Todd E. Redding Ph.D., P.Ag.

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### **Education**

2009 – PhD, Hydrology, University of Alberta. Supervisor Dr. K.J. Devito.

2001 - M.Sc. Physical Geography, Simon Fraser University. Supervisor Dr. M.G. Schmidt.

1995 – B.Sc. Physical Geography, University of Victoria. (Graduation with academic distinction).

### **Employment History**

- 08/10 present: College Professor, Department of Geography & Earth and Environmental Science, Okanagan College, Penticton, BC
- 10/06 09/11: Watershed Management Extension Specialist, FORREX, (Kelowna, Nanaimo & Penticton, BC)
- 01/10 04/10: Sessional Lecturer (Hydrology), Department of Geography, Vancouver Island University, Nanaimo, BC
- 05/02 08/02: Research Assistant, Department of Biological Sciences, University of Alberta, Edmonton, AB
- 01/05 04/05: Sessional Lecturer (Physical Hydrology), Department of Renewable Resources, University of Alberta, Edmonton, AB
- 05/00 08/00: Research Technician, British Columbia Conservation Foundation, Kamloops BC
- 09/99 04/02: Graduate Teaching Assistant (Soil Science, Climatology), Department of Geography, Simon Fraser University, Burnaby, BC
- 09/99 04/00: Graduate Research Assistant, Department of Geography, Simon Fraser University, Burnaby, BC
- 08/99 04/03: Forestry Research Consultant (field research, data analysis and report writing)
- 08/95 08/99: Earth Science Research Technician, Forest Sciences Section, BC Ministry of Forests, Kamloops BC

### **Teaching Experience**

- 09/10 present: College Professor, Department of Geography and Earth & Environmental Science, Okanagan College, Geography 111 (Intro to Physical Geography I), Geography 121 (Intro to Physical Geography II), Earth Science 101 (Environmental Science), Earth Science 111 (Introduction to Earth Science), Geography/Earth Science 212 (Weather and Climate)
- 01/10 04/10: Sessional Lecturer, Geography 374 (Hydrology), Department of Geography, Vancouver Island University
- 01/05 04/05: Sessional Lecturer, Renewable Resources 350 (Physical Hydrology), Department of Renewable Resources, University of Alberta
- 09/99 04/02: Graduate Teaching Assistant, Geography 317 Soil Science I (Dr. M.G. Schmidt), Department of Geography, Simon Fraser University (taught in 3 separate terms, 5 total lab sections)
- 09/00 04/02: Graduate Teaching Assistant, Geography 214 Climatology I (Dr. W.G.Bailey), Department of Geography. Simon Fraser University (taught in 3 separate terms. 9 total lab sections)

#### **Professional Affiliations**

- 1997 present: Professional Agrologist (P.Ag.), British Columbia Institute of Agrologists.
- 2014 present: Member, National Association of Geoscience Teachers
- 2001 2010: Member, Canadian Society of Soil Science
- 2002 2010: Member, Canadian Geophysical Union
- 2002 2010: Member, American Geophysical Union
- 2002 present: Member, International Association of Hydrologic Sciences

#### **Scholarships and Awards**

- 2011 2011 Professional Recognition Award, Canadian Water Resources Association, BC Branch
- 2003 2006: NSERC Canada Graduate Scholarship (\$35,000/yr for 3 yrs)
- 2002 2006: Alberta Ingenuity Fund PhD Studentship (\$22,000/yr for 4 yrs)

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2002 - 2003: NSERC-IPS2 Scholarship (\$19,500)

2002: Walter Johns Memorial Fellowship, University of Alberta (\$4,100)

2002: Dean of Science Scholarship, University of Alberta (\$2,000)

2001: Bentley Award, Canadian Society of Soil Science 2001 Annual Meeting (\$500)

2001: Graduate Fellowship, Simon Fraser University (\$4400)

### Research and Extension Funding (competitive)

- 2013: Okanagan College Grants-in-Aid (Pending), Development of a stream temperature monitoring network for Penticton
- 2013: Scholarly Activity Release (1.0 TLU), Support for data analysis and compilation of spatial and temporal variation in air and soil temperatures across the South Okanaga
- 2013: Okanagan College Grants-in-Aid (\$1350), Application of time lapse photography to enhance student visualization and understanding of environmental processes
- 2013: Okanagan College Grants-in-Aid (\$1700), Hydrometeorological instrumentation to support research on irrigation and water use efficiency in the South Okanagan
- 2012-2013: Okanagan College Innovative Projects Proposals, (0.5 TLU Teaching Release Winter Term 2013)

  Development of a green roof water balance model and lab assignment for EESC 101
- 2012 2013: Okanagan College Grants-in-Aid (\$1400), Solar radiation monitoring (co-applicant with R. Ransom)
- 2011 2012: Okanagan College Innovative Project Proposals, (1 TLU teaching release, \$8000 equivalent), Green roof hydrology research program
- 2011 2012: Okanagan College Grants-in-Aid (\$2000), Green roof drainage monitoring
- 2011 2012: Okanagan College Grants-in-Aid (\$1700), Green roof water balance monitoring
- 2010 2011: Okanagan College Grants in Aid (\$500)
- 2009 2011: Future Forest Ecosystems Science Council, "Reducing vulnerabilities and promoting resilience of BC's natural and human systems through adaptation of post-disturbance land management options" (Coleader of proposal, \$338,000)
- 2009 2011: Future Forest Ecosystems Science Council, "Comprehensive synthesis of forested watershed science and climate change impacts" (Project lead, \$76,125)
- 2009 2011: Future Forest Ecosystems Science Council, "The Effects of Climate and Forest Cover Change on Snowmelt-Dominated Water Supplies in the Okanagan" (Project team member, \$120,750)
- 2003 2006: Circumboreal/Alberta Research Grants to support field data collection (\$8,500)
- 2003: Research Equipment Grant from Syncrude Canada Ltd. to T. Redding and K. Devito (\$34,500)

#### **Peer-Reviewed Publications**

- Redding, T.E. and Leach, J. 2013. A synthesis of the effects of natural disturbance and post-disturbance management on streamflow, stream temperature, suspended sediment, and aquatic invertebrate populations (Chapter 3). In: Wienczyk, A et al. Climate-induced changes to natural disturbance regimes and management responses in British Columbia: Impacts on natural and human systems. FORREX Forum for Research and Extension in Natural Resources, Kamloops, BC. FORREX Series 28. URL: <a href="http://www.forrex.org/sites/default/files/forrex\_series/FS28-Chapter-3-Watersheds.pdf">http://www.forrex.org/sites/default/files/forrex\_series/FS28-Chapter-3-Watersheds.pdf</a>
- Wiensczyk, A., Gayton, D. and **Redding, T.E.** 2013. Introduction (Chapter 1). In: Wienczyk, A et al. Climate-induced changes to natural disturbance regimes and management responses in British Columbia: Impacts on natural and human systems. FORREX Forum for Research and Extension in Natural Resources, Kamloops, BC. FORREX Series 28. URL: http://www.forrex.org/sites/default/files/forrex\_series/FS28-Chapter-1-Introduction 0.pdf
- Smith, R. and **Redding, T.** 2012. Cumulative effects assessment: Runoff generation in snowmelt-dominated montane and boreal plain catchments. Streamline Watershed Management 15(1): 24-34. URL. http://www.forrex.org/sites/default/files/publications/articles/Streamline Vol15 No1 Art04.pdf
- **Redding, T.E.**, Lapp, S., and Leach, J. 2012. Natural disturbance and post-disturbance management effects on watershed values. BC Journal of Ecosystems and Management 13(1):1-14. http://jem.forrex.org/index.php/jem/article/viewFile/172/106

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- **Redding, T.E.** and Devito, K.J. 2011. Aspect and soil textural controls of snowmelt runoff on forested Boreal Plain hillslopes. Hydrology Research 42: 250-267.
- **Redding, T.E.** and Devito, K.J. 2010. Mechanisms and Pathways of Lateral Flow on Aspen-Forested, Luvisolic Soils, Western Boreal Plains, Alberta, Canada. Hydrological Processes 24: 2995-3010, DOI: 10.1002/hyp.7710
- Pike, R.G., **T.E. Redding**, R.D. Moore, R.D. Winker and K.D. Bladon (editors). 2010. Compendium of forest hydrology and geomorphology in British Columbia. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. and FORREX Forum for Research and Extension in Natural Resources, Kamloops, B.C. Land Manag. Handb. 66. www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm
- Winkler, R.D., Moore, R.D., **Redding, T.E.,** Spittlehouse, D.L., Carlyle-Moses, D., Smerdon, B. 2010. Hydrologic Processes and Watershed Response (Chapter 6). In: Pike, R.G., T.E. Redding, R.D. Moore, R.D. Winker and K.D. Bladon (editors). Compendium of forest hydrology and geomorphology in British Columbia. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. and FORREX Forum for Research and Extension in Natural Resources, Kamloops, B.C. Land Manag. Handb. 66. www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm
- Winkler, R.D., Moore, R.D., **Redding, T.E.**, Spittlehouse, D.L., Smerdon, B, and Carlyle-Moses, D. 2010. The Effects of Disturbance on Hydrologic Processes and Watershed Response (Chapter 7). In: Pike, R.G., T.E. Redding, R.D. Moore, R.D. Winker and K.D. Bladon (editors). Compendium of forest hydrology and geomorphology in British Columbia. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. and FORREX Forum for Research and Extension in Natural Resources, Kamloops, B.C. Land Manag. Handb. 66. www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm
- Pike, R.G., **Redding, T.E.**, Wilford, D., Moore, R.D., Ice, G., Reiter, M., and Toews, D.A.A. 2010. Detecting and predicting changes in watersheds (Ch. 16). In: Pike, R.G., T.E. Redding, R.D. Moore, R.D. Winker and K.D. Bladon (editors). Compendium of forest hydrology and geomorphology in British Columbia. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. and FORREX Forum for Research and Extension in Natural Resources, Kamloops, B.C. Land Manag. Handb. 66. <a href="https://www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm">www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm</a>
- Pike, R.G., Bennett, K., **Redding, T.E.**, Werner, A., Spittlehouse, D., Moore, R.D., Murdock, T., Beckers, J., Smerdon, B., Bladon, K., Foord, V., Campbell, D. and Tschaplinski, P. 2010. Climate change effects on watershed processes in British Columbia (Ch. 19). In: Pike, R.G., T.E. Redding, R.D. Moore, R.D. Winker and K.D. Bladon (editors). Compendium of forest hydrology and geomorphology in British Columbia. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. and FORREX Forum for Research and Extension in Natural Resources, Kamloops, B.C. Land Manag. Handb. 66. www.for.gov.bc.ca/hfd/pubs/Docs/Lmh/Lmh66.htm
- Beckers, J, Smerdon, B, **Redding, T**, Anderson, A, Pike, R and Werner, A. 2009. Hydrologic models for forest management applications: Part 1 Model selection. Streamline Watershed Management Bulletin 13(1): 35-
- Beckers, J, Pike, R, Werner, A, **Redding, T**, Smerdon, B and Anderson, A. 2009. Hydrologic models for forest management applications: Part 2 Incorporating the effects of climate change. Streamline Watershed Management Bulletin 13(1): 45-54.
- Smerdon, B.D., **Redding, T.E.** and Beckers, J. 2009. Forest Management Effects on Groundwater: Large Knowledge Gaps Persist. Streamline Watershed Management Bulletin, 12(2): 17-23.
- Smerdon, B.D., **Redding, T.E.**, and Beckers, J. 2009. An overview of the effects of forest management on groundwater hydrology. BC Journal of Ecosystems and Management 10(1):22–44.
- **Redding, T.E.** and Devito, K.J. 2008. Lateral flow thresholds for aspen forested hillslopes on the Western Boreal Plain, Alberta, Canada. Hydrological Processes. 22: 4287-4300, DOI:10.1002/hyp.7038.
- Smerdon, B.D. and **Redding, T.E.** 2007. Groundwater: More than water below the ground. Streamline 10(2): 1-
- **Redding, T.E.** and Devito, K.J. 2006. Particle densities of wetland soils in Northern Alberta, Canada. Canadian Journal of Soil Science. 86: 57-60.
- **Redding, T.E.**, Hannam, K.D., Quideau, S.A. and Devito, K.J. 2005. Particle density of aspen, spruce and pine forest floors in Alberta, Canada. Soil Science Society of America Journal 69: 1503-1506.
- Macrae, M, **Redding, T.E.**, Creed, I.F. Bell, W.R., and Devito, K.J. 2005. Soil, surface water and ground water phosphorus relationships in a partially harvested boreal plain aspen catchment. Forest Ecology and Management 206: 315-329.
- **Redding, T.E.**, G.D. Hope, M.G. Schmidt and M.-J. Fortin. 2004 Analytical methods for defining stand-clearcut edge effects demonstrated for N mineralization. Canadian Journal of Forest Research. 34: 1018-1024.
- Redding, T.E., M.-J. Fortin, G.D. Hope, M.G. Schmidt and W.G. Bailey. 2003. Spatial patterns of soil

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temperature and moisture across high-elevation forest-clearcut edges in the southern interior of British Columbia. Canadian Journal of Soil Science. 83: 121-130.

### **Conference Proceedings**

- **Redding, TE**, Winkler, RD, Spittlehouse, D, Moore, RD, Wei, A, and Teti, P. 2008. Mountain pine beetle and watershed hydrology: A synthesis focused on the Okanagan. Proceedings of the One Water One Watershed Conference, Kelowna, BC, October 21-23, 2008. 14 p.
- Winkler, R. Spittlehouse, D., Allen, D. **Redding, T.**, Giles, T., Hope, G., Heise, B., Alila, Y. and Voeckler, H.. 2008. The Upper Penticton Creek Watershed Experiment: Integrated Water Resource Research on the Okanagan Plateau, Proceedings of the One Water One Watershed Conference, Kelowna, BC, October 21-23, 2008. 10 p.
- **Redding, T.E.** and Devito, K.J. 2005. Snowmelt infiltration and runoff from forested hillslopes, Boreal Plain, Alberta. Proceedings of the 2005 Eastern Snow Conference, Waterloo, ON. June 8-10, 2005. 4 p.
- **Redding, T.E.**, Devito, K.J., Carmosini, N., and Creed, I.F. 2003. Influences of topography and harvesting on the spatial distribution of soil moisture, nitrogen and phosphorous across a Western Boreal Forest watershed. Proceedings of the 2003 Alberta Soil Science Workshop. Edmonton, AB. February 18-20, 2003. pp. 265-269.

#### **Theses**

- **Redding, T.E.** 2009. Hydrology of forested hillslopes on the Boreal Plain, Alberta, Canada. PhD. Thesis, Department of Biological Sciences, University of Alberta, 199 p.
- **Redding, T.E.** 2001. Spatial patterns of soil properties across forest-clearcut edges. MSc. Thesis, Department of Geography, Simon Fraser University. 93pp.

#### **Technical and Extension Publications (not peer reviewed)**

- **Redding, T.** 2011. A summary of recent British Columbia Watershed Management Information Needs Assessments. Streamline Watershed Management Bulletin 14(2): 20-23.
- **Redding, T.** 2010b. 2009 WatershedEXT Electronic Mailing List and Website User Evaluation Survey. FORREX, Kamloops, BC. Project Report. 11 p.

http://www.forrex.org/publications/other/ProjectReports/WatershedEXT\_Eval\_2009.pdf

- **Redding, TE,** Beckers, J and Pike, RG. 2010. Selecting hydrologic models to investigate the potential effects of forest management and climate change on watersheds. Island Geoscience Newsletter 7(1): 5-8.
- **Redding, T.**, Moore, R.D., Winkler, R.D., Pike, R.G. and Wilford, D.J. 2010. Long-term watershed research in British Columbia. Streamline Watershed Management Bulletin 14(1): 1-5.
- **Redding, T.** and Pike, R.G. 2010. New Publication: Compendium of Forest Hydrology and Geomorphology in British Columbia. Streamline Watershed Management Bulletin 14(1): 32-34.
- **Redding, T** and Bladon, K. 2009. Mountain Pine Beetle and Water Management: Workshop Summary. Streamline Watershed Management Bulletin 13(1): 29-31.
- Bladon, K and **Redding, T**. 2009. Wildfire and Watershed Hydrology: Key Findings of a Workshop. Streamline Watershed Management Bulletin 13(1): 1-4.
- Bladon, K and **Redding**, **T**. 2009. Workshop Summary: Wildfire and watershed hydrology. LINK, 11(1): 28-29.
- **Redding, T** and Bladon, K. 2009. Water Management with MPB: Will things be different? LINK, 11(1): 22-23. Moore, D. Winkler, D., Carlyle-Moses, D., Spittlehouse, D., Giles, T., Phillips, J., Leach, J., Eaton, B., Owens, P., Petticrew, E., Blake, W., Heise, B. and **Redding, T**. 2008. Watershed Response to the McLure Forest
- Fire: Presentation Summaries from the Fishtrap Creek Workshop, March 2008. Streamline 12(1): 1-11. **Redding, T.**, R. Winkler, P. Teti, D. Spittlehouse, S. Boon, J. Rex, S. Dubé, R.D. Moore, A. Wei, M. Carver, M. Schnorbus, L. Reese-Hansen, and S. Chatwin. 2008. Mountain pine beetle and watershed hydrology. *In* Mountain Pine Beetle: From Lessons Learned to Community-based Solutions Conference Proceedings,
- **Redding, T.** 2008. Changing climate, uncertain futures and evolving practices: Symposium Summary. LINK 10(2): 15.

June 10–11, 2008. BC Journal of Ecosystems and Management 9(3):33–50.

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- Winkler, R., Rex, J., Teti, P., Maloney, D. and **Redding, T**. 2008. Mountain pine beetle, forest practices, and watershed management. BC Ministry of Forests and Range. Extension Note No. 88. 11 p.
- Redding, T. 2008. Fishtrap Creek: Studying the effects of wildfire on watersheds. LINK. 10(1): 1-2.
- Swift, K and **Redding, T**. 2008. Silviculture operations in the Cascades: A summary of the Merritt Summer Field tour. LINK 9(3): 12-14.
- **Redding, T.**, S. Lepsoe, and M. Laurie. 2008. Southern Interior needs assessment for watershed management. FORREX Forest Research and Extension Partnership. Kamloops, BC, File Report No. 08-02.
- **Redding, TE** and K. Nickurak. 2008. Northern Interior needs assessment for watershed management. FORREX Forest Research and Extension Partnership. Kamloops, BC, File Report No. 08-01.
- **Redding, TE** and Pike, RG. 2007. Mountain Pine Beetle and Watershed Hydrology: Workshop Summary. Streamline 11(1): 22-24.
- Wilford, D., R.Pike, and **T.Redding**.2007.Watershed management perspective—Using site and watershed-level retention for water and terrain conservation. In Overcoming Obstacles to Variable Retention in Forest Management: Science to Management Forum Proceedings, September 25–27, 2007.BC Journal of Ecosystems and Management 8(3):100.
- **Redding, T.**, R.Pike, and P.Teti.2007. Understanding the effects of mountain pine beetle and salvage harvesting on hydrological processes and watershed response. In Overcoming Obstacles to Variable Retention in Forest Management: Science to Management Forum Proceedings, September 25–27, 2007. BC Journal of Ecosystems and Management 8(3):149.
- Pike, R.and **T.Redding**. 2007.FORREX Watershed Management information tools. In Overcoming Obstacles to Variable Retention in Forest Management: Science to Management Forum Proceedings, September 25–27, 2007.BC Journal of Ecosystems and Management 8(3):148.
- **Redding, T.**, Winkler, R., Carlyle-Moses, D. and Spittlehouse, D. 2007. Mayson Lake study examines hydrological processes. LINK 9(2): 10-11.
- **Redding, T.**, Gluns, D. and Moore, D. 2007. The Cotton Creek Watershed Experiment: Investigating the effects of forest disturbance on watershed function. LINK 9(2): 4-5.
- **Redding, T.E.** 2007. Mountain Pine Beetle and Watershed Hydrology: Preliminary Results of Research from BC, Alberta, and Colorado Post-Workshop Evaluation Survey Summary and Results. FORREX Internal Report. 13 pp.
- **Redding, T.E. 2007**. The Upper Penticton Creek Watershed Experiment: Results of a Paired Watershed Study Into the Effects of Forest Management on Water Resources Post-Workshop Evaluation Survey Summary and Results. FORREX Internal Report. 9 p.
- **Redding, T.E.** (Ed.). 2007. Mountain Pine Beetle and Watershed Hydrology: Preliminary Results of Research from BC, Alberta and Colorado (Workshop Handbook and Presentation Summaries). 60 p.
- **Redding, T.E.** and Winkler, R.D. (Eds.). 2007. The Upper Penticton Creek Watershed Experiment: Results of a Paired Watershed Study Into the Effects of Forest Management on Water Resources (Workshop Handbook and Presentation Summaries). 22 p.
- **Redding, T.E.** and Smerdon, B.D. 2005. Multidisciplinary emphasis to environmental physics: Skip the calculus? Hydrological Processes 19: 2091-2092 [Book Review].

#### **Conference Presentations**

- 2012 "Green Roof Water Balance Research at Okanagan College, Penticton". Poster Presentation, National Association of Geoscience Teachers, June 20, 2012, Spokane, WA (**T. Redding**)
- 2012 "Forest Watershed Science in the Southern Interior". Poster Presentation, National Association of Geoscience Teachers, June 20, 2012, Spokane, WA (R. Winkler, S. Boon, **T. Redding**)
- 2012 "The Compendium of Forest Hydrology and Geomorphology in BC". Poster Presentation, SISCO Winter Meeting, April 2-3, 2012, Salmon Arm, BC (**T. Redding**, R. Pike)
- 2012 "Green Roof Water Balance Research at Okanagan College, Penticton". Poster Presentation, Western Division of the Canadian Association of Geographers, March 9-10, 2012, Kelowna, BC (**T. Redding**)
- 2012 "Forest Watershed Science in the Southern Interior". Poster Presentation, Western Division of the Canadian Association of Geographers, March 9-10, 2012, Kelowna, BC (R. Winkler, S. Boon, **T. Redding**)
- 2010 "Review of Hydrologic Models for Forest Management Applications". Oral Presentation, Canadian Water Resources Association National Conference, Vancouver, BC, June 15-18, 2010 (J. Beckers, **T. Redding**, A. Anderson, R. Pike and A. Werner)

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- 2009 "Mountain Pine Beetle and Watershed Hydrology: An overview". Oral presentation, Mountain Pine Beetle and Water Management Workshop, Kelowna, BC, June 2, 2009 (R. Winkler and **T. Redding**)
- 2009 "Vertical water movement and groundwater recharge on forested Boreal Plain uplands, Alberta, Canada" Oral Presentation, Western Division of the Canadian Association of Geographers Conference, Nanaimo, BC, March 7, 2009 (**T. Redding**, K. Devito)
- 2008 "Mountain Pine Beetle and Watershed Hydrology A Synthesis" Invited Oral Presentation, Mountain Pine Beetle From Lessons Learned to Community Based Solutions, Prince George, BC, June 10-11, 2008 (**T. Redding**)
- 2007 "Watershed management perspective—Using site and watershed-level retention for water and terrain conservation" Poster Presentation, Variable Retention Science Forum, Prince George, BC, Sept 25-27, 2007. (D. Wilford, R. Pike and **T Redding**)
- 2007 "FORREX Watershed Management Information Tools" Poster Presentation, Variable Retention Science Forum, Prince George, BC, Sept 25-27, 2007. (R. Pike and **T Redding**)
- 2007 "Understanding the Effects of Mountain Pine Beetle and Salvage Harvesting on Hydrological Processes and Watershed Response" Poster Presentation, Variable Retention Science Forum, Prince George, BC, Sept 25-27, 2007. (**T. Redding**, R. Pike and P. Teti)
- 2007 "Understanding the Effects of Mountain Pine Beetle and Salvage Harvesting on Hydrological Processes and Watershed Response" Poster Presentation, Mountain Pine Beetle and Watershed Hydrology Workshop, Kelowna, BC, July 10, 2007. (**T. Redding**, R. Pike and P. Teti)
- 2007 "FORREX Watershed Management Information Tools" Poster Presentation, Mountain Pine Beetle and Watershed Hydrology Workshop, Kelowna, BC, July 10, 2007. (R. Pike and **T Redding**)
- 2006 "Vertical Flow Dominates Hillslope Response to Rainfall Simulation Experiments, Boreal Plain, Alberta" Oral Presentation, Canadian Geophysical Union. Banff, AB. May 14, 2006. (**T.E. Redding** and K.J. Devito)
- 2006 "Vertical Flow Dominates Hillslope Hydrological Response to Simulated Rainfall, Boreal Plain, Alberta" Oral Presentation, Canadian Geophysical Union, Prairie Section. Edmonton, AB. Feb 11, 2006. (**T.E. Redding** and K.J. Devito)
- 2005 "Hillslope runoff or recharge? The battle of the Boreal Plain" Poster Presentation, American Geophysical Union, San Francisco, December 5-9, 2005. H23C-1432. (**T.E. Redding** and K.J. Devito)
- 2005 "Snowmelt infiltration and runoff from forested hillslopes, Boreal Plain, Alberta" Oral Presentation, Eastern Snow Conference, Waterloo, ON. June 8-10, 2005. (**T.E. Redding** and K.J. Devito)
- 2005 "Snowmelt infiltration and runoff from forested uplands, Boreal Plain, Alberta" Oral Presentation, Canadian Geophysical Union, Banff, AB, May 9-11, 2005 (**T.E. Redding**, K.J. Devito)

### **Invited Presentations**

- 2011 "Climate-induced changes to natural disturbance regimes and management responses: Impacts on watershed values", FORREX and Future Forest Ecosystem Science Council, Smithers, BC, June 22, 2011 (**T. Redding**)
- 2011 "Climate-induced changes to natural disturbance regimes and management responses: Impacts on watershed values", FORREX and Future Forest Ecosystem Science Council, Prince George, BC, June 20, 2011 (T. Redding)
- 2011 "Climate-induced changes to natural disturbance regimes and management responses: Impacts on watershed values", FORREX and Future Forest Ecosystem Science Council, Nanaimo, BC, June 9, 2011 (T. Redding)
- 2010 "Mountain Pine Beetle and Water Management: Effects, Implications and Information Needs", Fraser Basin Council and MITACS, March 24, 2010 (**T. Redding** and K. Bladon)
- 2010 "Introduction to the Hydrology of Forested Watersheds". Forestry 242, Vancouver Island University, March 8, 2010 (**T. Redding**)
- 2010 "Mountain Pine Beetle and Watershed Hydrology", Forestry 352, Vancouver Island University, March 12, 2010 (**T. Redding** and R. Winkler)
- 2009 "Mountain Pine Beetle and Watershed Hydrology", Canadian Institute of Forestry Electronic Lecture Series, March 2009. (R. Winkler and **T. Redding**)
- 2008 "Mountain pine beetle and watershed hydrology: A synthesis focused on the Okanagan". One Water One Watershed Conference, Kelowna, BC, October 21-23, 2008 (**Redding, TE**, Winkler, RD, Spittlehouse, D, Moore, RD, Wei, A, and Teti, P.)

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- 2008 "Synthesis Presentation: Mountain Pine Beetle and Watershed Hydrology" Mountain Pine Beetle: From lessons learned to Community-based solutions, Prince George, June 10, 2008 (**T. Redding**, and others)
- 2007 "Fundamentals of Evaporation" Geography 210, UBC-Okanagan, March 22, 2007 (T. Redding)
- 2007 "Thresholds and Mechanisms of Subsurface Stormflow from Forested Hillslopes, Boreal Plains, Alberta" Earth and Environmental Science Seminar Series, UBC-Okanagan, March 21, 2007 (**T. Redding**)
- 2006 "Data Needs for Forestry" Sustainable Planning for the Okanagan Environment Workshop, Kelowna, BC, December 15, 2006. (**T. Redding**)
- 2006 "Water Movement on Forested Uplands, Boreal Plain". Instrumented Watersheds Annual Team Meeting, CONRAD, Edmonton, AB, Jan 23, 2006. (T.E. Redding and K.J. Devito)
- 2005 "Hydrology of Forested Uplands on the Boreal Plain: Forget Runoff, Think Storage". Instrumented Watersheds Annual Team Meeting, Syncrude Canada Ltd., Edmonton, AB, Jan 25, 2005. (**T.E. Redding** and K.J. Devito)
- 2005 "Converting the Analog Landscape into a Digital Model". Instrumented Watersheds Annual Team Meeting, Syncrude Canada Ltd., Edmonton, AB, Jan 25, 2005. (B.D. Smerdon, C.A. Mendoza, K.J. Devito, **T.E. Redding**)