttle, J.M., Dillon, P.J., English, M.C., Marsh, P., Smol, J.P. and Wrona, F.J. 2001. Impacts of dams/diversions and climate change. In: Threats to Sources of Drinking Water and Aquatic Ecosystem Health in Canada. NWRI Scientific Assessment Report no. 1, National Water Research Institute, Environment Canada, p. 69-72.

Conly, M. and Prowse, T.D. 1998. Temporal changes to the ice regime of a large cold

Dalton, A., Pietroniro, A., Prowse, T.D. and Jorden, S. 1996. Digital elevation model generation in a low-relief, inland delta environment using multiple data sources. Proceedings of the 26th Symposium on Remote Sensing of Environment, and 18th Annual Symposium of the Canadian Remote Sensing Society, March 25-29, 1996, Vancouver, Canada, p. 494-497.

Demuth, M.N., Hicks, F.E., Prowse, T.D. and McKay, K. 1996. A numerical modelling analysis of ice jam flooding on the Peace/Slave River, Peace-Athabasca Delta. Peace-Athabasca Delta Technical Studies Report, 34 pp. + figures.

Pietroniro, A., Prowse, T.D. and Demuth, M. 1996. Mapping areal extent of lakes and perched basins in the Peace-Athabasca Delta. Proceedings of the 26th Symposium on Remote Sensing of Environment, and 18th Annual Symposium of the Canadian Remote Sensing Society, March 25-29, 1996, Vancouver, Canada, p. 468-471.

Pietroniro, A., Prowse, T.D. and Jorden, S. 1996. Generating a spatial and temporal database for the Peace-Athabasca study region. In: Peace-Athabasca Delta Technical Studies, Appendix 1. Wood Buffalo National Park, Parks Canada, Fort Smith, Canada. Also as NHRI Contribution No. CS-96004, 31pp + appendices.

Prowse, T.D. 1996. Climate change effects on permafrost, freshwater ice and glaciers. Invited paper to: Ecosystem Effects of Atmospheric Change Meeting, Environment Canada, March 5-6, Pointe Claire, Quebec, p. 105-136.

Prowse, T.D. and Watson, L. 1996. Environmental Conservation Program, Overview of Current Northern Research. National Hydrology Research Institute, Environment Canada for Environmental Conservation Program.

Prowse, T.D., Conly, M. and Lalonde, V. 1996. Hydrometeorological conditions controlling ice-jam floods, Peace River near the Peace-Athabasca Delta. Northern River Basins Study Project Report No. 103, NRBS Edmonton, Canada, 66 pp + appendices. Also published by: Peace-Athabasca Delta Technical Studies.

Prowse, T.D., Peters, D.L. and Marsh, P. 1996. Modelling the water balance of Peace-Athabasca Delta perched basins. Peace-Athabasca Delta Technical Studies Report, 72 pp. + appendices.

Gibson, J.J., Edwards, T.W.D., and Prowse, T.D., 1995. Stable isotope mass balance of lakes and mine-tailings ponds in the permafrost region of Canada. IAEA/UNESCO Symposium on the Use of Isotopes in Water Resources Management, Vienna, Austria, 20-24 March 1995. IAEA-SM-336/49P.

Pietroniro, A., Prowse, T.D. and Lalonde, V. 1995. Modelling of spring freshet in a muskeg-wetland regime using LANDSAT-TM. *Proceedings of 2nd International*

Workshop on Application of Remote Sensing in Hydrology, Saskatoon, October 1994, p. 275-285.

Pietroniro, A., Prowse, T.D., Marsh, P. and Pomeroy, J. 1995. Classification of hydrologically significant land cover type in permafrost basins. Proceedings, *17th Canadian Symposium on Remote Sensing*, Saskatoon, June, 1995, p. 35-40.

Timoney, K., Peterson, M., Fargey, P., Prowse, T.D. and Wein, R. 1995. Spring ice-jam flooding of the Peace-Athabasca Delta: Preliminary evidence of a climatic oscillation. *Proceedings of the Symposium on Climate, Landscape and Vegetation Change in the Canadian Prairie Provinces*, Edmonton, May 8-10, p. 85-96.

Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1994. Evaporation from a small lake in the continental Arctic: mass balance, energy balance, and aerodynamic profile studies. *Proceedings of the 10th Northern Research Basin Symposium/Workshop*, Spitsbergen, Norway; K. Sand and A. Killintveit (Editors), p. 182-200.

Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1994. Evaporation in the North: Overview of quantitative studies using stable isotopes. Mackenzie Basin Impact Study Interim Report No. 2, Environment Canada, *Proceedings of 6th Biennial AES/DIAND Meeting on Northern Climate and Mid Study Workshop of the Mackenzie Basin Impact Study*, Yellowknife, Canada, p. 138-150.

Milburn, D. and Prowse, T.D. 1994. Observations on sediment chemistry interactions during northern river breakup. *Proceedings of Workshop on Environmental Aspects of River Ice*, Saskatoon, Canada, T.D. Prowse (Editor), NHRI Symposium Series No. 12, p. 21-41.

Milburn, D. and Prowse, T.D. 1994. The significance of suspended sediment and trace-element fluxes during northern river-ice break-up. *Proceedings of the 10th Northern Research Basin Symposium/Workshop*, Spitsbergen, Norway; K. Sand and A. Killintveit (Editors), p. 144-165.

Prowse, T.D. 1994. Canada. Report on snow and ice research in Canada. *ICE*, No. 2, p. 6-19.

Prowse, T.D. and Lalonde, V. 1994. The nature of flooding controlling a northern delta ecosystem. *Proceedings of the 10th Northern Research Basins Symposium Workshop*, Spitsbergen; Norway, K. Sand and A. Killintveit (Editors), p. 398-417.

Demuth, M.N. and Prowse, T.D. 1993. Profile properties of deteriorating columnar ice: Implications for modelling ice-cover flexural failure. *Proceedings of the 6th Workshop on the Hydraulics of River Ice*, Ottawa, 23-25 October 1991, p. 165-182.

Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1993. Runoff pathways and flow-contributing areas in a high boreal wetland, Upper Mackenzie Valley, Northwest Territories, Canada. *Proceedings of the Ninth International Northern Research Basins Symposium Workshop*, T.D. Prowse, C.S.L. Ommanney and K. Ulmer (Editors), Whitehorse YT to Inuvik NWT, 17-21 August 1992, NHRI Symposium Series No. 10, p. 139-154.

Gibson, J.J., Edwards, T.W.D., Bursey, G.G. and Prowse, T.D. 1993. Stable isotope estimates of evaporation from two catchments in Northern Canada.

(Editors), Whitehorse YT to Inuvik NWT, 17-21 August 1992, NHRI Symposium Series No. 10, p. 469-488.

Prowse, T.D., Demuth M.N. and Chew, H.A.M. 1990. Changes in the flexural strength of ice under radiation decay. *Proceedings of the 8th Northern Research Basins Symposium/Workshop*, Abisko, Sweden, March 26-30.

Prowse, T.D. and Demuth M.N. 1989. Failure modes observed during river ice breakup. *Proceedings of the 46th Eastern Snow Conference*, Quebec City, Quebec, p. 237-241.

Prowse, T.D., Beltaos, S., Burrell, B., Tang P. and Dublin, J. 1989. Breakup of the Nashwaak River, New Brunswick. *Proceedings of the 46th Eastern Snow Conference*, Quebec City, Quebec, p. 142-155.

Demuth, M.N. and Prowse, T.D. 1989. A hydraulically actuated test frame for the field determination of ice flexural properties. *Proceedings of the 46th Eastern Snow Conference*, Quebec City, Quebec, p. 242-246.

Prowse, T.D. 1989. Ice break-up on northern rivers: The Liard as an example. In: *Northern Lakes and Rivers* (Ed: W.C. Mackay), Boreal Institute for Northern Studies, Occasional Publication No. 22, p. 24-42. Also presented at the Knowing the North Conference, November 20-22, 1986, Edmonton, Alberta.

Prowse, T.D. 1989. Field Determination of ice jam porosity: Discussion and Reply. *Proceedings of the 9th International Symposium on Ice*, IAHR, Sapporo, Japan, Vol. 3, p. 275-277.

Demuth, M.N. and Prowse, T.D. 1988. In situ testing of river-ice strength using a hydraulic borehole jack.in river ice strength. *Proceedings of the 45th Eastern Snow Conference*, Lake Placid, New York, p. 181-185.

Prowse, T.D. and Demuth, M.N. and Onclin, C.R. 1988. Using the borehole jack to determine changes in river ice strength. *Proceedings of the 5th Workshop on Hydraulics of River Ice/Ice Jams*, Winnipeg, Manitoba, p. 283-303.

Prowse, T.D., Demuth, M.N. and Onclin, C.R. 1988. Strength and energy balance of decaying river ice. *Proceedings of the 7th Northern Research Basins*, Ilulissat, Greenland. p. 293-301.

Adams, W.P., Prowse, T.D. and Granberg, H. 1987. Observations on floating snowpacks: lakes, rivers and the sea. *Proceedings of the Snow Property Measurement Workshop*, Lake Louise, Alberta, April 1985, NRC Technical Memorandum 140, p. 313-346.

Prowse, T.D. 1987. The albedo of break-up ice covers. *Proceedings of the 44th Eastern Snow Conference*, Fredericton, New Brunswick, p. 197-202.

Prowse, T.D. and Onclin, C.R. 1987. Timing and duration of river ice break-up. *Proceedings of the 44th Eastern Snow Conference*, Fredericton, New Brunswick, p. 192-196.

Prowse, T.D. 1987. Summary on Session IV: Hydrometeorology. *Proceedings of Conference on Water Research Themes*. Saskatchewan Branch, Canadian Water Resources Association and Water Studies Institute, p. 187-188.

Prowse, T.D. 1986. Recommendations for site-specific observations of river ice. *Proceedings of the 42nd Eastern Snow Conference*, Montreal, Quebec, p. 111-125.

Prowse, T.D. 1986. River ice monitoring. *Proceedings of the 6th Northern Research Basins Symposium*, Houghton, Michigan, p. 69-82.

Prowse, T.D., Anderson, J.C. and Smith, R.L. 1986. Discharge measurement during river ice break-up. *Proceedings of the 43rd Eastern Snow Conference*, Hanover, New Hampshire, 55-69.

Prowse, T.D. and Marsh, P. 1986. Hydrothermal decay of ice jams. *Proceedings of the* 42nd Eastern Snow Conference, Montreal, Quebec, p. 272-276.

Prowse T.D. 1986. 1985 breakup and ice jam observations, Liard and Mackenzie Rivers near Fort Simpson, N.W.T. National Hydrology Research Institute, Environment Canada, report for Water Resources Division, Department of Indian Affairs and Northern Development, 38 pp.

Adams, W.P. and Prowse, T.D. with M.A. Bilello, E. Eliassen, S. Freysteinsson, O.Laasanen, T. Pangburn, B. Raab, E. Tesaker and Tvede, A. 1986. Techniques for measurement of snow and ice on freshwater in nordic countries. *Proceedings of the 6th Northern Research Basins Symposium*, Houghton, Michigan, p. 133-182.

Sherstone, D.A., Prowse, T.D. and Gross, H. 1986. Hot-wire and conductivity type gauges for ice thickness determinations: Mackenzie Delta, Northwest Territories. *Proceedings of the 4th Workshop on Hydraulics of River Ice*, Montreal, Quebec, June 19-20 1986, p. B-1.1-B1.25.

Sherstone, D.A., Prowse, T.D. and Gross, H. 1986. The development and use of hot-wire and conductivity type ice measurement gauges for determination of ice thickness in Arctic rivers. *Proceedings of the Cold Regions Hydrology Symposium*, American Water Resources Association, Fairbanks Alaska, July 22-25 1986, p.121-129.

Prowse, T.D. 1985. *Hydrometeorologic conditions prevailing during the 1984 river ice breakup, Fort Simpson Region, N.W.T.* National Hydrology Research Institute, Environment Canada, report for Water Resources Division, Department of Indian Affairs and Northern Development, 35 pp.

Prowse, T.D. and Anderson, J.C. 1984. A field survey form for monitoring ice conditions on lakes and rivers. *Proceedings of the 3rd Workshop on the Hydraulics of River Ice*, Fredericton, New Brunswick, p. 425-430.

Prowse, T.D. 1984. Liard and Mackenzie River ice break-up, Fort Simpson region, N.W.T., 1983.

7.7 Published Abstracts/Presented Papers/Talks

Prowse, T.D. 2009. Development and climate stressors on the hydr-ecology of the Mackenzie River Basin. Les grands fleuves vont à la mer, dans le cadre des Vingt-deuxièmes Entretriends du Centre Jacques Cartier. 30 November et 01 Decémbre, 2009, Lyon, France.

de Rham, L.P., Prowse, T.D., Beltaos, S. and Bonsal, B.R. 2009. Hydrology and climatology of the spring river-ice break-up, Mackenzie River Basin, Canada. Poster. Environment Canada Science and Technology Forum. April 28-29, 2009. Victoria, BC

Goulding, H. and Prowse, T.D. 2007.

Assessing the role of hydroclimatic controls on the occurrence of extreme hydrological events in the Mackenzie Delta, N.W.T. Poster at the 8th International ACUNS Student Conference on Northern Studies. Saskatoon, SK. Oct 18-21.

Lévesque, L.M. and Prowse T.D. 2006. Future climate change and potential impacts on permafrost and water resources in Nunavut. Abstracts of the 30thth Scientific Meeting of the Canadian Geophysical Union, 10-14 May, Banff, AB, Canada.

Peters, D.L., Prowse, T.D., Wrona, F.J., Thompson, M.S. and Kokelj, S.V. 2006. Sensitivities of high-latitude lakes to climatic and development disturbances: preliminary hydrology results. Abstracts of the 30th Scientific Meeting of the Canadian Geophysical Union, 10-14 May, Banff, AB, Canada.

Prowse, T.D. 2006. Invited talk: Vulnerability of Freshwater Ice. Vulnerability of Cryospheric and Socio-Economic Systems Workshop, 26-28 Feb. 2006, Peter Wall Institute, University of British Columbia, Vancouver, Canada.

Prowse, T.D., Bonsal, B.R. and Lacroix, M.P. 2006. Invited talk: Key trends in river ice regimes. Climate Changes and Hydropower Workshop, 2-3 March 2006, Winnipeg, Canada.

Reist, J.D., Wrona, F.J. and Prowse, T.D. 2006. Climate change impacts on arctic freshwater ecosytems and fisheries – ACIA Chapter 8. 59th Canadian Conference for Fisheries Research, 5-7 January 2006, Calgary, AB, Canada.

Furgal, C. and Prowse, T. 2005. Assessing Climate Impacts and Adaptation in the Canadian North: A northern view for the National Climate Assessment. ArcticNet Science Conference, Banff, AB, Canada, December 12-14.

Peters, D.L., Beltaos, S., Bonsal, B.R., Kranadi(o 0 TD.n12.72 à .m)8onsies Research, 5-7 January

overview and preliminary findings. Second International Conference on Arctic Research Planning, November 10-12, Copenhagen, Denmark.

Prowse, T.D. and Shen, H.T. 2005. River ice ecology. Invited talk to: World Water & Environmental Resources Congress 15-19 May 2005, Anchorage, AK, USA.

Prowse, T.D., 2005. Terrestrial cryosphere in the climate system. Invited plenary talk to 1st International CliC Science Conference, Climate and the Cryosphere, Beijing, China, 11-15 April 2005.

Prowse, T.D., and Lévesque, L.M. 2005. Climate change in arctic hydrologic systems: A focus on importance to freshwater ecosystems. Invited talk to: Adapting to Climate Change in Canada, May 4-7, Montréal, Canada.

Prowse, T.D., Wrona, F.J., Reist, R. 2005. Effects of a changing cryosphere on arctic freshwater ecology. Canada Sweden Workshop: Climate Change Impacts, Abisko, September 2005.

Reist, R., Wrona, F., Prowse, T., Power, M. and Dempson, B. 2005. Arctic chars – Integrators of impacts on freshwater and nearshore ecosystems: Elements of a much needed arctic wide monitoring and research programme to document impacts of climate variability and change (CVC). Canada Sweden Workshop: Climate Change Impacts, Abisko, September 2005.

Wrona, F.J., Prowse, T.D. and Reist, R. 2005. Ecological responses of arctic freshwater ecosystems to changing climate drivers. Effects of a changing cryosphere on arctic freshwater ecology. Canada Sweden Workshop: Climate Change Impacts, Abisko, September 2005.

Snorrason, Á., Zakrevski, J., Hasholt, B., Puupponen, M., Helweg, C., Engeset, R., Vuglinski, V., Frenzel, S.A., Prowse, T., Grabs, W., Ryabinin, V., and Maure, T. 2005. Arctic-HYCOS. International Conference on Arctic Research Planning II, 10-12 November Copenhagen, Denmark.

Snorrason, Á., Vorosmarty, C., Curry, J., Kane, D., Ohata, T., Pomeroy, J. Zakrevski, J., Hasholt, B., Puupponen, M., Helweg, C., Engeset, R., Vuglinski, V., Frenzel, S.A., Prowse, T., Grabs, W., Ryabinin V., and Maurer, T. 2005. The arctic hydrological cycle montitoring, modelling and assessment program, Arctic-HYDRA. International Conference on Arctic Research Planning II, 10-12 November Copenhagen, Denmark.

Wrona, F.J., Reist, J., Prowse, T., and Lévesque, L. 2005. Climate Interactions with Arctic Freshwater Ecosystems. Invited talk to: Adapting to Climate Change in Canada, May 4-7, Montréal, Canada.

Duguay, C.R., Prowse, T.D., Bonsal, B.R., Lacroix, M. and Ménard, P. 2004. Recent trends in Canadian lake ice covers (1966-1995). 61st Annual Meeting of the Eastern Snow Conference, 9-11 June 2004, Portland, Maine, U.S.A.

Peters, D.L., Bonsal, B.R., Fairbairn, D., Gibson, J.J., Prowse, T.D., Nord, R. and A. Werner. 2004. Climate Change Impacts on the Greater Victoria Water Supply: A Historical Analysis of Sooke Lake Reservoir Hydroclimatology, presented at the North American Lakes Management Society – "Lakes: Habitat for Fish, Habitat for People meeting, November 3-5, Victoria, BC.

Lacroix, M.P., Prowse, T.D., Bonsal, B.R., Duguay, C.R. and Ménard, P. 2004. Historical river ice trends in Canada. EOS, Transcations, American Geophysical Union, Vol. 85, No. 17, 27 April, 2004, Abstract H51D-10, p. 251.

Leconte, R., Peters, D., Toth, B., Pietroniro, A. and Prowse, T. 2004. Variation in lake and channel levels with varying winter severity in the Peace Athabasca Delta. EOS, Transcations, American Geophysical Union, Vol. 85, No. 17, 27 April, 2004, Abstract HB42B-03, p. 239.

Peters, D.L. and Prowse, T.D. 2004. Reverse flow in a northern freshwater lake-delta-wetland ecosystem. EOS, Transcations, American Geophysical Union, Vol. 85, No. 17, 27 April, 2004, Abstract H41D-08, p. 233.

Pietroniro, A., Toth, B., Leconte, R., Conly, M., Kouwen, N., Peters, D. and Prowse, T. 2004. The effect of climate change on the hydrology and the hydrodynamic characteristics of the Peace Athabasca system. EOS, Transcations, American Geophysical Union, Vol. 85, No. 17, 27 April, 2004, Abstract GC22A-06, p. 144.

Prowse, T.D. 2004. Climate Change in the Arctic: The Arctic Climate Impact Assessment. Invited plenary talk to 4th International Symposium of Science Journalists, 4-8 October, Montreal, Quebec, Canada.

Prowse, T.D. 2004. Climate Change Impacts On Water: a review of issues from "*Threats to Water Availability in Canada*" Invited talk, 57th CWRA Annual Conference Montreal, Quebec, June 16-18, 2004.

Prowse, T.D. 2004. Arctic Freshwater Cycle Synthesis Book: special focus on land processes/hydrology. Invited talk, United States, National Science Foundation, Freshwater Initiative All-Hands Meeting, Woods Hole, MA, 4-7 May 2004.

Prowse, T.D. 2004. Complexities of ice-affected flow on larger northern rivers. EOS, Transcations, American Geophysical Union, Vol. 85, No. 17, 27 April, 2004, Abstract H33D-03, p. 226.

Prowse, T.D. 2004. Research at the Water and Climate Impacts Research Centre. Federal Climate Change Learning Event, March 29 -30, Institute of Ocean Sciences, Sidney, BC, Canada.

Prowse, T.D. 2004. Water and Climate Impacts Research Centre, people and research. World Water Day workshop, March 22, University of Victoria, Victoria, BC, Canada.

Wrona, F. J., Prowse, T.D. and Reist, J.D. 2004. Impacts of climate and UV change on arctic freshwater ecosystems. EOS, Transcations, American Geophysical Union, Vol. 85, No. 17, 27 April, 2004, Abstract GC21B-06, p. 143.

Gibson, J.J., Prowse, T.D., Pietroniro, A., Wassenar, L. and Koehler G. 2003. Isotope tracing of water balance and climatic variability along the Mackenzie River. Isotope hydrology and integrated water resources management, 40th Anniversary International Symposium, 19-23 May 2-3, IAEA, Vienna, Austria.

Lacroix, M.P., Bonsal, B.R., Peters, D.L. and Prowse, T.D. 2003. Present and future ice regimes over northern Canada. Canadian Association of Geographers Conference, March 27-31, Victoria, BC, Canada.

Peters, D.L., Prowse, T.D. and Wrona, F.Ran-Nc17.rowse, T.D. 8 Tw8jiS.3EOcean Sce -1.15 TDfoTD(2

Milburn, D., Prowse, T.D. and Bonsal, B.R. 2003. Effects of climate variability and the ice cycle in northern rivers. Northern Research Basins, 14th International Symposium and Workshop, 25-29 August 2003, Kangerlussuaq/Sdr. Stromfjord, Greenland.

Wrona, F.J., J.M.Culp, T.D. Prowse, E. McCauley. K. Flanagan, and Glozier, N. 2003. Hydro-ecological effects of climate change on ice-covered aquatic systems. Canadian Association of Geographers, March 27-31, Victoria, BC, Canada.

Bobba, A.G., Piggott, A.R., Prowse, T., Moin, S.M.A., Southam, C.F. and Brown, D.W. 2002. Application of deterministic runoff model to Nith River, Ontario, Canada to study watershed hydrological characteristics due to climate change. In: Abstracts of the 28th Scientific Meeting of the Canadian Geophysical Union, May 18-21, Ottawa, Canada.

Beltaos, S. and Prowse, T. 2001. Climate impacts on ice-jam flooding of the Peace-Athabasca Delta. In: Abstracts of the 27th Scientific Meeting of the Canadian Geophysical Union, May 14-17, Ottawa, Canada.

Bonsal, B.R., Pietroniro, A. and Prowse, T.D. 2001. The ability of various GCMs to simulate current climate over the Western Cordillera of Canada. In: Abstracts of the 27th Scientific Meeting of the Canadian Geophysical Union, May 14-17, Ottawa, Canada.

Bonsal, B.R., T.D. Prowse, and M.P. Lacroix. Linkages between spring 0°C isotherm dates and hydrocryospheric variables over Arctic Canada. Proceedings, International Symposium on Arctic Feedbacks to Global Change, October 25-27, 2001, Rovaniemi, Finland, p. 75.

Gardner, J.T., English, M.C., Prowse, T.D., Carter, T. and Mackay, R. 2001. Impact of seiche events on the hydraulic properties of the Slave River Delta, NWT. In: Abstracts of the 27th Scientific Meeting of the Canadian Geophysical Union, May 14-17, Ottawa, Canada.

Prowse, T.D. 2001. Climate change impacts on no

Prowse, T.D. and Gibson, J.J. 1998. Winter discharge and its variability in a larger northern river: evidence from stable isotope signatures in river-ice profiles. GAC, MAC, APGGQ, Canadian Geophysical Union, Abstract Volume 23, p. A-150.

Vaughan, H. and Prowse, T.D. 1998. Linking climate change models and impacts assessment. Canadian Workshop on Climate Change Scenarios, Ville d'Esterel, Quebec, April 19-22, 1998.

Gibson, J.J. and Prowse, T.D. 1997. Regional variations in water balance regime in the continental Arctic using isotopic tracers. 31st Canadian Meteorological and Oceanographic Society, June 1-5, Saskatoon, Programs and Abstracts, 1-B1.5, p. 3.

Pietroniro, A., Hamlin, L., Prowse, T.D., Soulis, E.D. and Kouwen, D. 1997. Application of a radiation-temperature index snowmelt models to the lower Liard River valley. *31*st *Canadian Meteorological and Oceanographic Society*, June 1-5, Saskatoon, Programs and Abstracts, 1-B1.3, p. 2.

Prowse, T. D. and Conly, M.F. 1997. Hydrometeorological complexities affecting flooding of the Peace-Athabasca Delta. *31*st *Canadian Meteorological and Oceanographic Society*, June 1-5, Saskatoon, Programs and Abstracts, 1-B1.4 p. 2.

Prowse, T.D. and Conly, M.F. 1997. Impact of flow regulation on the aquatic ecosystem of the Peace and Slave Rivers, Northern Rivers Basin Study Synthesis Report No. 1. *Bulletin of the North American Benthological Society*, 14(1), p. 42.

Gibson, J.J. and Prowse, T.D. 1997. Spatio-temporal variability of lake water budgets in the boreal forest of Alberta using isotopic tracers: preliminary results. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 174.

Hamlin, L., Pietroniro, L., Prowse, T.D., Soulis, R. and Kouwen, N. 1997. Application of indexed snowmelt models to the lower Liard River valley. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 188.

Keller, R.A., Prowse, T.D. and Lawford, R.G. 1997. Temporal variability in spring snowpack and precipitation, and the frequency of winter atmospheric circulation patterns in the Peace River basin. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 132.

Miburn, D. and Prowse, T.D. 1997. Under-ice, sediment-bound contaminant transport and deposition in the Slave River Delta, Northwest Territories. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 187.

- Peters, D.L., Prowse, T.D. and Marsh, P. 1997. Water-balance modelling of perched basins in the Peace-Athabasca Delta, northeast Alberta, Canada. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 145.
- Pietroniro, A., Prowse, T.D. and Peters, D.L. 1997. Environmental monitoring of an inland freshwater delta. Fourth International Conference on Remote Sensing of Marine and Coastal Environments, 17-19 March, Orlando, Florida, 1997. (abstract; best of session award)
- Prowse, T.D. and Conly, M. 1997. Impact of flow regulation on the aquatic ecosystem of the Peace and Slave Rivers, Northern Rivers Basins Study Synthesis Report No. 1. Third Annual Science Meeting of the Ecological and Monitoring and Assessment Network (EMAN), Saskatoon, Canada, January 21-25, 1997. (abstract).
- Prowse, T.D. and Conly, M.F. 1997. Hydrometeorological conditions controlling flooding of a northern delta. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 189; also for submission to *Hydrological Processes*.
- Conly, F. M., Prowse, T.D., Andres, D. and English, M. 1996. Temporal changes to the ice regime of a large cold region river due to flow regulation. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 36.
- Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1996. Modelling isotope balances of lakes in cold regions. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 39.
- Hamlin, L., Pietroniro, A., Prowse, T., Soulis, R., and Kouwen, N. 1996. Snowmelt hydrologic modelling of the lower Liard River valley. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 27.
- Keller, R.A., Prowse, T.D. and Lawford, R.G. 1996. Variability in spring snowpack and winter atmospheric circulation frequency in the Peace River basin. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 44.
- Milburn, D. and Prowse, T.D. 1996. Suspended sediment rating curves: their hydroecological significance during northern river ice breakup. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 48.
- Peters, D.L., Prowse, T.D., Lafleur, P.M. and Buttle, J.M. 1996. Peace-Athabasca Delta perched-basin water balance study. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 76.

- Pietroniro, A., Prowse, T.D., Demuth, M.N., Dalton, A. and Jorden, S. 1996. Remote sensing and GIS application in the Peace-Athabasca Delta. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 78.
- Prowse, T.D. 1996. Ice jam floods- the key to ecosystem health of a delta wetland. Invited presentation to: Department of Fisheries and Oceans, Gulf Fisheries Centre, Moncton, New Brunswick, April 26, 1996.
- Prowse, T.D. 1996. Hydrological history of a drying delta ecosystem. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 75.
- Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1995. Stable-isotope mass balance of lakes and mine-tailings ponds in the permafrost region of Canada. *IAEA/UNESCO Symposium on the Use of Isotopes in Water Resources Management*, Vienna, March 20-24, 1995, IAEA-SM-336/49p.
- Gibson, J.J., Prowse, T.D., and Edwards, T.W.D., 1995. Development and validation of an isotopic method for estimation of lake evaporation. International GEWEX Workshop on Cold Season/Region Hydrometeorology, Summary Report and Proceedings, 22-26 May 1995, Banff, Alberta, IGPO Publication Series No. 15, pp. 119. (Oral)
- Keller, R.A., Prowse, T.D. and Lawford, R.G. 1995. Spring snowpack variability in the Peace River Basin. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 70.
- Milburn, D. and Prowse, T.D. 1995. Characterizing the under-ice suspended sediment plume during northern river breakup. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 100.
- Miller, B.J., Prowse, T.D. and Schoeneau, J.J. 1995. Spatial-temporal variation in soil nutrients along a moisture gradient in the Peace-Athabasca Delta. Canadian Geophysical Union, Hydrology Conference, Banff, Alberta, Abstract Proceedings, p. 95.
- Pietroniro, A., Prowse, T.D., Hamlin, L., Kouwen, N. and Soulis, R. 1995. Application of a grouped response unit hydrologic model in a discontinuous permafrost region. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 187.
- Prowse, T.D. and Demuth, M.N. 1995. Remedial strategies using ice to restore flooding: A case study of a northern delta. International Workshop on Remedial Strategies in Regulated Rivers, September 25-29, 1995, Lycksele, Sweden.
- Prowse, T.D. 1994. Hydrology of floods on the Peace River Delta. *Canadian Geophysical Union, Hydrology Conference*, Banff, Alberta, Abstract Proceedings, p. 25.

Chambers, P.A., Scrimgeour, G.J., Prowse, T.D. and Culp, J.M. 1993. Effects of river ice break-up on running water ecosystems at high elevations and latitudes: A review and perspective. *Bulletin of the North American Benthological Society*, Vol. 10, No. 1: 94.

Prowse, T.D. 1993. Stream hydrology of cold regions. *Bulletin of the North American Benthological Society*, Vol. 10, No. 1: 93.

Prowse, T.D. 1993. Hydrologic significance of floating ice. *Scientific Meeting of the Canadian Geophysical Union*, Banff, Alberta, 9-11 May 1993, Program and Abstracts No. 105.

Gibson, J.J., Edwards, T.W.D. and Prowse, T.D. 1991. Isotope hydrology of a high-boreal wetland with discontinuous permafrost, District of Mackenzie, N.W.T. *Central Canada Geological Conference*, Abstracts. February 27-28, McMaster University,

Gibson, J.J., Edwards, T.W.D. and Prowse