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## Dr. William L Quinton

Correspondence language: English


## Contact Information

The primary information is denoted by (*)

### Address


Home

313 Hiawatha Dr.
Waterloo Ontario N2L 2V9
Canada

Primary Affiliation (*)

75 University Ave. W.
Waterloo Ontario N2L 3C5
Canada


### Telephone


| | |
|---|---|
| Home | 1-519-8859896 |
| Work (*) | 1-529-8840710 extension: 3281 |


### Email


| | |
|---|---|
| Work (*) | wquinton@wlu.ca |

# Dr. William Quinton

## Language Skills

| Language | Read | Write | Speak | Understand | Peer Review |
|---|---|---|---|---|---|
| English | Yes | Yes | Yes | Yes | Yes |

## Degrees

- 1997/6 — Doctorate, Cold Regions Hydrology, University of Saskatchewan
  Supervisors: Marsh, Phil, 1991/9 - 1997/2; Gray, DM, 1991/9 - 1997/2
- 1991/6 — Master's Thesis, Wetland Hydrology, York University
- 1988/6 — Bachelor's Honours, Physical Geography, University of Western Ontario

## Recognitions

2013/10
University Representative
Wilfrid Laurier University
Honor
Represented the University on behalf of the President at meeting of University Presidents hosted by the NWT Minister of Environment and Natural Resources.

2013/9 - 2013/10
University Representative
Wilfrid Laurier University
Honor
As the PI of the Canada Foundation for Innovation (CFI) grant that funded the Centre for Cold Regions & Water Science, I was part of the Laurier team that hosted a delegation from NWT Government visiting Laurier to open the new Centre.

2013/6
Highlighted Journal Commentary
IOP Publishing
Honor
Our recent journal article (Williams, Quinton and Baltzer, Environmental Research Letters, 2013) was chosen by the journal's editorial board to be highlighted in a journal commentary.

2011/6
Invited Article
Wiley Publishing
Honor
Invited by Editor (Hydrological Processes Journal. Wiley) to contribute a commentary on cold regions hydrology.

2010/8 - 2015/8
Canada Research Chair, Tier 2 - 1,000,000
Natural Sciences and Engineering Research Council of Canada (NSERC)
Prize / Award
In recognition of research accomplishment, the applicant was awarded a teaching release and resources to build a research programme focussed on cold region hydrology. Awarded in 2005, and renewed in 2010.

2010/8 - 2015/8
Canada Research Chair - 500,000
Natural Sciences and Engineering Research Council of Canada (NSERC)
Prize / Award
Tier II Chair in Cold Regions Hydrology and Water Resources

2009/6
Canadian Delegate
Northern Research Basins (NRB). International Hydrological Promgramme
Honor
Canadian National Representative for the Northern Research Basins (17th International Symposium, Iqaluit, Canada, 2009); Assistant Chief Canadian Delegate for the Northern Research Basins (20th International Symposium, Finland, 2015); Chief Canadian Delegate for the Northern Research Basins (21st International Symposium, Iceland, 2017).

2008/6
National Correspondent
International Association of Hydrological Sciences
Honor
Canadian national representative for the International Association of Hydrological Sciences (IAHS).

## User Profile

Research Specialization Keywords: Cold regions hydrology, peatlands, permafrost thaw

## Employment

2007/9
Professor
Department of Earth Sciences, University of Western Ontario
Part-time, Adjunct
Tenure Status: Non Tenure Track
Service on supervisory committees.

2006/9
Professor
Department of Civil and Environmental Engineering, University of Waterloo
Part-time, Adjunct
Tenure Status: Non Tenure Track
Service on supervisory committees.

2005/9
Associate Professor
Geography/CRRC, Waterloo, Wilfrid Laurier University
Full-time, Associate Professor
Tenure Status: Tenure
Research (Canada Research Chair), supervision of undergraduate and graduate students, PDFs, Research Associates, technicians. University service (Department, Faculty and University committees), service to profession (leadership in professional organisations) engagement and outreach outside of university (with government agencies, local communities, industry).

2008/9 - 2014/4
Professor
Department of Earth Sciences, The University of Calgary
Part-time, Adjunct
Tenure Status: Non Tenure Track
Service on supervisory committees.

2000/9 - 2005/9
Assistant Professor
Geography, Simon Fraser University
Full-time, Assistant Professor
Tenure Status: Tenure Track

2000/1 - 2000/9
Research Scientist
Environment Canada, National Water Research Institute
Full-time
Tenure Status: Non Tenure Track
Leading research projects (including planning and executing inter-disciplinary research campaigns in remote Arctic areas, analysis of data, manuscript preparation), supervision of graduate students and technicians.

1999/9 - 1999/12
Sessional Lecturer
Geography, University of Saskatchewan
Full-time, Sessional, Lecturer
Tenure Status: Non Tenure Track

1997/2 - 1999/9
NSERC Visiting Scientist
Environment Canada, National Water Research Institute
Full-time
Tenure Status: Non Tenure Track

1991/4 - 1991/9
Project Manager, Northern Wetlands Study (NOWES)
Geography, York University
Full-time
Tenure Status: Non Tenure Track
Management of an interdisciplinary research station in northern Ontario, planning and execution of research studies, supervision of students.

1988/5 - 1988/9
Research Assistant
Geography, University of Western Ontario
Full-time
Tenure Status: Non Tenure Track
Field data collection in remote areas of the Canadian Rocky Mountains, analysis and synthesis of collected data.

## Research Funding History

**Awarded [n=8]**

2013/5 - 2018/5
Co-applicant

Changing Cold Regions Network, Grant

**Funding Sources:**

2013/5 - 2018/5 Natural Sciences and Engineering Research Council of Canada (NSERC)
Climate Change and Atmospheric Research
Total Funding - 5,000,000
Portion of Funding Received - 245,000
Funding Competitive?: Yes

Co-investigator : A. Berg; A. Black; A. Johnson; J. Baltzer; J. Hanesiak; J. Marshall; J. McDonnell; J. Pomeroy; J. Theriault; M. Hayashi; M. Turetsky; R. Stewart; S. Carey;

Principal Investigator : H. Wheater

2013/5 - 2016/5
Co-investigator

Vers une meilleure compréhension du transport aqueux et évasif du carbone dans un paysage forêt-tourbière en zone de pergélisol discontinu en dégradation rapide, Grant

**Funding Sources:**

2013/5 - 2016/5 Fonds Québécois de la Recherche sur la Nature et les Technologies (FQRNT)
Total Funding - 178,198
Portion of Funding Received - 20,000
Funding Competitive?: Yes

Co-investigator : T. Moore;

Principal Investigator : O. Sonnentag

2013/9 - 2015/9
Principal Investigator

Water Knowledge Application Network (WatKAN), Grant

**Funding Sources:**

2013/9 - 2015/9 Canadian Water Network
Total Funding - 132,850
Portion of Funding Received - 100,000
Funding Competitive?: Yes

Co-investigator : D. MacLatchey; H. Wheater; J. Baltzer; J. Pomeroy; P. Gober; P. Marsh

2010/9 - 2015/9
Principal Investigator

Chair in Cold Regions Hydrology, Research Chair

**Funding Sources:**

2010/9 - 2015/9 Canada Research Chairs (CRC)
Total Funding - 500,000
Portion of Funding Received - 500,000
Funding Competitive?: Yes

2011/3 - 2015/3
Principal Investigator

Improving Canadian Capacity for Predicting the Impacts of Natural and Human Disturbances on Boreal Water Resources, Grant

**Funding Sources:**

2011/3 - 2015/3 Wilfrid Laurier University
Total Funding - 1,300,000
Portion of Funding Received - 20,000
Funding Competitive?: Yes

2011/3 - 2015/3 Canada Foundation for Innovation (CFI)
Total Funding - 2,500,000
Portion of Funding Received - 40,000
Funding Competitive?: Yes

2011/3 - 2011/3 Government of The Northwest Territories
Total Funding - 2,500,000
Portion of Funding Received - 40,000
Funding Competitive?: Yes

Co-applicant : M. English;

Co-investigator : B. Wolfe; D. MacLatchy; G. Ferris; J. McGeer; M. Wilkie; R. Melnik; R. Petrone; S. Smith

2010/9 - 2014/9

Boreal and Cold Regions Headwater Runoff and Water Supply – operating funds, Grant

Principal Investigator **Funding Sources:**

2011/9 - 2015/9 Wilfrid Laurier University
Total Funding - 112,500
Portion of Funding Received - 112,500
Funding Competitive?: Yes

2012/3 - 2014/3
Principal Investigator
Cluster for Subarctic Ecosystems in Transition (CSET), Grant

**Funding Sources:**

2012/3 - 2014/3 Canadian Space Agency (CSA)
Total Funding - 451,545
Portion of Funding Received - 70,000
Funding Competitive?: Yes

Co-investigator : A. Berg; B. Branfireun; M. Hayashi; M. McRae; M. Richardson; P. Marsh; R. Petrone; R. Schincariol

2011/3 - 2014/3
Principal Investigator
Permafrost degradation mechanisms in organic-covered terrains and linkages to runoff production, Grant

**Funding Sources:**

2010/3 - 2015/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
Discovery Grant
Total Funding - 100,000
Portion of Funding Received - 100,000
Funding Competitive?: Yes

**Completed [n=13]**

2012/3 - 2013/3
Principal Investigator
Regional Consortium for Permafrost Ecosystems in Transition (PET), Grant

**Funding Sources:**

2012/3 - 2013/3 Canadian Foundation for Climate and Atmospheric Sciences (CFCAS)
Total Funding - 100,000
Portion of Funding Received - 35,000
Funding Competitive?: Yes

Co-investigator : J. Baltzer; P. Marsh

2009/9 - 2012/9
Principal Investigator
Understanding and prediction of permafrost melt impacts on northern water resources, Grant

**Funding Sources:**

2009/9 - 2012/9 Natural Sciences and Engineering Research Council of Canada (NSERC)
Strategic Project Grant
Total Funding - 449,310
Portion of Funding Received - 120,000
Funding Competitive?: Yes

Co-investigator : M. Hayashi; R. Schincariol

2011/7 - 2011/8
Principal Investigator
Support for Canadian National Correspondent to the IAHS, Grant

**Funding Sources:**

2011/7 - 2011/8 Wilfrid Laurier University
Research Office
Total Funding - 1,000
Portion of Funding Received - 1,000
Funding Competitive?: Yes

2009/6 - 2011/6
Collaborator

Integration of Data Management and Outreach for Cold Regions Hydrological, Cryospheric and Climate Science in Western and Northern Canada, Grant

**Funding Sources:**

2009/6 - 2011/6 Canadian Foundation for Climate and Atmospheric Sciences (CFCAS)
Total Funding - 295,000
Portion of Funding Received - 10,000
Funding Competitive?: Yes

Co-investigator : A. Pietroniro; C. Spence; D. Versghy; M. Hayashi; P. Marsh; R. Soulis; S. Carey; S. Munro;

Principal Investigator : J. Pomeroy

2005/9 - 2010/9
Principal Investigator

Boreal and Cold Regions Headwater Runoff and Water Supply, Research Chair

**Funding Sources:**

2005/9 - 2005/9 Canada Research Chairs (CRC)
Total Funding - 500,000
Portion of Funding Received - 500,000
Funding Competitive?: Yes

2009/12 - 2010/6
Principal Investigator

Laurier - Otago Water Science Collaborative, Scholarship

**Funding Sources:**

2009/12 - 2010/6 University of Otago
William Evans Scholarship
Total Funding - 7,500
Portion of Funding Received - 7,500
Funding Competitive?: Yes

2007/3 - 2010/3
Co-investigator

Arctic Freshwater Systems: Hydrology and Ecology, Grant

**Funding Sources:**

2007/3 - 2010/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
International Polar Year
Total Funding - 6,000,000
Portion of Funding Received - 140,000
Funding Competitive?: Yes

Co-investigator : B. Bonsal; B. Davison; C. Spence; D. Lam; D. Ross; F. Hicks; J. Pomeroy; J. VanderSanden; K. Young; L. Lesack; M. Hayashi; P. Marsh; R. Granger; R. Janowicz; R. Soulis; S. Baltaos; S. Carey; S. Dery; T. Prowse; W. Perry; W. Schertzer;

Principal Investigator : A. Pietroniro

2005/3 - 2010/3
Principal Investigator

Cold Regions hydrology Infrastructure, Grant

**Funding Sources:**

2005/3 - 2010/3 Canadian Foundation for Innovation
Total Funding - 252,033
Portion of Funding Received - 252,033
Funding Competitive?: Yes

2009/3 - 2010/3
Co-investigator

Large scale climate chamber simulations of permafrost environments, Grant

**Funding Sources:**

2009/3 - 2010/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
Collaborative Research and Development Grant
Total Funding - 12,000
Portion of Funding Received - 3,000
Funding Competitive?: Yes

Principal Investigator : R. Scincariol

2005/3 - 2010/3
Principal Investigator

The integrated runoff response of wetland-dominated basins in the zone of discontinuous permafrost, Grant

**Funding Sources:**

2005/3 - 2010/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
Northern Supplements Program
Total Funding - 42,000
Portion of Funding Received - 42,000
Funding Competitive?: Yes

2005/3 - 2010/3
Principal Investigator

Runoff generation in the wetland-dominated zone of discontinuous permafrost, Grant

**Funding Sources:**

2005/3 - 2010/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
Discovery Grant
Total Funding - 124,500
Portion of Funding Received - 124,500
Funding Competitive?: Yes

2006/3 - 2010/3
Co-investigator

Improved Processes and Parameterisation in Cold Regions: IP3, Grant

**Funding Sources:**

2006/3 - 2010/3 Canadian Foundation for Climate and Atmospheric Sciences (CFCAS)
Total Funding - 2,579,998
Portion of Funding Received - 357,750
Funding Competitive?: Yes

2005/9 - 2009/9
Principal Investigator

Boreal and Cold Regions Headwater Runoff and Water Supply – operating funds, Grant

**Funding Sources:**

2005/9 - 2010/9 Wilfrid Laurier University
Total Funding - 131,000
Portion of Funding Received - 131,000
Funding Competitive?: Yes

**Under Review [n=3]**

2015/3 - 2020/3
Co-applicant

Changing Arctic Network, Grant

**Funding Sources:**

2015/3 - 2020/3 Canada Foundation for Innovation (CFI)
New Opportunities
Total Funding - 8,204,650
Portion of Funding Received - 100,000
Funding Competitive?: Yes

Co-investigator : B. Wolfe; D. MacLatchy; J. Baltzer; J. McGeer; M. English; M. Turetsky; O. Sonnentag; S. Smith;

Principal Investigator : P. Marsh

2015/5 - 2018/5
Co-applicant

The Changing Arctic Network (CANet), Grant

**Funding Sources:**

2015/5 - 2018/5 Canada Foundation for Innovation (CFI)
Innovation Fund
Total Funding - 8,204,650
Portion of Funding Received - 100,000
Funding Competitive?: Yes

Co-investigator : B. Wolfe; D. MacLatchy; J. Baltzer; J. McGeer; M. Turetsky; O. Sonnentag; S. Smith;

Principal Investigator : P. Marsh

2014/12 - 2017/12
Principal Investigator

Consortium for permafrost ecosystems in transition (CPET), Grant

**Funding Sources:**

2014/12 - 2017/12 Horn River Basin Producers Group
Total Funding - 30,000
Portion of Funding Received - 5,000
Funding Competitive?: Yes

2014/12 - 2017/12 Natural Sciences and Engineering Research Council of Canada (NSERC)
Collaborative Research and Development
Total Funding - 314,478
Portion of Funding Received - 52,400
Funding Competitive?: Yes

2014/12 - 2014/12 Geoscience BC
Total Funding - 65,000
Portion of Funding Received - 10,800
Funding Competitive?: Yes

2014/12 - 2014/12 Petroleum Technology Alliance of Canada (PTAC)
Total Funding - 155,000
Portion of Funding Received - 25,800
Funding Competitive?: Yes

Co-investigator : A. Berg; J. Baltzer; J. Craig;

Collaborator : E. Johnson; M. Hayashi; O. Sonnentag

## Student/Postdoctoral Supervision

### Bachelor's [n=6]

| | |
|---|---|
| 2013/5 - 2013/9<br>Principal Supervisor | Haughton, Emily (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Evolution of water chemical properties with flow distance along a bog ecotone.<br>Present Position: M.Sc. candidate. |
| 2013/5 - 2013/8<br>Co-Supervisor | McManus, Allison (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Impact of galling of shrubs on the energy balance of the underlying ground surface.<br>Present Position: M.Sc. candidate, WIlfrid Laurier University. |
| 2012/5 - 2014/9<br>Principal Supervisor | Freeman, Lindsay (In Progress) , Wilfrid Laurier University<br>Thesis/Project Title: Seasonal water balance of a seismic line over degrading permafrost, southern NWT, Canada.<br>Present Position: Research Camp Co-ordinator, Scotty Creek, NWT. |
| 2011/5 - 2012/8<br>Principal Supervisor | Connon, Ryan (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Runoff processes and pathways on peat plateaus.<br>Present Position: PhD candidate, Wilfrid Laurier University |
| 2011/5 - 2011/8<br>Principal Supervisor | Corbett, Zack (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Spatial patterns of methylmercury concentration in thawing permafrost terrain |
| 2008/1 - 2010/8<br>Principal Supervisor | Veness, Tyler (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Spatial and temporal patterns of seasonal ground thaw<br>Present Position: Golder Associates, Fort St. John, BC. |

### Bachelor's Honours [n=2]

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|---|---|
| 2013/9 - 2014/5<br>Principal Supervisor | Freeman, Lindsay (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Seasonal water balance of seismic disturbance lines. |
| 2008/1 - 2009/5<br>Principal Supervisor | Henshaw, Jennifer (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Seasonal water balance of hydrologically-isolated and connected flat bogs at scotty Creek, NWT, Canada. |

### Master's Thesis [n=13]

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|---|---|
| 2014/9 - 2016/5<br>Principal Supervisor | Stone, Lindsay (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2016/5<br>Thesis/Project Title: Hydraulic properties of channel fens |
| 2014/9 - 2016/5<br>Principal Supervisor | Mathieu, Elyse (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2016/5<br>Thesis/Project Title: Impacts of fire on the active layer thermal regime |
| 2013/9 - 2015/6<br>Principal Supervisor | Haughton, Emily (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2015/6<br>Thesis/Project Title: Soil moisture recharge from snow melt |
| 2013/9 - 2015/6<br>Co-Supervisor | McManus, Allison (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2015/6<br>Thesis/Project Title: Influence of Landscape Aggregation in Modelling Snow-Cover Ablation and Snowmelt Runoff in Arctic Mountainous Environments |

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|---|---|
| 2012/9 - 2014/12<br>Principal Supervisor | Braverman, Michael (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2014/12<br>Thesis/Project Title: New geophysical methods of seismic disturbance monitoring |
| 2012/9 - 2014/12<br>Principal Supervisor | Vanopstal, Stacey (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2014/12<br>Thesis/Project Title: Role of root networks in soil thaw |
| 2012/9 - 2014/12<br>Principal Supervisor | Gordon, John (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2014/12<br>Thesis/Project Title: Methyl Mercury fluxes from peatlands with thawing permafrost |
| 2011/9 - 2012/9<br>Principal Supervisor | Corbett, Zack (Withdrawn) , Wilfrid Laurier University<br>Thesis/Project Title: Permafrost thaw implications on methyl mercury mobility in northern peatlands |
| 2010/9 - 2012/9<br>Principal Supervisor | Williams, Tyler (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Preferential slope drainage and thaw |
| 2010/9 - 2014/12<br>Principal Supervisor | Veness, Tyler (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2014/12<br>Thesis/Project Title: Seasonal hydrological connections among peatland types<br>Present Position: On Leave |
| 2010/9 - 2014/10<br>Principal Supervisor | Verma, Ashok (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Ground thaw energy variations in a northern wetland complex |
| 2008/9 - 2012/2<br>Co-Supervisor | Che, Qian (Completed) , University of Waterloo<br>Thesis/Project Title: Modelling ground thaw and runoff in an alpine tundra basin |
| 2007/9 - 2011/7<br>Principal Supervisor | Kenward, Andrea (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Landscape controls on CO2 exchange from a sub-Arctic landscape |

**Doctorate [n=4]**

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|---|---|
| 2013/9 - 2017/9<br>Principal Supervisor | Persaud, Bhaleka (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2017/9<br>Thesis/Project Title: Climate warming in the southern Taiga Plains Ecoregion |
| 2013/9 - 2016/9<br>Principal Supervisor | Connon, Ryan (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2016/9<br>Thesis/Project Title: Hydrology of seasonal bog connections in permafrost terrain |
| 2008/9 - 2010/9<br>Principal Supervisor | Morgan, Clay (Withdrawn) , Wilfrid Laurier University<br>Thesis/Project Title: Climate-induced changes to eco-hydrology of northern wetlands |
| 2003/1 - 2009/4<br>Principal Supervisor | Wright, Nicole (Completed) , Simon Fraser University<br>Thesis/Project Title: Drainage processes in wetland-dominated permafrost |

**Post-doctorate [n=10]**

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|---|---|
| 2014/8 - 2016/8<br>Co-Supervisor | Kurylyk, Barret (Completed) , University of Calgary<br>Thesis/Project Title: Numerical modelling of permafrost thaw through modifications to NEST. |
| 2013/2 - 2014/12<br>Principal Supervisor | Rahimzadeh, Parinaz (In Progress) , Wilfrid Laurier University<br>Student Degree Expected Date: 2014/12<br>Thesis/Project Title: Remote Sensing Detection of permafrost thaw-induced ecosystem change. |
| 2012/12 - 2014/2<br>Co-Supervisor | Riviere, Agnes (Completed) , University of Calgary<br>Thesis/Project Title: Modelling thaw of discontinuous permafrost. |

| | |
|---|---|
| 2012/5 - 2013/9<br>Co-Supervisor | Rajit Patankar (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Influence of canopy insect infestations on ground thermal regimes.<br>Present Position: PDF, University of Toronto |
| 2011/1 - 2011/8<br>Co-Supervisor | Ellis, Chad (Completed) , University of Saskatchewan<br>Thesis/Project Title: Improved model simulation of ground thaw. |
| 2009/8 - 2010/1<br>Principal Supervisor | Dall'Amico, Matteo (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Coupled heat and mass transfer simulation |
| 2008/5 - 2012/12<br>Principal Supervisor | Chasmer, Laura (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Detection of permafrost thaw rates and patterns from remote sensing. |
| 2008/1 - 2010/8<br>Principal Supervisor | Endrizzi, Stefano (Completed) , University of Saskatchewan<br>Thesis/Project Title: Simulation of subsurface energy advection and ground thaw. |
| 2007/9 - 2009/7<br>Principal Supervisor | Rezanezhad, Fereidoun (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: 3-dimensional tomography of peat soils using CT Scans |
| 2006/9 - 2008/11<br>Principal Supervisor | Zhang, Yinsuo (Completed) , Carleton University<br>Thesis/Project Title: Development of improved numerical simulations of ground thaw |

**Research Associate [n=4]**

| | |
|---|---|
| 2014/5 - 2016/5<br>Principal Supervisor | Brian Sieben (Completed) , Wilfrid Laurier-GNWT Partnership<br>Thesis/Project Title: Community Modeller, Water Knowledge Application Network (WatKAN). |
| 2013/1 - 2013/9<br>Principal Supervisor | Spring, Andrew (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Rates and patterns of permafrost thaw induced land cover change derived from multi-spectral and Lidar image analysis.<br>Present Position: PhD candidate, Wilfrid Laurier University |
| 2012/9 - 2012/12<br>Principal Supervisor | Williams, Tyler (Completed) , Wilfrid Laurier University<br>Thesis/Project Title: Data archive development, Scotty Creek Research Station.<br>Present Position: Research Scientist, Yukon Territorial Government. |
| 2008/3 - 2008/12<br>Principal Supervisor | Robert Bemrose (Completed) , Carleton University<br>Thesis/Project Title: Image analysis and development of model code for snowmelt runoff from alpine hillslopes.<br>Present Position: Researcher, Statistics Canada |

## Event Administration

| | |
|---|---|
| 2014/8 - 2014/12 | Special Session Organiser / Covenor, Annual Meeting of the American Geophysical Union. Changing Canadian sub-Arctic and Arctic landscapes as part of the climate system, Conference, 2014/12 - 2014/12 |
| 2014/6 - 2014/10 | Planning and Organising, Second Annual Meeting of the Changing Cold Regions Network (CCRN), Conference, 2014/10 - 2014/10 |
| 2014/1 - 2014/5 | Special Session Organiser / Covenor, Annual Meeting of the Canadian Geophysical Union – Hydrology Section. Cold Regions Hydrology, Conference, 2014/5 - 2014/5 |
| 2013/10 - 2014/2 | Planning and Organising, Annual General Meeting of the Wilfrid Laurier – Government of the Northwest Territories Partnership Agreement, Conference, 2014/2 - 2014/2 |
| 2013/10 - 2014/2 | Planning and Organising, Inaugural Scotty Creek Research Day, Conference, 2014/2 - 2014/2 |

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|---|---|
| 2013/10 - 2014/2 | Planning and Organising, Second Annual Taiga Plains Research Network Meeting and Workshop, Workshop, 2014/2 - 2014/2 |
| 2012/10 - 2013/2 | Planning and Organising, Inaugural Meeting of the Taiga Plains Research Network (TPRN), Conference, 2013/2 - 2013/2 |
| 2012/11 - 2013/1 | Planning and Organising, Annual General Meeting of the Wilfrid Laurier – Government of the Northwest Territories Partnership Agreement, Conference, 2013/1 - 2013/1 |
| 2012/2 - 2012/6 | Session Chair / Discussant, Arctic Boreal Vulnerability Experiment (ABoVE) Workshop, Workshop, 2012/6 - 2012/6 |
| 2011/8 - 2011/12 | Planning and Organising, Laurier-GNWT Partnership Science Committee meeting with of the Laurier Aboriginal Students Association, Association, 2011/12 - 2011/12 |
| 2011/6 - 2011/10 | Planning and Organising, Forum for Leadership on Water (FLOW) meeting and panel discussion, Workshop, 2011/10 - 2011/10 |
| 2011/2 - 2011/6 | Planning and Organising, Laurier-GNWT Partnership Workshop on Training. (Member of the Workshop Organising Comittee), Workshop, 2011/6 - 2011/6 |
| 2011/1 - 2011/5 | Special Session Organiser / Covenor, Joint Annual Meeting of the Canadian Geophysical Union and the Canadian Society of Agricultural and Forest Meteorology. Improved Cold Regions Hydrology Processes, Parameterisation, and Prediction I & II, Conference, 2011/5 - 2011/5 |
| 2010/10 - 2011/2 | Planning and Organising, Workshop on Integrating Ecological Monitoring and Education. (Invited Representative of the Laurier-GNWT Partnership Agreement), Workshop, 2011/2 - 2011/2 |
| 2010/11 - 2011/1 | Planning and Organising, Forum for Leadership on Water (Flow) Meeting on the implementation of the Northern Voices, Northern Waters: Northwest Territories Water Stewardship Strategy.(Invited Representative of the Laurier-GNWT Partnership Agreement), Conference, 2011/1 - 2011/1 |
| 2010/6 - 2010/10 | Consultation and Discussant, Joint NSERC (Strategic Grant) – IP3 Northern Research and CRHM Training Workshop, Workshop, 2010/10 - 2010/10 |
| 2010/6 - 2010/10 | Planning and Organising, Joint NSERC Strategic Project - IP3 Users' Advisory Workshop / Northern Water Resources Research, Workshop, 2010/10 - 2010/10 |
| 2010/6 - 2010/10 | Planning and Organising, Joint NSERC Strategic Project - IP3 Users' Advisory Workshop / CRHM Training Workshop, Workshop, 2010/10 - 2010/10 |
| 2010/2 - 2010/6 | Special Session Organiser / Covenor, Improved Cold Regions Hydrology Processes, Parameterisation, and Prediction, CMOS Special Session, Conference, 2010/6 - 2010/6 |
| 2009/8 - 2009/12 | Planning and Organising, Planning meeting for Laurier-GNWT Partnership, Conference, 2009/12 - 2009/12 |
| 2009/6 - 2009/10 | Planning and Organising, Joint Annual Workshop of the IP3 & WC2N Networks, Workshop, 2009/10 - 2009/10 |
| 2009/1 - 2009/5 | Special Session Organiser / Covenor, Joint Meeting of AGU/CGU. Advances in Non-destructive and Image Processing Techniques for Hydrology and Environmental Studies, Conference, 2009/5 - 2009/5 |
| 2009/1 - 2009/5 | Special Session Organiser / Covenor, Joint Meeting of AGU/CGU. Advances in Cold Regions Hydrology, Conference, 2009/5 - 2009/5 |
| 2008/12 - 2009/3 | Planning and Organising, IP3 - Workshop on Prediction at WLU, Workshop, 2009/3 - 2009/3 |

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| 2008/10 - 2009/2 | Session Chair / Discussant, Ken Hewitt Symposium on Cold Regions and Water Science Research, Conference, 2009/3 - 2009/3 |
| 2008/7 - 2008/11 | Session Chair / Discussant, IP3 - 3nd Annual Workshop, Workshop, 2008/11 - 2008/11 |
| 2008/2 - 2008/6 | Planning and Organising, IP3 - Cold regions Hydrological Model (CRHM) Training Workshop, Workshop, 2008/6 - 2008/6 |
| 2008/2 - 2008/6 | Planning and Organising, IP3 - Workshop on Modelling and Parameterisation at WLU, Workshop, 2008/6 - 2008/6 |

## Editorial Activities

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| 2013/9 - 2014/6 | Guest Editor, Special Issue, Hydrological Processes Journal, Canadian Geophysical Union - Hydrology Section, Journal |
| 2009/1 - 2009/12 | Guest Editor, Hydrology and Earth System Science (HESS)/Cold Regions Hydrology: Improved Processes, Parameterisation, Prediction, Journal |
| 2009/6 - 2009/9 | Co-Editor, Proceedings, Northern Research Basins Symposium (Proceedings), Report |

## Knowledge and Technology Translation

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| 2005/9 - 2020/9 | Co-Director, Community Engagement<br>Group/Organization/Business Serviced: Cold Regions Research Centre<br>Target Stakeholder: General Public<br>Outcome / Deliverable: Facilitating and promoting northern research, training and capacity building. Outcomes include hosting of research and training workshops and meetings, production of theses, journal articles.<br>Evidence of Uptake/Impact: Cold regions / Northern studies has been adopted by Wilfrid Laurier University as a key component of its Strategic Research Plan. As such, Laurier has a high concentration of students and researchers focussed on cold regions research. Other evidence of impact includes the development of the ten-year (2010-2020) Partnership Agreement on research and capacity building the the Government of the Northwest Territories. This was largely facilitated by the Cold Regions Research Centre.<br>References / Citations / Web Sites: http://coldregions.ca/<br>Activity Description: Fund raising and dispersal for northern research, training and engagement activities. |

2012/2 - 2020/2 Founding member, Research Uptake Strategies
Group/Organization/Business Serviced: Taiga Plains Research Network
Target Stakeholder: Academic Personnel
Outcome / Deliverable: Interdisciplinary uptake of knowledge to improve understanding and capacity to predict the overall response of ecosystems to warming and human disturbance. Outcomes and deliverables are focussed on development of new interdisciplinary approaches and modelling tools for northern ecosystem response to warming.
Evidence of Uptake/Impact: Improved interdisciplinary predictive modelling tools for ecosystem response to warming and human disturbance. These new tools include linkages and feed-backs between ecological and hydrological systems in an attempt to numerically represent the eco-hydrological response of Boreal and subarctic ecosystems to warming.
References / Citations / Web Sites: http://taigaplains.ca/
Activity Description: Interdisciplinary activities focussed on improving the understanding of and the ability to predict the response of Boreal and sub-Arctic ecosystems to climate warming and human disturbance. Such activities include interdisciplinary workshops, grant applications, special sessions at conferences, creation or expansion of partnerships including government agencies and local communities (e.g. Laurier-GNWT Partnership), service on interdisciplinary supervisory committees.

2014/6 - 2017/6 Scientific Advisor, Policy/Regulation Development
Group/Organization/Business Serviced: Government of British Columbia
Target Stakeholder: Government Personnel
Outcome / Deliverable: Provide new knowledge and predictive tools to facilitate the implementation of the Water Sustainability Act.
Evidence of Uptake/Impact: Changes to the Water Sustainability Act to reflect the impact of permafrost thaw on water resources in north-eastern BC.
Activity Description: Research collaboration with BC Ministry of Forests, Lands and Natrural Resource Operations.

2013/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Fort Nelson First Nation
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Collaboration on Cooperative Research and Development application to NSERC.

2013/6 - 2015/6 Scientific Advisor, R&D Collaboration with Industry
Group/Organization/Business Serviced: Horn River Basin Producers Group (HRBPG)
Target Stakeholder: Industrial Consortium
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Collaboration on Cooperative Research and Development application to NSERC.

2013/6 - 2015/6 Scientific Advisor, R&D Collaboration with Industry
Group/Organization/Business Serviced: Nexen
Target Stakeholder: Industry/Business (>500 employees)
Outcome / Deliverable: Capacity building and knowledge mobilization
Evidence of Uptake/Impact: Improved understanding of and ability to predict future water availability with ecosystem changes resulting from climate warming and human disturbance.
Activity Description: Collaboration with NSERC CRD proposal (in review). This includes development of a new suite of predictive tools for water supplies and ecosystem change with ongoing permafrost thaw.

2013/6 - 2015/6 Scientific Advisor, R&D Collaboration with Industry
Group/Organization/Business Serviced: ConocoPhillips Canada
Target Stakeholder: Industry/Business (>500 employees)
Outcome / Deliverable: Capacity building and knowledge mobilization
Evidence of Uptake/Impact: Improved understanding of and ability to predict future water availability with ecosystem changes resulting from climate warming and human disturbance.
Activity Description: Collaboration with NSERC CRD proposal (in review). This includes development of a new suite of predictive tools for water supplies and ecosystem change with ongoing permafrost thaw.

2013/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Dene Tha First Nation
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Planning and coordination of field research activities and band priorities with regard to warming and human induced changes to the land cover.

2013/6 - 2015/6 Scientific Advisor, R&D Collaboration with Industry
Group/Organization/Business Serviced: Quick Silver Resources
Target Stakeholder: Industry/Business (>500 employees)
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Collaboration on Cooperative Research and Development application to NSERC.

2013/6 - 2015/6 Scientific Advisor, R&D Collaboration with Industry
Group/Organization/Business Serviced: Petroleum Technology Alliance of Canada (PTAC)
Target Stakeholder: Industrial Consortium
Outcome / Deliverable: Capacity building and knowledge mobilization
Evidence of Uptake/Impact: Improved understanding of and ability to predict future water availability with ecosystem changes resulting from climate warming and human disturbance.
Activity Description: Collaboration with NSERC CRD proposal (in review). This includes development of a new suite of predictive tools for water supplies and ecosystem change with ongoing permafrost thaw.

2012/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Trout Lake (Sambaa K'e) First Nation
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Working with community on permafrost thaw impact on the water quality of Trout Lake.

2009/6 - 2015/6 Scientific Advisor, Policy/Regulation Development
Group/Organization/Business Serviced: Government of the Northwest Territories
Target Stakeholder: Government Personnel
Outcome / Deliverable: Guidance for the Protection of Land, Forest, and Wildlife – Oil and Gas Seismic Exploration.
Activity Description: Working with Forest Resources Management Branch (ENR/GNWT) on development of Best Practices for industry.

2009/6 - 2015/6 Scientific Advisor, Policy/Regulation Development
Group/Organization/Business Serviced: Government of the Northwest Territories
Target Stakeholder: Government Personnel
Outcome / Deliverable: Climate Change Impact and Adaptation Plan
Activity Description: Coordination of research activities with GNWT research priorities.

2009/6 - 2015/6 Scientific Advisor, Policy/Regulation Development
Group/Organization/Business Serviced: Government of the Northwest Territories
Target Stakeholder: Government Personnel
Outcome / Deliverable: Water Resources Management Strategy

2009/6 - 2015/6 Scientific Advisor, Policy/Regulation Development
Group/Organization/Business Serviced: Government of the Northwest Territories
Target Stakeholder: Government Personnel
Outcome / Deliverable: Decho Forest Resource Assessment
Activity Description: Coordination of research on seismic line disturbances with development of Best Practices (ENR/GNWT)

1999/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Village of Fort Simpson
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Evidence of Uptake/Impact: Often contacted by the Fort Simpson or by groups within Fort Simpson for input on issues related to water, permnafrost, ecosystems.
Activity Description: Regular meetings in Fort Simpson to provided updates on field studies in the Fort Simpson region, and to receive feedback.

1999/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Liidlii Kue First Nation
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Regular meetings of Scotty Creek researchers with First Nations community members in the Fort Simpson Region for two-way knowledge exchange.

1999/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Denedeh Resource Committee
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Evidence of Uptake/Impact: Regularly contacted with the Resource Committee, usually through the LKFN or DFN Resource Managers.
Activity Description: Regular meetings of Scotty Creek researchers with First Nations community members in the Fort Simpson Region for two-way knowledge exchange.

1999/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Fort Simpson Metis Local #52
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Regular meetings of Scotty Creek researchers with First Nations community members in the Fort Simpson Region for two-way knowledge exchange.

1999/6 - 2015/6 Scientific Advisor, Community Engagement
Group/Organization/Business Serviced: Jean-Marie Rover First Nation
Target Stakeholder: General Public
Outcome / Deliverable: Community capacity building and knowledge mobilization
Activity Description: Regular meetings of Scotty Creek researchers with First Nations community members in the Fort Simpson Region for two-way knowledge exchange.

2010/7 - 2010/7 Science Steering Committee member, Policy/Regulation Development
Group/Organization/Business Serviced: Government of the Northwest Territories - Wilfrid Laurier University Partnership
Target Stakeholder: Government Personnel
Outcome / Deliverable: Increased capacity to predict the impacts of unprecedented climate warming and human disturbance on northern water resources.
Evidence of Uptake/Impact: Changes to the NWT Water Strategy to account for the impact of permafrost thaw on water resources. Other GNWT strategies and best practice guidelines were also modified to reflect new knowledge generated by my research programme. Raised grant funds to train GNWT employees on application of new hydrological predictive tools. This includes the training of a designated Community Modeller on secondment in the Environment and Natural Resources Department (GNWT) who provides model training to that department.
References / Citations / Web Sites: http://nwtwlu.com
Activity Description: Community engagement, training of government employees, organisation of training workshops, direct contributions to government policy and strategy development through regular meetings with government managers and elected officials.

## International Collaboration Activities

2015/4 - 2020/4 CollaboratorUnited States
Provide logistical and research support at the Scotty Creek Research Camp for research teams from the NASA RAMP (Rapid Methane Pulse) experiment. (application under review by NASA).

2014/8 - 2018/10 Co-Director, Northern Research Basins, Canada
Organise the Canadian Delegation to the NRB, represent Canadian northern researchers at the international NRB meetings

2008/6 - 2015/7 National Representative, Canada
Represent the Canadian hydrological community at the International Association of Hydrological Sciences.

## Committee Memberships

2007/9 - 2020/9 Committee Member, Laurier Institute for Water Science, Wilfrid Laurier University
This committee oversees the activities of the IWS, plans new initiatives, reports to the Board of Directors.

2010/7 - 2020/7 Committee Member, Science Steering Committee, Laurier - Government of the Northwest Territories
Provides leadership and direction for research and capacity building activities of the Partnership.

2014/5 - 2020/5 Committee Member, Laurier-GNWT Terms of Reference sub-committee, Laurier-GNWT Partnership Agreement
Development and implementation of the Terms of Reference for the Partnership Science Steering Committee, Access Agreement for Infrastructure provided by the Laurier-GNWT Partnership Agreement, Development and updating of Partnership Science Plan.

2013/9 - 2018/9 Committee Member, Undergraduate Curriculum Committee, Wilfrid Laurier University
This committee oversees the undergraduate curriculum, develops new programmes and courses, develops linkages with other programmes and universities.

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| 2014/2 - 2018/2 | Committee Member, Laurier Field Research Safety Committee, Wilfrid Laurier University<br>Development of safety guidelines for operation for remote field research camps. Interface with Government of the Northwest Territories to conform with Territorial guidelines and expectations for Safety, arrangement for safety training courses for university staff and students, including fire arms safety, helicopter and fixed-wing safety, first aid for remote areas. |
| 2014/8 - 2017/8 | Committee Member, Water Science Undergraduate Programme Development Committee, Wilfrid Laurier University<br>Develop a new articulated, interdisciplinary undergraduate programme in Water Science, including a co-op option. |
| 2013/11 - 2016/11 | Chair, Search Committee, Wilfrid Laurier - Government of Northwest Territories Partnership Agreement<br>Search, interview and appointment of positions funded by the Laurier-GNWT Partnership Agreement, including Research Technicians, and Community Liaison Officers. |
| 2013/9 - 2016/9 | Committee Member, Field Safety Committee, Wilfrid Laurier University<br>This committee develops policies and guidelines for safety for field research. |
| 2013/9 - 2016/9 | Co-chair, Cold Regions Research Centre, Wilfrid Laurier University<br>Oversee the operation of the Centre, coordinate activities with the IWS and other Centres, promote cold regions research and training initiatives, outreach and engagement, support and facilitation of the Laurier-GNWT Partnership Agreement. |
| 2014/8 - 2015/8 | Committee Member, Departmental Appointments Committee, Wilfrid Laurier University<br>Appointment and promotion of faculty members. |
| 2010/6 - 2015/6 | Committee Member, Science Committee, Laurier-GNWT Partnership Agreement, Wilfrid Laurier University<br>This committee sets out science, training and engagement priorities for the Laurier-GNWT Partnership.This committee reports to the WLU VP Academic/Provost and to the Deputy Minister, Department of Environment and Natural Resources, GNWT. |
| 2010/6 - 2015/6 | Chair, CALIBER Home Users Group (CHUG)., Wilfrid Laurier University<br>Sub-Committee of the CFI CALIBER Grant applicants to oversee the timeline for building completion, use and dissemination of infrastructure. |
| 2014/4 - 2015/4 | Committee Member, Canadian Arctic Network (CANet) - CFI proposal Development Committee, Wilfrid Laurier University<br>This committee was formed to prepare ands submit a proposal to the Canada Foundation for Innovation. The committee reports to the VP Research. |
| 2014/2 - 2014/10 | Committee Member, Centre for Cold Regions & Water Science, Wilfrid Laurier University<br>This committee governs the operation of the Centre of for Cold Regions & Water Science. It reports to the VP Research. |
| 2013/9 - 2014/9 | Co-chair, Cold Regions Research Centre Committee, Wilfrid Laurier University<br>Co-Director, Cold Regions Research Centre. |
| 2012/9 - 2014/9 | Chair, Association of Canadian Universities for Northern Studies, Northern Scientific Training Program (Wilfrid Laurier University)., Wilfrid Laurier University<br>I oversee the NSTP proposal and reporting process for student applicants and their supervisors, as well as prepare the annual report and submission package to ACUNS. |
| 2008/9 - 2014/9 | Co-chair, the Institute for Water Science, Wilfrid Laurier University<br>Co-Director of the Institute for Water Science. On-going membership. |

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| 2011/4 - 2011/6 | Committee Member, University Research Professor Award, Selection Committee, Wilfrid Laurier University<br>This committee considers nominations for the award of University Research Professor, and makes a recommendation to the VP Research. |
| 2010/8 - 2010/9 | Committee Member, Appointments Committee, Wilfrid Laurier University<br>For the appointment of new tenure-track faculty members. |
| 2010/8 - 2010/9 | Committee Member, Appointments Committee, Wilfrid Laurier University<br>For the appointment of Sessional Instructors. |
| 2008/9 - 2010/9 | Committee Member, Board of Directors for the Institute of Water Science, Wilfrid Laurier University<br>The committee reported to the VP Research. |
| 2008/1 - 2010/7 | Co-chair, Laurier Institute for Water Science, Wilfrid Laurier University<br>Oversee progress of the IWS, develop new initiatives, coordinate with the CRRC. |
| 2008/1 - 2009/10 | Committee Member, Proposal Development Committee for CFI application jointly proposed by the CRRC and the IWS., Wilfrid Laurier University<br>This committee prepared the CALIBER CFI application (Quinton, PI) which was funded and formed the infrastructural platform for the Laurier-GNWT Partnership Agreement including the new Centre for Cold Regions & Water Science. |
| 2008/9 - 2009/9 | Committee Member, Graduate Studies Committee, Wilfrid Laurier University<br>The committee reviews and makes recommendations on applications for Graduate Studies in the Department of Geography and Environmental Studies. |
| 2008/4 - 2009/4 | Committee Member, Water Science undergraduate programme development, Wilfrid Laurier University<br>This committee us charged with developing an undergraduate co-op programme in Water Science. |
| 2008/9 - 2008/12 | Committee Member, NSERC Scholarship Review Committee, Wilfrid Laurier University<br>This committee reviews student applications for NSERC Scholarships, and makes recommendations to the VP Research. |

## Other Memberships

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| 2013/9 - 2023/10 | Member, Canadian Network of Northern Research Operators<br>Representative of the Scotty Creek Research Station to the CNNRO. |
| 2012/2 - 2022/2 | Founding Member, Taiga Plains Research Network<br>Developed a new network of researchers with a common interest in examining ecosystem impacts of unprecedented climate warming and human disturbance in the the Taiga Plains Ecoregion. |
| 2014/8 - 2018/8 | Co-Chair, Northern Research Basins<br>Organise and lead the Canadian Delegation to the Bi-Annual Northern Research Basins Conference and Workshop. |
| 2014/7 - 2018/7 | Committe Member, Samba Deh First Nations<br>Trout Lake Source Water Protection Technical Advisory Group. Works with community leaders of the Samba Deh (Trout Lake) First Nation and other researchers to mitigate environmental challenges arising from climate warming. |
| 2009/1 - 2017/9 | National Representative, International Hydrological Program<br>National Representative of the Northern Research Basins Working Group. |

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| 2009/5 - 2017/5 | Committe Member, Northern Research Bains<br>NRB-Canadian Executive Committee. Development of the Canadian Delegation to the International NRB, representation of Canada at the NRB and preparation of Canadian report to the NRB. In 2009, the NRB meeting was hosted by Canada, so in that year the responsibilities also included organisation of the workshop. |
| 2013/1 - 2017/1 | Committee Member, Natural Sciences and Engineering Research Council of Canada (NSERC)<br>Science Steering Committee of the Changing Cold Regions Network. This committee oversees the research direction of the Changing Cold Regions Network (NSERC-CCAR) |
| 2012/8 - 2016/8 | Member, Canadian Polar Commission<br>ACUNS Representative and Chair of the Northern Studies Training Program at Wilfrid Laurier University. |
| 2013/9 - 2015/9 | Committee Member, Government of the Northwest Territories<br>Central Mackenzie Surface Water and Groundwater Baseline Assessment and Monitoring Program Committee. Makes recommendations to the GNWT on funding research and monitoring proposals |
| 2008/6 - 2015/7 | National Correspondent, International Association of Hydrological Sciences<br>Canadian representative to the International Association of Hydrological Sciences. |
| 2014/5 - 2015/5 | President, Canadian Geophyisical Union - Hydrology Section<br>President of the Canadian Geophysical Union - Hydrology Section. |
| 2013/1 - 2015/1 | Science Steering Committee Member, Natural Sciences and Engineering Research Council of Canada (NSERC)<br>NSERC-CCAR, Changing Cold Regions Network (CCRN). |
| 1992/9 - 2014/9 | Member, American Geophysical Union<br>Hydrology Section. On-going membership. |
| 2013/5 - 2014/5 | Vice President, Canadian Geophyisical Union - Hydrology Section<br>Vice-President, Canadian Geophysical Union - Hydrology Section. |
| 2008/6 - 2013/5 | Treasurer, Canadian Geophyisical Union - Hydrology Section<br>Treasurer, Canadian Geophysical Union - Hydrology Section |
| 2006/12 - 2011/1 | Member, Improved Process, Parameterisation and Prediction in Cold Regions (IP3)<br>IP3 Science Committee member. |
| 2002/12 - 2008/6 | Executive Member, International Association of Hydrological Sciences (IAHS)<br>Canadian National Committee (CNC) for the International Association of Hydrological Sciences (IAHS) |

## Presentations

1. Sonnentag O, Helbig M*, Payette F*, Wischnewski K*, Baltzer J, Marsh P, Quinton W. (2014). Implications of boreal forest expansion and loss for regional climate in northwestern Canada. American Geophysical Union Annual Meeting, San Francisco, United States
   Main Audience: Researcher
   Invited?: No, Keynote?: No
2. Braverman M*, Quinton W. (2014). Impact of linear disturbance on hydrological regime in regions of discontinuous permafrost. GeoRegina 2014, Regina, Canada
   Invited?: No, Keynote?: No

3. Helbig M*, Detto M, Wischnewski K*, Quinton W, Sonnentag O. (2014). Greenhouse gas fluxes of a rapidly degrading permafrost landscape in the Taiga Plains, Northwest Territories. THAW 2014. Thermokarst Aquatic Ecosystems Workshop, Quebec City, Canada
   Invited?: No, Keynote?: No

4. VanOpstal S*, Quinton W. (2014). Exploring the role root networks have on seasonal ground thaw in the zone of discontinuous permafrost. Canadian Geophysical Union Joint Annual Meeting with Canadian Society of Soil Science and Mantle Convection Workshop, Banff, Canada
   Invited?: No, Keynote?: No

5. Connon R*, Quinton W, Craig J, Hayashi M. (2014). The effect of permafrost thaw on rising streamflows in the Lower Liard River Valley, NWT, Canada. Canadian Geophysical Union Joint Annual Meeting with Canadian Society of Soil Science and Mantle Convection Workshop, Banff, Canada
   Invited?: No, Keynote?: No

6. Baltzer J, Quinton W, Sonnentag O. (2014). Boreal forests in permafrost landscapes: changing structure and function in response to climate warming. Geophysical Union Annual Meeting, San Francisco, United States
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

7. Helbig M*, Detto M, Wischnewski K*, Chasmer L, Quinton W, Kljun N, Payette F*, Sonnentag O. (2014). On the challenges of measuring greenhouse gas and energy fluxes over heterogeneous boreal landscapes. Institute of Soil Science at the University of Hamburg, Lecture Series, Hamburg, Germany
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

8. Connon R*, Quinton W, Hayashi M, Craig J. (2014). The effect of permafrost thaw on rising stream flows in the lower Liard River valley, NWT, Canada. Canadian Geophysical Union – Hydrology Section. Eastern Student Meeting., Toronto, Canada
   Invited?: No, Keynote?: No

9. Berg A, Quinton W, Huang J, Chasmer L, Ambadan J*, Connon R*, Stone L*. (2014). The relationship of increasing trends in GRACE observed total water storage to landscape changes in the Southern Taiga Plain. American Geophysical Union Annual Meeting, San Francisco, United States
   Main Audience: Researcher
   Invited?: No, Keynote?: No

10. Hanisch J*, Connon R*, Templeton M, Quinton W, Olefeldt D, Moore T, Roulet N, Sonnentag O. (2014). Characterizing dissolved organic carbon concentrations and export in a boreal forest-peatland landscape under the influence of rapidly degrading discontinuous permafrost. American Geophysical Union Annual Meeting, San Francisco, United States
    Main Audience: Researcher
    Invited?: No, Keynote?: No

11. Helbig M*, Wischnewski K*, Chasmer L, Quinton W, Kljun N, Detto M, Sonnentag O. (2014). Seasonal dynamics of the land surface energy balance of a boreal forest-peatland landscape affected by degrading permafrost in the Taiga Plains. American Geophysical Union Annual Meeting, San Francisco, United States
    Main Audience: Researcher
    Invited?: No, Keynote?: No

12. Quinton W. (2014). Outreach and Engagement with Communities (Theme E). CCRN Inception Meeting,, Saskatoon, Canada
    Invited?: Yes, Keynote?: No

13. Williams T*, Pomeroy J, Janowicz R, Carey S, Rasouli K, Quinton W. (2014). An improved method for calculating ground surface temperatures in snow free periods. Canadian Geophysical Union Joint Annual Meeting with Canadian Society of Soil Science and Mantle Convection Workshop, Banff, Canada
    Invited?: No, Keynote?: No

14. DeBeer C*, Strickert G*, Wheater H, Quinton W. (2014). Mobilizing scientific knowledge and enhancing environmental decision support in Northern and Western Canada: The outreach and engagement programme of the changing Cold Regions Network. 48th Congress of the Canadian Meteorological and Oceanographic Society, Rimouski, Canada
Invited?: Yes, Keynote?: No

15. Baltzer J, Quinton W. (2014). Building on the Laurier-GNWT partnership. Invited presentation to the Deputy Minister, Environment and Natural Resources, Government of the Northwest Territories, Yellowknife, Canada
Main Audience: Decision Maker
Invited?: Yes, Keynote?: No

16. Braverman M*, Quinton W. (2014). Impact of linear disturbance on hydrological regime in regions of discontinuous permafrost. Canadian Geophysical Union Joint Annual Meeting with Canadian Society of Soil Science and Mantle Convection Workshop, Banff, Canada
Invited?: No, Keynote?: No

17. Pelletier N*, Olefeldt D, Turetsky M, Quinton W, Sonnentag O, Talbot J. (2014). Post-thaw carbon stock variation in a permafrost peatland of the boreal zone. American Geophysical Union Annual Meeting, San Francisco, United States
Main Audience: Researcher
Invited?: No, Keynote?: No

18. Helbig M*, Detto M, Wischnewski K*, Chasmer L, Quinton W, Kljun N, Payette F*, Higgins K*, Sonnentag O. (2014). The influence of rapidly degrading discontinuous permafrost in the Northwest Territories, Canada, on atmospheric CO2 and CH4 fluxes. EUCOP4: 4th European Conference on Permafrost, Evora, Portugal
Invited?: No, Keynote?: No

19. Pelletier N*, Olefeldt D, Turetsky M, Quinton W, Sonnentag O, Talbot J. (2014). Post-thaw carbon stock variation in a permafrost peatland of the boreal zone. Arctic Change 2014, Ottawa, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

20. Helbig M*, Wischnewski K*, Chasmer L, Kljun N, Marsh P, Sonnentag O. (2014). Monitoring carbon, water and heat fluxes in northwestern Canada under the influence of changing land cover and permafrost conditions. 1st ICOS International Conference on Greenhouse Gases and Biogeochemical Cycles, Brussels, Belgium
Invited?: No, Keynote?: No

21. Hanisch J*, Connon R*, Templeton M*, Quinton W, Olefeldt D, Moore T, Roulet N, Sonnentag O. (2014). Remobilization of dissolved organic carbon in a boreal forest-peatland landscape under the influence of rapidly degrading discontinuous permafrost.Arctic Change 2014, Ottawa, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

22. Higgins K*, Payette F*, Lévesque E, Quinton W, Sonnentag O. (2014). Small-scale influence of vegetation on thaw depth in a boreal forest-peatland landscape, Northwest Territories, Canada. EUCOP4: 4th European Conference on Permafrost, Evora, Portugal
Invited?: No, Keynote?: No

23. Sonnentag O, Helbig M*, Baltzer J, Chasmer L, Detto M, Kljun N, Marsh P, Payette F*, Quinton W, Wischnewski K*. (2014). The Taiga Plains Research Network: Observing net carbon, water and heat exchanges across a latitudinal permafrost gradient in Northwestern Canada for improved understanding of high latitude ecosystem responses to climate change. Arctic Change 2014, Ottawa, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

24. Pelletier N*, Olefeldt D, Turretsky M, Quinton W, Sonnentag O, Talbot J. (2013). Influence of permafrost thaw on carbon cycling and veghetation communities in a northern discontinuous peatland complex at Scotty Creek, Northwest Territories. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

25. Chasmer L, Quinton W, Hopkinson C, Veness T*, Baltzer J. (2013). Quantifying land cover classification sensitivity to shape, structure, and form within the discontinuous permafrost zone, NWT: Importance to hydrological model parameterization. 2013 Joint Scientific Congress of CMOS, CGU, & CWRA, Saskatoon, Canada
Invited?: No, Keynote?: No

26. Wilkie M, Baltzer J, Quinton W, Gordon J*, Lister A, MacLatchy D. (2013). Effects of permafrost thaw and land use on toxicants and fish health in the Dehcho. Return to Country Foods Workshop, Kakisa, Canada
Invited?: Yes, Keynote?: No

27. Berg A, Warren R*, Merchant M*, Rowlandson T*, Quinton W. (2013). Spatial and temporal variation of soil water in the Canadian Sub-arctic and relationship to SMOS brightness temperature. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

28. Quinton W, Sonnentag O, Connon R*, Chasmer L. (2013). The growth of permafrost-free bogs at the southern margin of permafrost, 1947-2010. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

29. Quinton W, Marsh P, Berg A, Baltzer J. (2013). Subarctic and Arctic ecosystem studies in the CCRN. CCRN Theme B Workshop, Hamilton, Canada
Invited?: Yes, Keynote?: No

30. Hopkinson C, Chasmer L, Quinton W. (2013). Studying permafrost plateau morphological processes and rates of change using LiDAR and thermography. 55th Annual Meeting of the Western Division of the Canadian Association of Geographers (WDCAG), Lethbridge, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No

31. Quinton W. (2013). Observed earth system change in cold regions - Inventory and statistical evaluation (Theme A). Annual Changing Cold Regions Network Meeting, 1st, Saskatoon, Canada
Invited?: Yes, Keynote?: No

32. Connon R*, Baltzer J, Craig J, Hayashi M, Quinton W. (2013). Rising stream flows in the lower Liard River valley, NWT, Canada: examining potential causes. 2013 Joint Scientific Congress of CMOS, CGU, & CWRA, Saskatoon, Canada
Invited?: No, Keynote?: No

33. English M, Baltzer J, Connon R*, Marsh P, Marshall K*, Quinton W, Parsaud B*, Spence C. (2013). The state of water in the NWT. NWT Environmental Monitoring Results Workshop, 2nd Annual NWT Environmental Monitoring Results Workshop, December 10-12, 2013., Yellowknife, Canada
Invited?: Yes, Keynote?: No

34. Quinton W. (2013). How might processes and their interactions respond to change: Soils. CCRN Theme B Workshop, Hamilton, Canada
Invited?: Yes, Keynote?: No

35. Hayashi M, Rivière A*, McKenzie J, Voss C. (2013). Permafrost response to climate change: Linking field observation with numerical simulation. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

36. Quinton W, Baltzer J. (2013). Changing surface water systems in the discontinuous permafrost zone: Implications to stream flow. IAHS–IAPSO–IASPEI Joint Assembly, Gothenburg, Sweden
Invited?: Yes, Keynote?: Yes

37. Sonnentag O, Helbig M*, Detto M, Wischnewski K*, Chasmer L, Marsh P, Quinton W. (2013). Establishment of a meso-network of eddy covariance towers to quantify carbon, water and energy fluxes along a permafrost and climate gradient in the Taiga Plains, Northwest Territories, Canada. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

38. Quinton W. (2013). Water resource implications of climate warming and human disturbance in the Taiga Plains. Presentation to the University of Waterloo, Waterloo, Canada
Invited?: Yes, Keynote?: No

39. Quinton W. (2013). Observed earth system change in cold regions – Inventory and statistical evaluation (Theme A). CCRN Inception Meeting, Saskatoon, Canada
Invited?: Yes, Keynote?: No

40. Helbig M*, Detto M, Higgins K*, Wischnewski K*, Chasmer L, Quinton W, Sonnentag O. (2013). Quantifying carbon, water and energy fluxes under the influence of rapidly degrading discontinuous permafrost in the Northwest Territories, Canada. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

41. Baltzer J, Patankar R*, Downey A, Quinton W. (2013). Roots on ice – Responses of root water uptake to seasonal thaw and permafrost degradation in a subarctic boreal peatland. International Workshop on Sap Flow, 9th, Ghent, Belgium
Invited?: No, Keynote?: No

42. Sniderhan A*, Patankar R*, Baltzer J, Quinton W. (2013). The changing climate: Picea mariana on discontinuous permafrost. Annual Changing Cold Regions Network Meeting, 1st, Saskatoon, Canada
Invited?: No, Keynote?: No

43. Baltzer J, Quinton W. (2013). Permafrost thaw and landscape change in the Southern Taiga Plains. Pan-Territorial Permafrost Workshop, Yellowknife, Canada
Invited?: Yes, Keynote?: No

44. Rivière A, Hayashi M, Quinton W. (2013). Roles of groundwater processes in the evolution of complex landscape of discontinuous permafrost. Canadian Geophysical Union, Annual meeting, Saskatoon, Canada
Invited?: No, Keynote?: No

45. Quinton W. (2013). Summary and overview of Theme E progress and developments. (Outreach and engagement with communities). Annual Changing Cold Regions Network Meeting, 1st, Saskatoon, Canada
Invited?: Yes, Keynote?: No

46. Farfard M*, Quinton W, Batlzer J. (2013). Successional processes in subarctic wetlands influenced by permafrost thaw. Faster, higher, more? Past, present and future dynamics of alpine and arctic flora under climate change. Kurhaus Bergun, Grisons, Switzerland
Invited?: No, Keynote?: No

47. Raleigh M, Landry C, Hayashi M, Quinton W, Lundquist J. (2013). Approximating snow surface temperature from standard temperature and humidity data: New possibilities for snow model and remote sensing validation. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

48. Pomeroy J, Wheater H, Quinton W, Stewart R. (2013). Changing cold regions: Addressing atmospheric, cryospheric, ecological and hydrological change in the Saskatchewan and Mackenzie river basins, Canada. AGU Meeting in the Americas in Cancun, Cancun, Mexico
Invited?: No, Keynote?: No

49. Sonnentag O, Baltzer J, Chasmer L, Detto M, Marsh P, Quinton W. (2012). Influence of increasing active layer depth and continued permafrost degradation on carbon, water and energy fluxes over two contrasting, forested permafrost landscapes in the Taiga Plains, Northwest Territories, Canada. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

50. Baltzer J, Quinton W. (2012). The Taiga Plains monitoring network. Presented to NERC (UK) funded research network at the Aurora Research Institute, Inuvik, Canada
Invited?: No, Keynote?: No

51. Quinton W, Baltzer J. (2012). Water resource implications of permafrost thaw in the Southern NWT. Presented to Deptarment of Geography, University of Guelph, Guelph, Canada
Invited?: Yes, Keynote?: No

52. Marsh P, Quinton W, Endrizzi S*. (2012). Hydrological hazards in Northern Canada. Federal Interdepartmental Program of Energy R & D (PERD), Calgary, Canada
Invited?: Yes, Keynote?: No

53. Cockburn J, Baltzer J, Quinton W. (2012). Rates of landscape change in discontinuous permafrost terrain inferred from Goose Lake sediments, Scotty Creek Basin, Northwest Territories, Canada. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

54. Baltzer J, Quinton W. (2012). Permafrost thaw in Ontario's Far North: Implications for water resources. Meeting with Ontario Power Generation, University of Waterloo, Waterloo, Canada
Invited?: No, Keynote?: No

55. Quinton W, Marsh P, Hayashi M, Baltzer J. (2012). Permafrost thaw-induced land cover change: Implications for the resource sector. Federal Interdepartmental Program of Energy R & D (PERD), Calgary, Canada
Invited?: Yes, Keynote?: No

56. Chasmer L, Petrone R, Quinton W, Hopkinson C, Sutherland G*, Kljun N, van Gorsel E*. (2012). Use of high resolution remote sensing for better understanding biosphere-atmosphere interactions. Presented to Deptarment of Geography, University of Guelph, Guelph, Canada
Invited?: Yes, Keynote?: No

57. Williams T*, Quinton W, Kanigan J. (2012). Linear disturbances in a peatland environment: Permafrost thaw and landscape change. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

58. Quinton W, Baltzer J, Johnson E, Hayashi M. (2012). Water resource implications of wide-spread permafrost thaw in Northeastern BC. 6th B.C. Unconventional Gas Technical Forum, Victoria, Canada
Invited?: Yes, Keynote?: Yes

59. Christensen B, Hayashi M, Zhang Y, Quinton W. (2012). Sub-grid thermal modeling of discontinuous permafrost near Ft. Simpson, Northwest Territories. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

60. Baltzer J, Hayashi M. (2012). Permafrost thaw-induced land cover change: Implications for land and water. Meeting with Liidlii Kue First Nation (LKFN) and Decho First Nations (DFN), Fort Simpson, Canada
Invited?: Yes, Keynote?: No

61. Hopkinson C, Chasmer L, Veness T*, Goulden T*, Quinton W. (2012). Investigating forest canopy and permafrost interactions in a northern boreal watershed using airborne LiDAR and thermal imagery. Canadian Symposium on Remote Sensing (CSRS 33rd), Ottawa, Canada
Invited?: No, Keynote?: No

62. Williams T*, Quinton W, Chasmer L. (2012). Modelling incoming radiation on linear disturbances near Fort Simpson, NWT. CGU-WS Eastern Student Conference, Hamilton, Canada
Invited?: No, Keynote?: No

63. Marsh P, Quinton W, Endrizzi S*, Lantz T, Yang D, Zhao L*. (2012). Climate, hydrology, permafrost, and vegetation interactions in the Western Canadian Arctic. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

64. Baltzer J, Quinton W, Chasmer L. (2012). Permafrost thaw as a mechanism for widespread boreal forest loss. Ecological Society of America Annual Meeting, Portland, United States
Invited?: No, Keynote?: No

65. Veness T*, Quinton W. (2012). Connecting spatial variability of thaw to preferential permafrost degradation within the discontinuous permafrost zone: Scotty Creek, Northwest Territories, Canada. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

66. Baltzer J, Quinton W, Marsh P. (2012). Rapid changes in the Northwest Territories: Key issues and a partnership-based approach. NASA Arctic Boreal Vulnerability Experiment (ABoVE) Workshop, Boulder, United States
Invited?: Yes, Keynote?: No

67. Marsh P, Quinton W, Endrizzi S*, Onclin C, Russell M, Lantz T, Kokelj S. (2012). The role of vegetation, snow, soil moisture and hydrology on the spatial distribution of active layer thickness and upper permafrost layer melt. IPY 2012. Internation Polar Year Final Science Meeting, Montreal, Canada
Invited?: No, Keynote?: No

68. Christensen B*, Hayashi M, Zhang Y*, Quinton W. (2011). Predicting the hydrological response of un-gauged basins in wetland dominated discontinuous permafrost. Joint Annual Meeting of the Canadian Geophysical Union and the Canadian Society of Agricultural and Forest Meteorology, Banff, Canada
Invited?: No, Keynote?: No

69. Hayashi M, McClymont A*, Christensen B, Bentley L, Quinton W. (2011). Thawing of permafrost peatlands: Effects of water-energy feedback on landscape evolution. GEOHYDRO 2011. 1st Joint Meeting of the Canadian Quaternary Association (CANQUA) and the Canadian Chapter of the International Association of Hydrogeologists (IAH-CNC), Quebec City, Canada
Invited?: No, Keynote?: No

70. Hayashi M, McClymont A*, Bentley L, Quinton W. (2011). Thawing of discontinuous permafrost: Effects of heterogeneous landcover and water-energy feedback. Seminar presented at Helmholtz Center for Environmental Research, Leipzig, Germany
Invited?: Yes, Keynote?: No

71. Kenward A*, Chasmer L*, Petrone R, Quinton W. (2011). Influence of permafrost plateau thaw on carbon exchanges along a fen-plateau-bog transect within the discontinuous permafrost zone, Northwest Territories. Joint Annual Meeting of the Canadian Geophysical Union and the Canadian Society of Agricultural and Forest Meteorology, Banff, Canada
Invited?: No, Keynote?: No

72. Che Q*, Quinton W, Soulis E. (2011). Investigation of snow cover area and water equivalent using ground-based photography. University of Waterloo, Deptartment of Civil Engineering Speaker Series, Waterloo, Canada
Invited?: No, Keynote?: No

73. Endrizzi S*, Gruber S, Marsh P, Quinton W, Dall' Amico M*, Rigon R. (2011). The GEOtop model to describe the coupled energy and water balance in frozen soils. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: Yes, Keynote?: No

74. Hopkinson C, Chasmer L*, Crasto N, Goulden T*, Quinton W. (2011). Assessing spatial coincidence between forest canopy and discontinuous permafrost features. Joint Annual Meeting of the Canadian Geophysical Union and the Canadian Society of Agricultural and Forest Meteorology, Banff, Canada
Invited?: No, Keynote?: No

75. Quinton W, Brown T. (2011). Examining the influence of permafrost thaw on runoff in the Subarctic. Joint Annual Meeting of the Canadian Geophysical Union and the Canadian Society of Agricultural and Forest Meteorology, Banff, Canada
Invited?: No, Keynote?: No

76. Hayashi M, McClymont A*, Bentley L, Quinton W. (2011). Thawing of discontinuous permafrost: Effects of heterogeneous landcover and water-energy feedback. Seminar presented at Alfred Wegener Institute, Potsdam, Germany
Invited?: Yes, Keynote?: No

77. Hayashi M, McClymont A*, Bentley L, Quinton W. (2011). Effects of water-energy-vegetation feedback on thawing of peat-covered, discontinuous permafrost. Seminar presented at Lancaster Environmental Centre, University of Lancaster, Lancaster, United Kingdom
Invited?: Yes, Keynote?: No

78. Nagare R*, Schincariol R, Quinton W, Hayashi M. (2011). Effects of initial water content on freeze-thaw processes in peat mesocosms. Joint Annual Meeting of the Canadian Geophysical Union and the Canadian Society of Agricultural and Forest Meteorology, Banff, Canada
Invited?: No, Keynote?: No

79. Hayashi M, McClymont A*, Quinton W, Bentley L, Christensen B*. (2011). Thawing of permafrost peatlands and hydrological implications. Final Meeting and Workshop of the IP3 Network, Saskatoon, Canada
Invited?: Yes, Keynote?: No

80. Chasmer L, Hopkinson C, Petrone R, Quinton W. (2011). Fusion of airborne LiDAR and WorldView-2 MS data for classification of depth to permafrost within Canada's sub-Arctic. SilviLaser, Hobart, Australia
Invited?: No, Keynote?: No

81. Quinton W, Hayashi M. (2011). Permafrost thaw induced land-cover change in the Canadian subarctic: Implications for water resources. IUGG General Assembly IAHS Symposia (H02) - Cold Regions Hydrology in a Changing Climate, Melbourne, Australia
Invited?: Yes, Keynote?: Yes

82. Hayashi M, McClymont A*, Bentley L, Quinton W. (2011). Effects of water-energy-vegetation feedback on thawing of peat-covered, discontinuous permafrost. Seminar presented at Institute of Terrestrial Ecosystems, Federal Institute of Technology (ETH), Zurich, Switzerland
Invited?: Yes, Keynote?: No

83. Quinton W, Hayashi M, Baltzer J, Craig J. (2011). Runoff from wetland-dominated terrains with thawing permafrost. American Geophyscial Union, Annual Fall Meeting, San Francisco, United States
Invited?: Yes, Keynote?: Yes

84. Petrone R, Chasmer L, Brown S, Mendoza C, Diiwu J, Hopkinson C, Devito K. (2010). Examining the sensitivity of modelled evapotranspiration to vegetation structural characteristics within boreal peatlands, riparian ecosystems and upland mixedwood forest. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

85. McClymont A*, Bentley L, Hayashi M, Christensen B*, Quinton W. (2010). Geophysical imaging of discontinuous permafrost in northwest Canada. EAGE, Near Surface Geophysics Meeting, Zurich, Switzerland
Invited?: No, Keynote?: No

86. Rezanezhad F, Price J, Elrick D, Elliot T, Shook K. (2010). Examining the influence of pore size distribution and geometry on flow through unsaturated peat using 3D micro-CT scanning. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

87. Quinton W. (2010). Permafrost thaw in the southern NWT: Implications for water resources. Laurier-GNWT Research Partnership Meeting, Yellowknife, Canada
Invited?: No, Keynote?: No

88. Endrizzi S*, Marsh P, Quinton W. (2010). Topographic control on the depth of thaw in a peat covered continuous permafrost site in the arctic tundra and implication on the runoff production. International Polar Year Oslo Science Conference, Oslo, Norway
Main Audience: Researcher
Invited?: No, Keynote?: No

89. Hayashi M, Bentley L, McClymont A*, Quinton W. (2010). Geophysical imaging of discontinuous permafrost: Effects of sub-grid landcover variability and linear disturbance. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

90. Hayashi M, Quinton W. (2010). Melting of discontinuous permafrost: Roles of coupled water and energy transport processes. Seminar presented at Laval University, Quebec City, Canada
Invited?: No, Keynote?: No

91. Marsh P, Endrizzi S*, Quinton W. (2010). IP3 research in the Western Canadian Arctic. IP3 CRHM and Northern Research Workshop, Yellowknife, Canada
Invited?: No, Keynote?: No

92. Carey S, Quinton W, Pomeroy J. (2010). The role of subsurface storage and permafrost change on subarctic streamflow. International Polar Year Oslo Science Conference, Oslo, Norway
Invited?: No, Keynote?: No

93. Christensen B*, Hayashi M, Quinton W, Chasmer L*. (2010). Run-off generation from aggregates of peat plateaus in the discontinuous permafrost zone of the NWT. CGU Joint Meeting with CMOS, Ottawa, Canada
Invited?: No, Keynote?: No

94. Endrizzi S, Marsh P. (2010). Investigation of the energy-based theory of runoff in arctic regions with a hydrological model that couples the heat and water balance. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

95. McClymont A*, Hayashi M, Bentley R, Christiansen B. (2010). Geophysical imaging of thawing permafrost. Speaker Series, Cold Regions research Centre, Waterloo, Canada
Invited?: Yes, Keynote?: No

96. Nagare R*, Schincariol R, Quinton W, Hayashi M. (2010). Laboratory simulation of water and heat transport in sub-arctic peat soils: Experimental setup. CGU Joint Meeting with CMOS, Ottawa, Canada
Invited?: No, Keynote?: No

97. Hayashi M, McClymont A, Christensen B, Bentley L. (2010). Effects of water-energy feedback processes on thawing of peat-covered, discontinuous permafrost. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

98. Endrizzi S*, Marsh P, Quinton W. (2010). Impact of the topographic control on the depth of thaw in a peat covered continuous permafrost site in the arctic tundra. GEO2010. Canadian Conference on Permafrost, Calgary, Canada
Invited?: No, Keynote?: No

99. Christensen B*, Hayashi M, Quinton W, Chasmer L. (2010). Run-off generation from aggregates of peat plateaus in the discontinuous permafrost zone of the NWT. IP3 CRHM and Northern Research Workshop, Yellowknife, Canada
Invited?: No, Keynote?: No

100. Quinton W. (2010). Changing northern landscapes: New challenges and partnerships for NWT water resources. Public Lecture, Prince of Wales Northern Heritage Centre, Yellowknife, Canada
Invited?: Yes, Keynote?: Yes

101. Chasmer L*, Petrone R, Devito K, Mendoza C, Quinton W. (2010). Sensitivity of potential evapotranspiration to canopy characteristics within the western boreal forest, Alberta. CGU Joint Meeting with CMOS, Ottawa, Canada
Invited?: No, Keynote?: No

102. Hayashi M, McClymont A*, Bentley L, Quinton W. (2010). Thawing of discontinuous permafrost: Using geophysical data to understand water-energy feedback processes. Seminar presented at the Department of Applied and Environmental Geophysics, Federal Institute of Technology (ETH), Zurich, Switzerland
Invited?: Yes, Keynote?: No

103. Hayashi M, Quinton W. (2010). Thawing of discontinuous permafrost: Effects of heterogeneous landcover and water-energy feedback. Seminar presented at Copenhagen University, Copenhagen, Denmark
Invited?: Yes, Keynote?: No

104. Hayashi M, Quinton W. (2010). Melting of discontinuous permafrost: Roles of coupled water and energy transport processes. Seminar presented at U.S. Geological Survey, Lakewood, United States
Invited?: No, Keynote?: No

105. Quinton W. (2010). Permafrost thaw in the Canadian sub-Arctic: Some implications for water resources. New Zealand Geographical Society Seminar Series, University of Otago, Dunedin, New Zealand
Invited?: Yes, Keynote?: No

106. Endrizzi S*, Marsh P, Quinton W. (2010). Topographic control on the depth of thaw in a peat covered continuous permafrost site in the arctic tundra and implication on the runoff production. CGU Joint Meeting with CMOS, Ottawa, Canada
Invited?: No, Keynote?: No

107. Christensen B*, Hayashi M, McClymont A*, Bentley L, Quinton W. (2010). Melting of discontinuous permafrost: Effects of canopy removal and water-energy feed-back processes. GEO2010. Canadian Conference on Permafrost, Calgary, Canada
Invited?: No, Keynote?: No

108. Endrizzi S*, Marsh P, Quinton W, Dall'Amico M*. (2010). Topographic control of the depth of ground thaw in a peat covered continuous permafrost site in the Canadian arctic tundra. European Geosciences Union General Assembly, Vienna, Austria
Invited?: No, Keynote?: No

109. Hayashi M, Quinton W. (2010). Thawing of discontinuous permafrost: Effects of heterogeneous landcover and water-energy feedback. Seminar presented at Geomorphology Seminar Series, Tsukuba, Japan
Invited?: Yes, Keynote?: No

110. Quinton W. (2009). Peatland hydrology of discontinuous permafrost in the Northwest Territories: Overview and synthesis. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

111. Hayashi M, Bentley L, McClymont A*, Quinton W. (2009). Geophysical imaging of discontinuous permafrost: Effects of sub-grid landcover variability and linear disturbance. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

112. Chasmer L*, Whittington P*, Hopkinson C, Petrone R, Quinton W. (2009). The influence of vegetation canopy structure on the spatial pattern of active layer thaw within the Sub-Arctic – Boreal transition discontinuous permafrost zone. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

113. Rezanezhad F*, Quinton W, Price J, Elrick D, Elliot T*, Shook K. (2009). Influence of pore size and geometry on peat unsaturated hydraulic conductivity measured from 3D computed tomography images. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

114. Chasmer L*, Quinton W, Hopkinson C, Petrone R, Whittington P*. (2009). The influence of vegetation canopy structure on active layer thaw within the sub-arctic discontinuous permafrost zone. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

115. Thorne R*, Quinton W. (2009). Development of an energy-based runoff generation model in Arctic Tundra regions. 17th International Northern Research Basins (NRB) Symposium and Workshop, Baffin Island, Canada
Invited?: No, Keynote?: No

116. Chasmer L*, Petrone R, Quinton W. (2009). Spatial partitioning of CO2 fluxes based on canopy structure within a heterogeneous boreal wetland ecosystem. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

117. Carey S, Zhang Y*, Quinton W. (2009). Improved parameterizations for organic-covered permafrost soils. Joint Annual Workshop of the IP3 & WC2N Networks, Lake Louise, Canada
Invited?: Yes, Keynote?: No

118. Zhang Y*, Carey S, Quinton W, Janowicz R. (2009). Parameterization of organic-covered permafrost soils in land surface and hydrological models. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

119. Nagare R*, Schincariol T, Quinton W, Hayashi M. (2009). Calibration of time domain reflectometry using undisturbed peat samples. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

120. Thorne R*, Quinton W. (2009). Development of an energy-based runoff generation model in Arctic Tundra regions. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

121. Thorne R*, Quinton W. (2009). Development of an energy-based runoff generation model in arctic tundra regions. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

122. Quinton W, Hayashi M. (2009). Permafrost melt in wetland basins: Implications for water resources in the NWT. Information Meeting with the Government of the Northwest Territories, Department of Environment and Natural resources, Yellowknife, Canada
Invited?: Yes, Keynote?: No

123. Morgan C*, Quinton W, Soulis R. (2009). The interaction of vegetation and alpine watershed runoff in relation to climate change. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

124. Quinton W, Hayashi M. (2009). Permafrost thaw in the Liard River Valley: Rates and implications. Planning Meeting, Environment and Natural Resources, Yellowknife, Canada
Invited?: Yes, Keynote?: No

125. Kenward A*, Quinton W, Petrone R. (2009). Examining gas flux interactions in wetland-dominated permafrost terrain. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

126. Zhang Y*, Carey S, Quinton W, Janowicz R. (2009). Parameterizations of organic-covered permafrost soils in land surface and hydrological models. Joint Annual Workshop of the IP3 & WC2N Networks, Lake Louise, Canada
Invited?: No, Keynote?: No

127. Quinton W, Hayashi M, Chasmer L*. (2009). Basin runoff modelling in wetland-dominated, discontinuous permafrost: Important considerations. 17th International Northern Research Basins (NRB) Symposium and Workshop, Iqaluit, Canada
Invited?: Yes, Keynote?: No

128. Hayashi M, Quinton W, Chasmer L*. (2009). Wetland-forest transition at the edge of permafrost: Roles of water and energy transport process. Joint Annual Workshop of the IP3 & WC2N Networks, Lake Louise, Canada
Invited?: No, Keynote?: No

129. Marsh P, Endrizzi S*, Quinton W, Thorne R*, Dall'Amico M*. (2009). Modelling the spatial dynamics of permafrost and seasonally frozen ground at diverse scales. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

130. Henshaw J*, Quinton W. (2009). Connectivity and storage of bogs in a northern wetland. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

131. Chasmer L*, Petrone R, Quinton W, Brown S*, Hopkinson C. (2009). Spatial partitioning of CO2 fluxes based on canopy structure within a heterogeneous managed Boreal wetland ecosystem. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

132. Chasmer L*, Quinton W, Hayashi M. (2009). The influence of the black spruce canopy on the spatial annual thaw pattern of permafrost plateaus. Joint Annual Workshop of the IP3 & WC2N Networks, Lake Louise, Canada
Invited?: No, Keynote?: No

133. Quinton W, Hayashi M, Chasmer L*. (2009). Permafrost melt in the wetland-dominated zone of discontinuous permafrost - Implications for basin runoff. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

134. Chasmer L*, Petrone R, Devito K, Quinton W, Mendoza C. (2009). Airborne lidar remote sensing of canopy characteristics and fluxes at URSA. Canadian Oil Sands Network for Research and Development (CONRAD) Environmental Research Symposium, Edmonton, Canada
Invited?: Yes, Keynote?: No

135. Hayashi M, Quinton W, Chasmer L*. (2009). Wetland-forest transition at the edge of permafrost: Roles of coupled water and energy transport process. Geological Society of America, Annual Meeting, Portland, United States
Invited?: No, Keynote?: No

136. Kenward A*, Quinton W, Petrone R. (2009). Examining gas flux interactions in wetland-dominated permafrost terrain. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

137. Che Q*, Quinton W. (2009). Snowmelt runoff simulation from a subalpine tundra hill slope. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

138. Chasmer L*, Hopkinson C, Quinton W, Hayashi M. (2009). Quantifying change in peat plateau and wetland areas within the discontinuous permafrost zone: 1947 to present. The 30th Canadian Symposium on Remote Sensing, Lethbridge, Canada
Invited?: No, Keynote?: No

139. Quinton W, Hayashi M, Chasmer L*, Rezanezhad F*, Che Q*, Verma A*, Kenward A*. (2009). Basin runoff prediction in the context of degrading permafrost. Joint Annual Workshop of the IP3 & WC2N Network, Lake Louise, Canada
Invited?: Yes, Keynote?: No

140. Nagare R*, Schincariol R, Quinton W, Hayashi M. (2009). Calibration of TDR probes for low water content measurements in organic soils. Ken Hewitt Symposium on Cold Regions and Water Science Research, Waterloo, Canada
Invited?: No, Keynote?: No

141. Rezanezhad F*, Quinton W, Price J, Elliot T. (2009). Measurement and analysis of physical and hydraulic properties of unsaturated peat using 3D micro-CT scanning. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

142. Quinton W. (2009). Tundra and wetland hydrology in the context of climate change and catchment comparison. North-Watch Workshop I: Climatic drivers, hydrological regime and environmental change, Dorset, Canada
Invited?: Yes, Keynote?: No

143. Seglenieks F*, Soulis E, Quinton W, Hayashi M. (2009). Development of the MESH hydrological model in two Canadian arctic basins. Joint meeting of Canadian Geophysical Union and the American Geophysical Union, Toronto, Canada
Invited?: No, Keynote?: No

144. Chasmer L*, Quinton W, Petrone R, Whittington P, Hopkinson C. (2008). The influence of vegetation canopy structure on soil frost dynamics within the northern boreal and sub-arctic discontinuous permafrost zones. 3rd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: No, Keynote?: No

145. Quinton W, Hayashi M, Wright N*, Chasmer L*, Hopkinson C, Schincariol R, Rezanezhad F*, Thorne R*, Kenward A*, Zhang Y*, Verma A*, Petrone R. (2008). IP3 progress at Scotty Creek. 3rd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: Yes, Keynote?: No

146. Liu L*, Soulis E, Quinton W. (2008). Soil moisture parameterisation in hydrology land surface schemes. Annual Northern Research Day, 2nd, Waterloo, Canada
Invited?: No, Keynote?: No

147. Chasmer L*, Quinton W, Petrone R, Whittington P*, Hopkinson C. (2008). The influence of vegetation canopy structure on soil frost dynamics within the northern boreal and sub-arctic discontinuous permafrost zones. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

148. Quinton W, Bemrose R*, Carey S, Zhang Y*. (2008). Seasonal active layer development of an alpine tundra hillslope. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

149. Rezanezhad F*, Quinton W, Price J, Elrick D, Elliot T, Heck R. (2008). Direct measurement of unsaturated hydraulic conductivity through peat soils using pore distribution obtained by x-ray computed tomography. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

150. Verma A*, Quinton W. (2008). Influence of canopy radiation transfer on spatial distribution of soil thaw. Annual Northern Research Day, 2nd, Waterloo, Canada
Invited?: No, Keynote?: No

151. Pomeroy J, Carey S, Essery R, Granger R, Hayashi M, Janowicz R, Marsh P, Munro S, Pietroniro A, Quinton W, Snelgrove K, Soulis R, Spence C, Verseghy D. (2008). Wetter, wilder and warmer. The Lowdown on the Meltdown: CFCAS Symposium on Arctic Climate, Ottawa, Canada
Invited?: Yes, Keynote?: Yes

152. Schincariol R, Nagare R*, Quinton W, Hayashi M. (2008). The supporting role of laboratory mesocosm studies in the Scotty Creek watershed field studies. 3rd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: No, Keynote?: No

153. Kenward A*, Quinton W, Petrone R. (2008). Examining gas-flux interactions in wetland dominated permafrost terrain. Presented to the University of Toronto, Toronto, Canada
Invited?: No, Keynote?: No

154. Rezanezhad F*, Quinton W, Elliot T, Price J, Elrick D, Heck R. (2008). Physical and hydraulic properties of peat soil using x-ray computed tomography and image analysis. EGU General Assembly, Vienna, Austria
Invited?: No, Keynote?: No

155. Pomeroy J, Essery R, Marks D, Quinton W, Carey S. (2008). Snow and vegetation: Processes and parameterisation. IP3 Users & Stakeholders Community Workshop, Canmore, Canada
Invited?: Yes, Keynote?: No

156. Quinton W. (2008). CRHM for small scales: Wetlands with permafrost. IP3 Users & Stakeholders Community Workshop, Canmore, Canada
Invited?: Yes, Keynote?: No

157. Kenward A*, Quinton W. (2008). Examining gas-flux interactions in wetland-dominated permafrost terrain. Annual Northern Research Day, 2nd, Waterloo, Canada
Invited?: No, Keynote?: No

158. Thorne R*, Quinton W, Carey S, Marsh P. (2008). Modelling the topographic influences on active layer thaw and runoff in arctic tundra. 3rd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: No, Keynote?: No

159. Chasmer L*, Quinton W, Hopkinson C, Fox A. (2008). Quantifying canopy structural and topographic variability within a southern subarctic watershed using airborne lidar. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

160. Pomeroy J, Carey S, Essery R, Granger R, Hayashi M, Janowicz R, Marsh P, Munro S, Pietroniro A, Quinton W, Snelgrove K, Soulis R, Spence C, Verseghy D,. (2008). Overview and current status of the IP3 network. 3nd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: Yes, Keynote?: No

161. Rezanezhad F*, Quinton W. (2008). 3D quantification of the peat soil properties using x-ray computed tomography and image analysis techniques. Annual Northern Research Day, 2nd, Waterloo, Canada
Invited?: No, Keynote?: No

162. Wright N*, Quinton W, Hayashi M. (2008). Hydrological response of heterogeneous land covers to water and energy inputs in a discontinuous permafrost basin. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

163. Rezanezhad F*, Quinton W, Myers T, Price J, Elrick D, Elliot T, Heck R. (2008). Experimental study of physical and hydraulic properties of experimental study of physical and hydraulic properties of peat soil using peat soil using x-ray computed tomography. Annual Northern Research Day, 2nd, Waterloo, Canada
Invited?: No, Keynote?: No

164. Quinton W. (2008). Processes and parameterisation: Wetlands, lakes, and permafrost. IP3 Users & Stakeholders Community Workshop, Canmore, Canada
Invited?: Yes, Keynote?: No

165. Chasmer L, Devito K, Fox A, Hopkinson C, Kljun N, McCaughey H, Petrone R, Quinton W. (2008). Spatial parameterization of zero-plane displacement and surface roughness length using airborne lidar within three boreal ecosystems. Canadian Geophysical Union, Annual Meeting, Banff, Canada
Invited?: No, Keynote?: No

166. Quinton W, Carey S. (2008). Towards an energy-based runoff generation theory for tundra landscapes. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

167. Rezanezhad F*, Quinton W. (2008). Measurement and analysis of physical and hydraulic properties of peat soils using 3D micro-CT scanning. Invited Guest Speaker, Department of Chemistry, Wilfrid Laurier University, Waterloo, Canada
Invited?: Yes, Keynote?: No

168. Zhang Y*, Carey S, Quinton W, Janowicz J, Flerchinger G. (2008). Simulation of infiltration into organic-covered permafrost soils. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

169. Rezanezhad F*, Quinton W, Price J, Elrick D, Elliot T, Heck R. (2008). Physical and hydraulic properties of peat soil using x-ray computed tomography and image analysis. 3rd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: No, Keynote?: No

170. Quinton W. (2008). Runoff from organic-covered permafrost terrains: Improving process understanding and parameterisations. EGU General Assembly, Vienna, Austria
Invited?: Yes, Keynote?: Yes

171. Schincariol R, Nagare R*, Quinton W, Hayashi M. (2008). The Supporting role of mesocosm-scale laboratory experiments in solving critical issues at hydrogeological research sites. American Geophysical Union, Annual Fall Meeting, San Francisco, United States
Invited?: No, Keynote?: No

172. Rezanezhad F*, Quinton W, Price J, Elrick D, Elliot T, Shook K. (2008). Influence of pore size and geometry on peat unsaturated hydraulic conductivity. 3rd Annual IP3 Meeting and Workshop, Whitehorse, Canada
Invited?: No, Keynote?: No

## Broadcast Interviews

| | |
|---|---|
| 2013/09/02 - 2016/09/06 | Opening of the new Centre for Cold Regions and Water Science building at Wilfrid Laurier University. Quinton featured as PI of the CFI grant that contributed to funding the new building, Released by Laurier Media Relations, not part of a programme, Youtube: http://www.youtube.com/watch?v=0rhK1O_FHxs |

| | |
|---|---|
| 2014/10/24 - 2014/10/24 | Permafrost thaw impacts on water resources in the Northwest Territories, Interviewed by Ollie Williams, Moose FM, Yellowknife on 3 October, 2014, FM - 100.1 CJCD Yellowknife |
| 2014/04/22 - 2014/04/22 | Discussion of Earth Day, Matt Holmes Show, CHML AM 900 |
| 2013/10/18 - 2013/10/18 | Interview about CCRWS, the Yukon Wolf Creek site, and cold regions research, CBC North/Yukon Host: Leonard Linklater, CBC Radio |
| 2013/09/09 - 2013/09/09 | Research shows permafrost and ecosystems in the subarctic changing quickly, Environment, Science and Technology Host: Marc Montgomery, Radio Canada International |
| 2012/07/25 - 2012/07/25 | Laurier-GNWT Partnership Agreement on research and training, The Trailbreaker (with Joslyn Ossenbrug), CBC North radio |
| 2010/10/04 - 2010/10/04 | Climate warming impacts on the North, Northbeat (with Deneze Nakehk'o), CBC North (TV), |

## Text Interviews

| | |
|---|---|
| 2014/09/04 | "Scientists study changing landscape: Researchers expanding permafrost studies at Scotty Creek.", Deh Cho Drum Newspaper (print and web), 4 Sept., 2014, p.6. http://nnsl.com/archive/pdf-archives/ |
| 2014/04/01 | Graduate students spend three months at remote research site: Research in the Northwest Territories looks at how climate change is affecting the Far North, Research@Laurier |
| 2013/10/11 | Researcher feature on: opening of new centre for leading-edge research into cold regions and water science, Research@Laurier http://www.wlu.ca/news_detail.php?grp_id=0&nws_id=11726 |
| 2013/10/10 | Laurier researchers receive funding for Water Knowledge Application Network (WatKAN), Research@Laurier |
| 2013/10/05 | New Laurier centre focused on water, cold region research, Newspaper: The Kitchener Record http://www.therecord.com/news-story/4141714 |
| 2013/09/09 | Research shows permafrost and ecosystems in subarctic changing quickly, Research@Laurier http://www.wlu.ca/research |
| 2013/09/05 | Deh Cho muskeg at centre of climate change study, News Article, the Decho Drum http://nnsl.com/archive/ |
| 2013/09/05 | Country food reassurances offered at Kakisa workshop, News Article, the Decho Drum |
| 2013/09/05 | Muskeg offers climate clues, News Article, Dehcho Drum http://nnsl.com/archive/ |
| 2013/08/01 | Featured article by journal: Linear disturbances on discontinuous permafrost: implications for thaw-induced changes to land-cover and drainage patterns, Published on Web by Environmental Research as a journal highlight. Lettershttp://environmentalresearchweb.org/cws/article/ne |
| 2012/01/02 | Researcher feature on northern water research at Laurier. "Laurier awash in major water research", Research@Laurier newsletter |
| 2008/07/01 | Researcher feature on the Laurier Institute for Water Science: "It's all about water", Research@Laurier |

# Publications

## Journal Articles

1. Quinton, WL and D. Peters. (2016). Preface, Special Issue of Hydrological Processes for Canadian Geophysical Union, HydrologySection.Hydrological processes.
   Submitted
   Refereed?: No, Open Access?: No
2. Merchant, M.A., Adams, J.R., Berg, A.A., Baltzer, J.L., Quinton, W.L., Chasmer, L.E.(2016). The contributions of C-band SAR multipolarization data and polarimetric decompositions to subarctic boreal peatland mapping. IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing.
   Accepted
   Refereed?: Yes
3. Helbig M., Chasmer L., Desai, A., Kljun N., Quinton W., Sonnentag O.(2016). Direct climate change effects on net carbon dioxide fluxes exceed indirect effects of thawing permafrost in a boreal forest-wetland landscape. Global Change Biology.
   Submitted
   Refereed?: Yes
4. Helbig M, Wischnewski K, Kljun N, Chasmer L, Quinton W, Detto M, Sonnentag, O.(2016). Regional atmospheric cooling and wetting effectof permafrost thaw-induced boreal forest loss. Global Change Biology.
   Published
   Refereed?: Yes
5. Rezanezhad, F., J. Price, W. Quinton, B. Lennartz, T. Milojevic, P. VanCappellen. (2016). Structure of peat soils and implications forwater storage, flow and solute transport: A review update for geochemists.Chemical Geology. 429: 75-84..
   Published
   Refereed?: Yes, Open Access?: No
6. Helbig, M., L. Chasmer, N. Kljun, W. Quinton, C Treat, O. Sonnentag. (2016). The positive net radiative greenhouse gas forcing of increasing methane emissions from a thawing boreal forest-wetlandlandscape. Global Change Biology.
   Published
   Refereed?: Yes
7. Kurylyk, B.L., M. Hayashi, W.L. Quinton, J.M. McKenzie and C.I. Voss. (2016). Influence of vertical and lateral heat transferon permafrost thaw, peatland landscape transition, and groundwater flow. Water Resources Research. 52
   Published
   Refereed?: Yes, Open Access?: No
8. Mohammed, A., R.A. Schincariol, W.L. Quinton, R.M. Nagare, and Flerchinger, G.N.(2016). On the use of mulching to mitigate permafrostdegradation due to linear disturbances in sub-arctic peatlands. Ecological Engineering.
   Submitted
   Refereed?: Yes, Open Access?: No
9. Haughton, E., E. Chasmer, O. Sonnentag and W. Quinton. (2016). Implications of permafrost thaw on snow cover and snow melt in a subarctic peat plateau bog complex. Hydrological Processes.
   Submitted
   Refereed?: Yes

10. Helbig, M., K. Wischnewski, G. Gosselin, S. Biraud, I. Bogoev, W. Chan, E. Euskirchen, A. Glenn, P. Marsh, W. Quinton, O. Sonnentag. (2016). Addressing a systematic bias in carbon dioxideflux measurementswith the EC150 and the IRGASON open-path gas analyzers.Agricultural and Forest Meteorology. 228: 349–359.
Published
Refereed?: Yes, Open Access?: No

11. Gordon, J., W. Quinton, B. Branfireun, D. Olefeltd. (2016). Mercury and methylmercury biogeochemistry in athawing permafrost wetland complex, Northwest Territories, Canada.Hydrological Processes.
Submitted
Refereed?: Yes, Open Access?: No

12. Braverman, M., and W. Quinton. (2016). Permafrost degradation under a linear disturbance in the discontinuous permafrost. Hydrological Processes.
Submitted
Refereed?: Yes, Open Access?: No

13. Pelletier, N., J. Talbot, D. Olefeldt, M. Turetsky, C. Blodau, O.Sonnentag and W.L. Quinton. (2016). Permafrost aggradation, degradation and apparentcarbon accumulation in a permafrost peatland (Northwest Territories, Canada). Holocene.
Submitted
Refereed?: Yes

14. Connon, R., W. Quinton, J. Craig, J. Hanisch, O. Sonnentag. (2015). The hydrology of interconnected bog complexes indiscontinuous permafrost terrains.Hydrological Processes. 29: 3831–3847.
Published
Refereed?: Yes, Open Access?: No

15. Braverman, M. & W. Quinton. (2015). Hydrological impacts of seismic lines in the wetland-dominated zone of thawing, discontinuous permafrost, NorthwestTerritories, Canada.Hydrological Processes.
Published
Refereed?: Yes, Open Access?: No

16. Williams T, Pomeroy J, Janowicz J, Carey S, Rasoulil K, Quinton W. (2015). An Improved Method for Calculating Ground Surface Temperatures in Snow Free Periods. Hydrological Processes. 29: 3954–3965.
Published
Refereed?: Yes, Open Access?: No

17. Patankar R*, Quinton W, Hayashi M, Baltzer J. (2015). Sap flow responses to seasonal thaw and permafrost degradation in a subarctic boreal peatland. Trees - Structure and Function DOI 10.1007/s00468-014-1097-8. 29(1): 129-142.
Published
Refereed?: Yes, Open Access?: No

18. Quinton, WL and D. Peters. (2015). Preface, SpecialIssue of Hydrological Processes for Canadian Geophysical Union, HydrologySection.Hydrological Processes. 29: 3829-3830.
Published
Refereed?: No, Open Access?: No

19. Raleigh, M., C. Landry, M. Hayashi, W. Quinton, J. Lundquist. (2014). Improved approximation of snow surface temperature with common meteorological variables:tools for detecting bias in snowmelt modeling.Water Resources Research. 49: 8053-69..
Published
Refereed?: Yes

20. Carey S, Quinton W. (2014). Preface, Special Issue of Hydrological Processes for Canadian Geophysical Union, Hydrology Section. Hydrological Processes. 28(14): 4161–4162.
Published
Refereed?: No, Open Access?: No

21. Wheater H, DeBeer C, Pomeroy J, Quinton, W., Stewart R, Carey S, Marsh P, Pietroniro A, McKay M. (2014). The Changing Cold Regions Network: Observation, Diagnosis, and Prediction of Environmental Change in the Saskatchewan and Mackenzie River Basins, Canada. Science China: Earth Sciences doi: 10.1007/s11430-014-5001-6.
Published
Refereed?: Yes, Open Access?: No

22. Baltzer J, Veness T*, Chasmer L*, Sniderhan A*, Quinton W. (2014). Forests on thawing permafrost: fragmentation, edge effects, and net forest loss. Global Change Biology. 20(3): 824-834.
Published
Refereed?: Yes

23. Chasmer L*, Hopkinson C, Veness T*, Quinton W, Baltzer J. (2014). A decision-tree classification for low-lying complex land cover types within the zone of discontinuous permafrost. Remote Sensing of Environment. 143: 73-84.
Published
Refereed?: Yes

24. Mohammed A*, Schincariol R, Nagare R*, Quinton W. (2014). Reproducing field-scale active layer thaw in the lab. Vadose Zone Journal.
Published
Refereed?: Yes

25. Connon R *, Quinton W, Hayashi M, Craig J. (2014). The effect of permafrost thaw on rising stream flows in the lower Liard River valley, NWT, Canada. Hydrological Processes, DOI: 10.1002/hyp.10206. : 4163–4178.
Published
Refereed?: Yes

26. Quinton W, Baltzer J. (2013). The active-layer hydrology of a peat plateau with thawing permafrost (Scotty Creek, Canada). Hydrogeology Journal. 21(1): 201-220.
Published
Refereed?: Yes

27. Nagare R*, Schincariol R, Mohammed A*, Quinton W, Hayashi M. (2013). Measuring saturated hydraulic conductivity and anisotropy of peat by a modified split container method. Hydrogeology Journal. 21(2): 515-520.
Published
Refereed?: Yes

28. Quinton W, Baltzer J. (2013). Changing surface water systems in the discontinuous permafrost zone: implications to stream flow. International Association of Hydrological Sciences Publication. (360): 85-92.
Published
Refereed?: Yes

29. Williams T*, Quinton W. (2013). Modelling incoming radiation on a linear disturbance and its impact on the ground thermal regime in discontinuous permafrost. Hydrological Processes. 27(13): 1854-1865.
Published
Refereed?: Yes

30. Baltzer J, Patankar R*, Downey A, Quinton W. (2013). Impacts of seasonal thaw and permafrost degradation on Picea mariana root function in a subarctic boreal peatland. Acta Horticulturae. (991): 141-148.
Published
Refereed?: Yes

31. Patankar R*, Quinton W, Baltzer J. (2013). Permafrost-driven differences in habitat quality determine plant response to gall-inducing mite herbivory. Journal of Ecology. 101(4): 1042-1052.
Published
Refereed?: Yes

32. Raleigh M, Landry C, Hayashi M, Quinton W, Lundquist J. (2013). Approximating snow surface temperature from standard temperature and humidity data: New possibilities for snow model and remote sensing evaluation. Water Resources Research. 49(12): 8053-8069.
Published
Refereed?: Yes

33. Williams T*, Quinton W, Baltzer J. (2013). Linear disturbances on discontinuous permafrost: implications for thaw-induced changes to land cover and drainage patterns (Highlighted in journal commentary). Environmental Research Letters. 8(2): 025006.
Published
Refereed?: Yes, Open Access?: Yes

34. Chasmer L*, Kenward A*, Quinton W, Petrone R. (2012). CO2 Exchanges within zones of rapid conversion from permafrost plateau to bog and fen land cover types. Arctic, Antarctic and Alpine Research. 44(4): 399-411.
Published
Refereed?: Yes

35. Chasmer L*, Petrone R, Brown S*, Hopkinson C, Mendoza C, Diiwu J, Quinton W, Devito K. (2012). Sensitivity of modelled evapotranspiration to canopy characteristics within the Western Boreal Plain, Alberta. International Association of Hydrological Sciences Publication. (352): 337-340.
Published
Refereed?: Yes

36. Nagare R*, Schincariol R, Quinton W, Hayashi M. (2012). Moving the field into the lab: Simulation of water and heat transport in subarctic peat. Permafrost and Periglacial Processes. 23(3): 237-243.
Published
Refereed?: Yes

37. Nagare R*, Schincariol R, Quinton W, Hayashi M. (2012). Effects of freezing on soil temperature, freezing front propagation and moisture redistribution in peat: laboratory investigations. Hydrology and Earth System Sciences. 16(2): 501-515.
Published
Refereed?: Yes

38. Waddington J, Thompson D*, Wotton M, Quinton W, Flannigan M, Benscoter B, Baisley S, Turetsky M. (2012). Examining the utility of the Canadian Forest Fire Weather Index System in boreal peatlands. Canadian Journal of Forest Research. 42(1): 47-58.
Published
Refereed?: Yes

39. Chasmer L*, Hopkinson C, Quinton W. (2011). Quantifying errors in discontinuous permafrost plateau change from optical data, Northwest Territories, Canada: 1947–2008. Canadian Journal of Remote Sensing. 36(2): 211-223.
Published
Refereed?: Yes

40. Quinton W, Hayashi M, Chasmer L*. (2011). Permafrost-thaw-induced land-cover change in the Canadian subarctic: implications for water resources. Hydrological Processes. 25(1): 152-158.
Published
Refereed?: Yes

41. Chasmer L*, Quinton W, Hopkinson C, Petrone R, Whittington P*. (2011). Vegetation canopy and radiation controls on permafrost plateau evolution within the discontinuous permafrost zone, Northwest Territories, Canada. Permafrost and Periglacial Processes. 22(3): 199-213.
Published
Refereed?: Yes

42. Endrizzi S*, Quinton W, Marsh P. (2011). Examining the spatial pattern of ground thaw in the Arctic tundra from distributed modelling and field observation. Cryosphere.
Accepted
Refereed?: Yes

43. Quinton W, Chasmer L*, Petrone R. (2011). Permafrost loss and a new approach to the study of subarctic ecosystems in transition. Cold regions hydrology in a changing climate (IAHS Publication no. 346). 346: 98-102.
Published
Refereed?: Yes

44. Nagare R*, Schincariol R, Quinton W, Hayashi M. (2011). Laboratory calibration of time domain reflectometry to determine moisture content in undisturbed peat samples. European Journal of Soil Science. 62(4): 505-515.
Published
Refereed?: Yes

45. Zhang Y*, Carey S, Quinton W, Janowicz J, Pomeroy J, Flerchinger G. (2010). Comparison of algorithms and parameterisations for infiltration into organic-covered permafrost soils. Hydrology and Earth System Science. 14: 729-750.
Published
Refereed?: Yes

46. Rezanezhad F*, Quinton W, Price J, Elrick D, Elliot T*, Shook K. (2010). Influence of pore size and geometry on peat unsaturated hydraulic conductivity computed from 3D computed tomography image analysis. Hydrological Processes. 24(21): 2983-2994.
Published
Refereed?: Yes

## Journal Issues

1. Connon R* et al., Spence C et al., Rasouli K* et al., Burn D, Newton B* (a) et al., Newton B* (b) et al., Eum H* (a) et al., Eum H* (b) et al., Shrestha R* et al., Harder P* & Pomeroy J, Raney S* & Eimers MC, Manns H* et al., Branham J* & Strack M, Faubert JP* & Carey S, Farrick K* & Branfireun B.(2014). Special Issue of Hydrological Processes for Canadian Geophysical Union, Hydrology Section. Hydrological Processes. 28(14): 226.
Published
Refereed?: Yes
Editors: Carey S, Quinton W

2. Millares A et al., Zhao Q et al., Rezanezhad F et al., Rapp L & Bishop K, Schmidt A et al., Liu J et al., Luce C & Tarboton D, Zhang Y et al., McClymont A et al., Hood J & Hayashi M, Ellis C et al., Flerchinger G et al., Fang X et al., Yang J et al., Shook K & Pomeroy J, DeBeer C & Pomeroy J, Bewley D et al., Lilbæk G & Pomeroy J, Guan X et al., MacDonald M et al., Granger R & Hedstrom N. (2011). Cold region hydrology: improved processes, parameterization and prediction. Hydrology and Earth System Sciences. (13-15): 220.
Published
Refereed?: Yes, Open Access?: Yes
Editors: Carey S, Quinton W, Pomeroy J, Weiler M

## Book Chapters

1. Marsh P, Pomeroy J, Pohl S, Quinton W, Onclin C, Russell M, Neumann N*, Pietroniro A, Davison B, McCartney S*. (2008). Snow melt processes and runoff at the Arctic treeline: 10 years of MAGS Research. Woo M-K. The Mackenzie GEWEX Experience,Vol-2: Hydrological Processes. (2): 97-123.
   Published, Springer
   Refereed?: Yes
2. Quinton W, Hayashi M. (2008). Recent Advances Toward Physically-based Runoff Modeling of the Wetland-dominated, Central Mackenzie River Basin. M-K Woo. The Mackenzie GEWEX Experience,Vol-2: Hydrological Processes. (2): 257-279.
   Published, Springer
   Refereed?: Yes

## Reports

1. Williams T*, Quinton W. (2012). Linear disturbances in a peatland environment: permafrost thaw and landscape change. 5. Canadian Geophysical Union.
2. Veness T*, Quinton W. (2012). Connecting spatial variability of subsurface thaw to preferential permafrost degradation within the discontinuous permafrost zone: Scotty Creek, Northwest Territories, Canada. 5. Canadian Geophysical Union.
3. Nagare R, Schincariol R, Quinton W, Hayashi M. (2011). Laboratory calibration of time domain reflectometry to determine moisture content in undisturbed peat samples Euro. J. Soil. Sci. (published online, 4th April 2011). 19. European Geophysical Union.
4. Endrizzi S, Quinton W, Marsh P. (2011). Modelling the spatial pattern of ground thaw in a small basin in the arctic tundra The Cryosphere Discuss., 5, 367–400, 2011 www.the-cryosphere-discuss.net/5/367/2011/ doi:10.5194/tcd-5-367-2011. 33. European Geophysical Union.
5. Zhang Y, Carey S, Quinton W, Janowicz J, Flerchinger G. (2009). Comparison of algorithms and parameterisations for infiltration into organic-covered permafrost soils Hydrol. Earth Syst. Sci. Discuss., 6, 5705-5752, 2009. 47. European Geophysical Union.
6. Young K, Quinton W. (2009). Proceedings, 17th International Northern Research Basins Symposium and Workshop, Iqaluit-Pangnirtung-Kujjuaq, Canada, 12-18 August, 2009. 241. Northern Research Basins.

## Conference Publications

1. Braverman M*, Quinton W. (2013). Mapping permafrost under a linear disturbance with ground-penetrating radar. Proceedings. 66th Canadian Geotechnical Conference and the 11th Joint CGS/IAH-CNC Groundwater Conference (Geo Montreal 2013), Montreal, Canada
   Conference Date: 2013/9
   Paper
   Published
   Refereed?: Yes, Invited?: No
2. Chasmer L, Hopkinson C, Petrone R, Quinton W. (2011). Fusion of airborne LiDAR and WorldView-2 MS data for classification of depth to permafrost within Canada’s sub-Arctic. SilviLaser, Hobart, Australia
   Conference Date: 2011/10
   Paper
   Published
   Refereed?: Yes, Invited?: No

3. Hayashi M, McClymont A*, Christensen B*, Bentley L, Quinton W. (2011). Thawing of permafrost peatlands: Effects of water-energy feedback on landscape evolution. Proceedings. The joint meeting of the International Association of Hydrogeologists Canadian National Chapter and the Canadian Quaternery Association, Quebec City, Canada
   Conference Date: 2011/8
   Paper
   Published
   Refereed?: Yes, Invited?: No

4. McClymont A*, Bentley L, Hayashi M, Christensen B*, Quinton W. (2010). Geophysical imaging of discontinuous permafrost in northwest Canada. EAGE, Near Surface Geophysics, Zurich, Switzerland
   Conference Date: 2010/9
   Paper
   Published
   Refereed?: Yes, Invited?: No

5. Christensen B*, Hayashi M, Quinton W. (2010). Hydrology of discontinuous permafrost: Effects of permafrost plateau geometry on subsurface drainage. 6th Canadian Conference on Permafrost, Calgary, Canada
   Conference Date: 2010/9
   Paper
   Published
   Refereed?: Yes, Invited?: No

6. Chasmer L*, Hopkinson C, Quinton W, Hayashi M. (2009). Quantifying change in peat plateau and wetland areas within the discontinuous permafrost zone: 1947 to present. Proceedings. 30th Canadian Symposium on Remote Sensing, Lethbridge, Canada
   Conference Date: 2009/6
   Paper
   Published
   Refereed?: No, Invited?: No

7. Chasmer L, Petrone R, Brown S, Hopkinson C, Kljun N, Devito K, Quinton W. (2009). Spatial partitioning of CO2 fluxes based on canopy structure within a heterogeneous managed boreal wetland ecosystem. Proceedings. 30th Canadian Symposium on Remote Sensing June, Lethbridge, Canada
   Conference Date: 2009/6
   Paper
   Published
   Refereed?: No, Invited?: No

8. Quinton W, Hayashi M, Chasmer L*. (2009). Peatland hydrology in the discontinuous permafrost region of the Northwest Territories, Canada. Proceedings. 17th International Northern Research Basins Symposium and Workshop, Iqaluit, Canada
   Conference Date: 2008/8
   Paper
   Published
   Refereed?: No, Invited?: No

9. Thorne R*, Quinton W, Marsh P. (2009). Development of an energy-based runoff generation model in Arctic tundra regions. Proceedings. 17th International Northern Research Basins Symposium and Workshop, Iqaluit, Canada
   Conference Date: 2008/8
   Paper
   Published
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