

## **CURRICULUM VITAE**

University of Idaho

**NAME:** Link, Timothy E.

**DATE:** January 5, 2022

**RANK OR TITLE:** Professor

**DEPARTMENT:** Forest, Rangeland, and Fire Sciences

**OFFICE LOCATION AND CAMPUS ZIP:** CNR 203B, 1133

**OFFICE PHONE:** 885-9465

**FAX:** 885-6564

**EMAIL:** tlink@uidaho.edu

**WEB:** <https://idahowildlandhydrology.weebly.com>

**DATE OF FIRST EMPLOYMENT AT UI:** November 26, 2001

**DATE OF TENURE:** February 10, 2007

**DATE OF PRESENT RANK OR TITLE:** July 1, 2013

### **EDUCATION BEYOND HIGH SCHOOL:**

#### **Degrees:**

Ph.D., Oregon State University, Corvallis, Oregon, 2001, Environmental Sciences/Water Resources

M.S., Oregon State University, Corvallis, Oregon, 1998, Geology

B.A., Hampshire College, Amherst, Massachusetts, 1991, Geology

### **EXPERIENCE:**

#### **Teaching, Extension and Research Appointments:**

Director: Water Resources Graduate Program, University of Idaho, Moscow, ID. 2020 – present.

Professor of Forest Hydrology, Department of Forest, Rangeland, and Fire Sciences, University of Idaho, Moscow, Idaho, 2013-present

Associate Professor of Forest Hydrology, Department of Forest, Rangeland, and Fire Sciences, University of Idaho, Moscow, Idaho, 2007-2013.

Assistant Professor of Forest Hydrology, Department of Forest Resources, University of Idaho, Moscow, Idaho, 2001-2007.

Adjunct Faculty, Department of Civil Engineering, University of Idaho, 2003-present.

Adjunct Faculty, Department of Rangeland Ecology and Management, University of Idaho, 2003-present.

Courtesy Faculty, Department of Forest Science, Oregon State University, Corvallis, Oregon, 2002-present.

Graduate Research/Teaching Assistant, Oregon State University, Corvallis, Oregon, 1995-2001.

#### **Consulting:**

Washington Dept. of Natural Resources, Olympia, WA. 2020-present. Chehalis Basin Strategy Hydrological Modeling Study. Technical Writing and Implementation Group (TWIG)

Washington Dept. of Natural Resources, Olympia, WA. 2017-2019. Eastside Type N Riparian Effectiveness Dry Study Technical Writing and Implementation Group (TWIG).

Northwest Management, Inc., Moscow, ID. 2017. Literature review and synthesis on the effects of forestry on riparian functions.

Corrie Yackulic Law Firm, PLLC. Seattle, WA. Expert Witness: In regards to the Forest Hydrology Aspects of the Whitman Bench, Snohomish County, Washington, USA, for Ryan M. Pszonka et al., Plaintiffs v. Snohomish County et al., Defendants. 2015-2016.

Third World Center for Water Resource Management, Mexico City, Mexico, 2000-01.

Staff Geochemist, PTI Environmental Services, Boulder, Colorado, 1991-95.

## TEACHING ACCOMPLISHMENTS:

### Areas of Specialization:

Snow hydrology, Interactions of vegetation and hydrologic processes, Interactions of fire and hydrology, Microclimatology of riparian systems

### Courses Taught:

INTR501 Navigating the Post-PhD Gauntlet (with Alistair Smith), 1 cr., Fall 2019  
 WR604 International Water Science Issues: Chile (with Brian Kennedy), 3 cr., Spring 2015, Fall 2016 & 2017  
 WR604 International Water Science Issues: Columbia River Basin Headwaters, 2 cr., Fall 2017  
 GEOS 697 – Boise State Univ., Interdisciplinary Modeling: Water-Related Issues and Changing Climate, with L. Saito and A. Fernald, 3 cr., Summer 2015  
 RGSC 618 – New Mexico State Univ., Interdisciplinary Modeling: Water-Related Issues and Changing Climate, with L. Saito and A. Fernald, 3 cr., Summer 2012  
 FOR 501 – Cross-Disciplinary Research Seminar, 1 cr., Spring 2012  
 FOR 462 – Watershed Science & Management, 3 cr., Fall 2003, 2004, 2006-2012, 2014, 2016, Spring 2017-2021  
 WR 501 – Water Resource Seminar, 1 cr. Fall 2010 – 2012  
 FOR 504 – Streamflow Generation Processes, 1 cr., Spring 2011  
 NRES 730 – Univ. NV-Reno, Interdisciplinary Modeling: Water-Related Issues and Changing Climate, with L. Saito and A. Fernald, 3 cr., Summer 2010  
 FOR 516 – Hydrologic Effects of Forest Management, 1 cr., Spring 2009, 2011, 2020  
 FOR 515 – Physical Hydrology, 3 cr., Fall 2005, 2007, 2009, 2011, 2015, 2019  
 FOR 463 – Hydrologic Measurement Techniques, 1 cr., Fall 2003-2006, 2009-2010  
 WR 504 – Interdisciplinary Water Resources Projects, 3 cr, Spring 2009  
 WR 504 – Water, Salmon, and Society Field Course, 2 cr., Fall 2008  
 FOR 462 – Watershed Science & Management (**online**), 3 cr., Fall 2004-2008  
 FOR 504 – Snow-Vegetation Interactions, 1 cr., Spring 2008  
 FOR 504 – IGERT Immersion Course (as co-instructor), 1 cr. field course, (Summer 2010 & 2011)  
 FOR 504 – Cumulative Watershed Processes 1 cr., Spring 2007  
 FOR 504 – Advanced Watershed Science & Management, 3 cr., Fall 2004  
 FOR 504 – Hydrologic Effects of Forest Management, 1 cr., Spring 2004  
 FOR 504 – Physical Hydrology, 3 cr., Fall 2003  
 FOR 404 – Fundamental Hydrologic Measurement Techniques, 1 cr., Fall 2002  
 FOR 462 – Watershed Management, 2 cr., Spring & Fall 2002  
 FOR 504 – Forest Hydrology, 3 cr., Fall 2002  
 FOR 404 – Hydrologic Measurement Techniques, 1 cr., Fall 2002

### Students Advised:

Graduate Students Advised to Completion of Degree, Major Professor:  
 Abby Lute, Ph. D., Water Resources, June 2021  
 Robert Zielinski, M. S., Environmental Sciences, May 2021  
 Casey McCormack, M. S., Environmental Sciences, May 2021  
 Adrienne Marshall, Ph.D., Water Resources, April 2019  
 Ethan Waldman, M. S., Environmental Sciences, May 2018  
 Markie Miller, M. S., Environmental Sciences, December 2017  
 Bryan Cummings, PSM Water Resources, May 2016  
 P. Zion Klos, Ph.D., Environmental Sciences, April 2016  
 Ryan Niemeyer, Ph.D., Water Resources, December 2015

Sage Bryden, M. S., Water Resources, November 2013  
Wade Tinkham, Ph. D., Natural Resources, May 2013 (Co-advised with Dr. Alistair Smith)  
Andy Knight, M. S., Environmental Sciences, May 2012  
Enhao Du, Ph.D., Environmental Sciences, October 2010  
Diana Carson, M.S., Forest Resources, September 2010  
Hongyu Huang, M.S., Forest Resources, August 2010 (Co-advised with Dr. Alistair Smith)  
Joel Clark, M.S., Forest Resources, June 2010  
Eric Herchmer, M.S., Forest Resources, May 2010  
Robert Lawler, M.S., Forest Resources, February 2010.  
Michele Reba, Ph.D., Civil Engineering, December 2008  
Jason Hubbard, Ph.D., Natural Resources, June 2007  
Gary Chauvin, M.S. Environmental Sciences, December 2006  
Andrew Warnsing, M.S., Forest Resources, August 2006  
Ashley Covert, M.S. Forest Resources, December 2003

Graduate Students in Progress, Major Professor:

John Gravelle, Ph. D., Environmental Sciences  
Kaitlyn Strickfaden, M. S., Natural Resources (co-advised with David Ausband)  
Reid Sutton, M. S., Water Resources

Graduate Students Advised to Completion of Degree, Committee Member:

Charles Jones, M. S., Natural Resources, May 2021  
Konrad Hafen, Ph. D., Water Resources, April 2021  
Jeff Stenzel, Ph. D., Natural Resources, April 2021  
Meghan Foard, Ph. D., Water Resources, April 2020  
Micah Russell, Ph. D., Water Resources, April 2020  
Kathleen Torso, Ph. D., Water Resources, February 2020  
Maria Zubkova, Ph. D., Natural Resources, November 2019  
Paris Edwards, Ph. D., Water Resources, May 2019  
Kathryn Baker, Ph. D., Natural Resources, May 2019  
Benjamin Soderquist, Ph. D., Natural Resources, May 2017  
Alex Suazo, M.S., Natural Resources, July 2016  
Brian Owen, M. S., Environmental Sciences, May 2016  
Amanda Bentley-Brymer, Ph. D., Environmental Sciences, November 2015  
Mark Corrao, Ph. D., Water Resources, May 2015  
Kristen Welsh Unwala, Ph. D., Water Resources, May 2015  
Hallie Rajkovich, M. S., Water Resources, May 2014  
Abigail Lute, M. S., Water Resources, May 2014  
Mariana Dobre, Ph. D., Biosystems Engineering, Washington State University, July 2013  
Joshua Hail, M. S., Landscape Architecture, May 2013  
Ryan Toohey, Ph.D., Environmental Sciences, July 2012  
Jaclyn Hancock, M.S., Water Resources, April 2012  
Chet Hagen, M.S., Water Resources, May 2011  
Shaniko Nichol-Driskill, M. S., Natural Resources, April 2011  
Chris Welcker, Ph.D., Civil Engineering, April 2011  
Peter Gäg, M.S., Forest Resources, May 2009  
Joey Machala, M.S., Water Resources, May 2009  
Aaren Fiedler, M.S. Hydrology, March 2009  
Mike Falkowski, Ph.D., Natural Resources, June 2008  
Robert Pangle, Ph.D., Natural Resources, May 2008  
Chad Opatz, M.S., Hydrology, October 2007  
Anne-Marie Casey, M.S., Environmental Sciences, April 2006  
Lynne Westerfield, M.S., Conservation Social Sciences, March 2006  
Huei-Jin Wang, M.S., Forest Resources, February 2006  
Katherine Lanspery, M.S., Rangeland Ecology and Management, November 2005  
Michael Atchison, M.S., Environmental Sciences, April 2005  
Tom Pypker, Ph.D., Forest Science (Oregon State University), December 2004  
Erin Chamberlain, M.S., Environmental Sciences, September 2004

Wendy Joslin, M.S., Forest Resources, May 2004  
James Heffner, M.S., Geology, April 2004

Graduate Students in Progress, Committee Member:

Natasha Wingerter, Ph. D., Water Resources  
Saadullah Baloch Khan, M. S., Environmental Sciences  
Heather Neace, M. S., Water Resources  
Elizabeth Herrmann, Ph. D., Environmental Sciences  
Matthew Tomaszewski, M. S., Natural Resource Sciences (Washington State University)

Dissertation External Examiner:

Hafiz Ahmed, Ph.D. Department of Civil, Geological and Environmental Engineering,  
University of Saskatchewan, Canada, July 2021.  
Sandra N. Dharmadi Hawthorne, Ph.D. Department of Forest and Ecosystem Science,  
University of Melbourne, Australia, Spring 2012.  
William Floyd, Ph.D., University of British Columbia, Canada, 2012

**Courses Developed:**

FOR462 Watershed Science & Management  
FOR463 Hydrologic Measurement Techniques  
FOR504 Forest Hydrology  
FOR504 Advanced Watershed Science & Management  
FOR504 Snow-Vegetation Interactions  
FOR504 Cumulative Watershed Processes  
FOR504 Streamflow Generation Processes  
FOR515 Physical Hydrology  
FOR516 Hydrologic Effects of Forest Management  
WR504 Water, Salmon, and Society  
ENT/FOR/WLF 504 IGERT Immersion Course  
WR604 International Water Science Issues: Chile  
WR604 International Water Science Issues: Columbia River Basin Headwaters

**Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:**

Invited Seminars:

The Mica Creek Experimental Watershed: Motivation, History, and Opportunities. EPA Region  
10 Forest Practices Group. August 24, 2021. ~15 attendees.

Effects of timber harvest and climate change on streamflow regimes in the western U.S.: The  
role of spatial scale on watershed sensitivity. National Council on Air and Stream  
Improvement (NCASI) Climate Change and Forests Webinar. August 10, 2021. ~350  
attendees.

Interdisciplinary Snow Science on the UIEF: Understanding linkages between complex terrain,  
canopy structure, snow dynamics, and wildlife. Timothy E. Link, Robert Lawler, Diana  
Carson, Eric Herchmer, and Kaitlyn Strickfaden. Department of Forest, Rangeland, and  
Fire Sciences Seminar Series. September 23, 2020.

Snowmelt processes in discontinuous forests: Apparent paradoxes and implications for  
advancing hydrologic understanding in complex terrain. Forest Resources Seminar  
Series. March 29, 2017.

The Changing Climate, Snow, and Flow in Idaho. (with John Abatzoglou). Environmental  
Studies Seminar Series, Lewis-Clark State College, Lewiston, ID. February 22, 2017.

Indicators of Climate Change in Idaho: The Intersection of Biophysical Change with Social

Perception. with John Abatzoglou and Penny Morgan. The Malcolm M. Renfrew Interdisciplinary Colloquium. September 15, 2015.

Plenary Speaker. Snake River and John Day/Umatilla Basin Team Meeting. "Recent advances and ongoing research on the ecohydrological dynamics of: Western junipers, aspen patches, and forest snow in complex terrain". October 28, 2015. ~80 attendees.

Indicators of Climate Change in Idaho: The Intersection of Biophysical Change with Social Perception. with John Abatzoglou and Penny Morgan. The Malcolm M. Renfrew Interdisciplinary Colloquium. September 15, 2015.

Plenary Speaker. 14<sup>th</sup> Annual Forester's Forum. "The Mica Creek Paired Watershed Study: A Critical Update of Old Science". February 4, 2015. ~100 attendees.

Interdisciplinary Research in Natural Resources & Environmental Sciences. Dept. of Department of Forest, Rangeland, and Fire Sciences Seminar Series. December 10, 2014.

Snowmelt processes in forests: Apparent paradoxes and implications for advancing hydrologic understanding in complex terrain. Consortium of Universities for the Advancement of Hydrological Sciences Inc. (CUAHSI) Cyberseminar Series. February 21, 2014. (cancelled due to family illness)

The effect of contemporary forest practices in the inland Pacific Northwest: A study of streamflow, sediment, temperature, nutrients, aquatic macroinvertebrates, and fish. University of Idaho Environmental Science Seminar Series. February 15, 2012.

Snowmelt processes in discontinuous forests: Apparent paradoxes and implications for advancing hydrologic understanding in complex terrain. University of Idaho Soil and Water Science Seminar Series. February 8, 2012.

Grasslands of Inner Mongolia. University of Idaho Global Rangelands Seminar Series. October 12, 2011.

Snowmelt processes in discontinuous forests: Apparent paradoxes and implications for advancing hydrologic understanding in complex terrain. Invited seminar for UC Merced School of Engineering, Environmental Systems Seminar series, September 21, 2011.

Snowmelt processes in discontinuous forests: Apparent paradoxes and interdisciplinary opportunities. Invited seminar for Malcolm M. Renfrew Interdisciplinary Colloquium, April 17, 2011.

Climate change and hydrology: The western north American perspective. Guest lecture for University of Idaho Environmental Science Capstone Seminar, March 30, 2011.

Effectiveness assessment of best management practices for forestry in the inland Pacific Northwest. UI Water Resources Seminar Series, September 14, 2010.

How have the effects of forest management changed over the past century?: An effectiveness assessment of best management practices for forestry in the inland Pacific Northwest. Invited seminar for Washington State University School of Earth & Environmental Sciences Seminar Series, January 26, 2010.

Trends and variability of water resources in the western U. S.: An indication of future conditions? Invited seminar and panel member. UI Sustainability Center 350 Group Day of Action on Climate Change Teach-in. Nov. 4, 2009.

Historical trends and variability of snowpack and streamflows in Idaho: An indication of future conditions? Invited seminar for the Departments of Forest Resources and Geography

seminar series. Sep. 14, 2007.

Solving the catchment water and energy balance in snow dominated regions. Invited seminar for the Institute for Landscape Ecology, University of Giessen, Germany. Feb. 28, 2007.

Findings from the Mica Creek test of the Idaho forest practices rules. T. E. Link, T. Cundy, J. Gravelle, J. Hubbart, D. Karwan, and J. Broglio. Lecture for the National Council for Air and Stream Improvement (NCASI), West Coast Regional Meeting, Portland, OR., Sep. 28, 2006. ~60 industry, agency and academic attendees.

New approaches for monitoring rainfall and radiation in forests. Invited seminar for the Friends of Forest Hydrology, British Columbia – Emerging Watershed Monitoring Techniques Conference. Campbell River, British Columbia. September 20-21, 2006. ~30 industry and agency personnel.

Forest hydrology: A crash course. Seminar for the Coeur d'Alene Forest Coalition. 12 participants from industry, agencies, community and conservation groups. Coeur d'Alene, ID, Aug. 16, 2006.

A synthesis of work assessing the cumulative effects of contemporary timber harvest practices in the Mica Creek Experimental Watershed. The 23rd Inland Empire Forest Engineering Conference. March 7-8, 2006. Moscow, Idaho.

Cumulative effects of contemporary timber harvest practices in a continental/maritime mountainous watershed: A synthesis of results from the Mica Creek Study. Seminar for Potlatch Corporation annual corporate meeting, Clarkston, WA, January 20, 2006.

Assessing the impacts of canopy structure on hydrologic processes. Fire, Water and People Seminar Series, Moscow, ID, November 2004.

Assessing the cumulative effects of current forest management practices on water flow and quality, University of Idaho, Department of Fisheries & Wildlife Seminar Series, Moscow, ID, October 2004.

Investigating the Interactions of Vegetation and Topography on Hydrologic Processes, University of Idaho – Boise, Ecohydraulics Research Group and University of Concepcion - Chile delegation, October 2004.

Analyzing the effects of modern forest harvest practices. Presentation to the Moscow Rotary Club. Moscow, ID, September 20, 2004.

Impact of forest treatments and climate change on hydrologic regimes, USDA Cooperative State Research Education and Extension Service Headquarters, Washington D. C., September, 2004.

Assessing the impacts of current forest management practices on water flow and quality, University of Idaho, Soil and Water Quality Seminar Series, Moscow, ID, February 2004.

Assessing the cumulative effects of forest management, University of Idaho, Department of Forest Products Seminar Series, Moscow, ID, February 2004.

Measurement and modeling of hydrologic processes in an old-growth seasonal temperate rainforest, University of Reading (United Kingdom), Environmental Systems Science Centre Seminar Series, May 2003.

Interactions of terrain and vegetation on snowmelt runoff patterns in semi-arid rangelands, University of Idaho, Department of Rangeland Resources Seminar Series, Moscow, ID, February 2003.

The sensitivity of snowmelt processes to climate and forest cover during rain-on-snow events. University of Idaho, Department of Forest Resources Seminar Series, Moscow, ID, March 2002.

Recent modeling advances in forest and snow hydrology. USFS District Office, Nez Perce National Forest, Grangeville, ID, January 2002,

Measurement and modeling of water and energy fluxes in a seasonal temperate rainforest. Portland State University, Environmental Sciences and Resources Program Seminar Series, Portland, OR, April 2001.

Seasonal snowcover dynamics in the boreal forest. USDA-ARS Northwest Watershed Research Center, Boise, ID, June 1999.

**Guest Lectures:**

Palouse Basin Summary & Future Alternatives. Guest lecture for ENVS201: Careers in the Environmental Sciences. November 1, 2021

Climate change, snow, and streamflow in the western U.S.: Relevance for wildlife. Guest lecture for FISH526: Climate Effects and Conservation Management. August 30, 2021.

A condensed course in fundamental hydrology, with a focus on the Elwha-Dungeness watersheds. Guest lecture for LA 520/LARC 559: Western Regional Landscapes (Washington State University). January 23, 2020.

Forestry and the Environment: An Introduction. Guest lecture for EnvS 100: Introduction to Environmental Science, November 29, 2017.

Watershed Science & Management: An Introduction. Guest lecture for FOR102: Introduction to Forest Management, March 1, 2017

Snowmelt Processes in Discontinuous Forests: Apparent paradoxes and implications for advancing hydrologic understanding in complex terrain. Guest lecture for ISEM 301: Water in Society, February 26, 2015.

Water, Culture, Power, and the Challenge of Climate Change. Guest lecture for ISEM 101: Water, Culture, and Power, October 24, 2014.

Hydrology 501: A crash course. Guest lectures and assignment for WR506: Integrated Water Resources, September 8, 2014.

Hydrology 501: A crash course. Guest lecture and assignment for WR506: Integrated Water Resources, October 18, 2012.

Forest and snow hydrology in the northern Rocky Mountains. Guest lecture for LA 520/LARC 559: Northern Rocky Mountain Regional Landscapes (Washington State University). February 2, 2012.

Hydrology 501: A crash course. Guest lecture for WR506: Integrated Water Resources, October 18, 2011.

Forest and snow hydrology in the northern Rocky Mountains. Guest lecture for LA 520/LARC 559: Northern Rocky Mountain Regional Landscapes (Washington State University). January 25, 2011.

Hydrometeorological measurements for watershed science and management. Guest lecture for

FOR274: Forest Measurements, November 2010.

Hydrology 501: A crash course. Guest lecture for WR506: Integrated Water Resources, October 14, 2010.

Snow hydrology fundamentals. Guest lecture. CE325 Engineering Hydrology, October 2005.

#### SCHOLARSHIP ACCOMPLISHMENTS:

##### Refereed/Adjudicated:

- \* denotes graduate student author
- † denotes undergraduate student author

- Russell, M. \*, J. U. H. Eitel, T. E. Link, and C. A. Silva. 2021. Important airborne LiDAR metrics of canopy structure for estimating snow interception. *Remote Sensing*. v. 13, 4188. <https://doi.org/10.3390/rs13204188>
- Seyfried, M. S., G. N. Flerchinger, S. Bryden\*, T. E. Link, D. Marks, and J. McNamara. 2021. Slope/aspect controls on soil climate: Field documentation and implications for large-scale simulation of critical zone processes, *Vadose Zone Journal*;e20158. <https://doi.org/10.1002/vzj2.20158>
- Marshall, A. M., Link, T. E., Flerchinger, G. N., and Lucash, M. S., 2021. Importance of parameter and climate data uncertainty for future changes in boreal hydrology. *Water Resources Research*. 57. e2021WR029911. <https://doi.org/10.1029/2021WR029911>
- Marshall, A. M., Link, T. E., Flerchinger, G. N., Nicolsky, D. J., Lucash, M. S., 2021. Ecohydrologic modeling in a deciduous boreal forest: Model evaluation for application in non-stationary climates. *Hydrological Processes*. 35(6). e14251. <https://doi.org/10.1002/hyp.14251>
- Deval, C. \*, E. S. Brooks, J. A. Gravelle, T. E. Link, M. Dobre, and W. J. Elliot. 2021. Long-term response in nutrient load from commercial forest management operations in a mountainous watershed. *Forest Ecology and Management*. v. 494, 119312. <https://doi.org/10.1016/j.foreco.2021.119312>
- Wang, H., T. Seaborn, Z. Wang, C. C. Caudill, and T. E. Link. 2021. Modeling tree canopy height using machine learning over mixed vegetation landscapes. *International Journal of Applied Earth Observations and Geoinformation*. v. 101. 102353. <https://doi.org/10.1016/j.jag.2021.102353>
- Marshall, A. M. \*, M. Foard\*, C. M. Cooper\*, P. Edwards\*, S. L. Hirsch\*, M. Russell\*, and T. E. Link. 2020. Climate change knowledge and gaps in mountainous headwaters: Spatial and topical distribution of research in the Columbia River Basin. *Regional Environmental Change* 20(4): 134. <https://doi.org/10.1007/s10113-020-01721-7>
- Coble, A.A., H. Barnard, E. Du, S. Johnson, J. Jones, E. Keppeler, H. Kwon, T. E. Link, B. Penaluna, M. Reiter, M. River, K. Puettmann, and J. Wagenbrenner. 2020. Long-term hydrological response to forest harvest during seasonal low flow: Potential implications for contemporary harvest practices. *Science of the Total Environment*. v. 730, 138926. <https://doi.org/10.1016/j.scitotenv.2020.138926>
- Russell, M. T. \*, J. U. H. Eitel, A. J. Maguire\*, and T. E. Link. 2020. Toward a novel laser-based approach for validating snow interception estimates. *Remote Sensing*. 12, 1146; <https://doi.org/10.3390/rs12071146>.
- Scheller, R. M., A. Kretchun, D. J. Shinneman, B. Soderquist\*, K. Maguire, T. E. Link, and E. K.



- Strand. 2020. Long term persistence of aspen in snowdrift-dependent ecosystems. *Forest Ecology and Management*. <https://doi.org/10.1016/j.envsci.2019.01.009>.
- Marshall, A. M.\* , T. E. Link, A. P. Robinson, and J. T. Abatzoglou. 2020. Higher snowfall intensity is associated with reduced impacts of warming upon winter snow ablation. *Geophysical Research Letters*. 47, e2019GL086409. <https://doi.org/10.1029/2019GL086409>.
- Srivastava, A., E. S. Brooks, M. Dobre, W. J. Elliot, J. Q. Wu, D. C. Flanagan, J. A. Gravelle\*, and T. E. Link. 2020. Modeling forest management effects on water and sediment yield from nested, paired watersheds in the interior Pacific Northwest, USA. *Science of the Total Environment*. v. 701. <https://doi.org/10.1016/j.scitotenv.2019.134877>.
- Marshall, A. M.\* , J. T. Abatzoglou, T. E. Link, and C. Tennant. 2019. Projected changes in interannual variability of peak snowpack amount and timing in the western United States. *Geophysical Research Letters*, 46(15), 8882-8892. <https://doi.org/10.1029/2019GL083770>.
- Blöschl, G. Marc F.P. Bierkens, Antonio Chambel, Christophe Cudennec, Georgia Destouni, Aldo Fiori, James W. Kirchner, Jeffrey J. McDonnell, Hubert H.G. Savenije, Murugesu Sivapalan, Christine Stumpp, Elena Toth, Elena Volpi, Gemma Carr, Claire Lupton, José Salinas, Borbála Széles, Alberto Viglione, Hafzullah Aksoy, Scott T. Allen, Anam Amin, Vazken Andréassian, Berit Arheimer, Santosh K. Aryal, Victor Baker, Earl Bardsley, Marlies H. Barendrecht, Alena Bartosova, Okke Batelaan, Wouter R. Berghuijs, Keith Beven, Theresa Blume, Thom Bogaard, Pablo Borges de Amorim, Michael E. Böttcher, Gilles Boulet, Korbinian Breinl, Mitja Brilly, Luca Brocca, Wouter Buytaert, Attilio Castellarin, Andrea Castelletti, Xiaohong Chen, Yangbo Chen, Yuanfang Chen, Peter Chiffard, Pierluigi Claps, Martyn P. Clark, Adrian L. Collins, Barry Croke, Annette Dathe, Paula C. David, Felipe P. J. de Barros, Gerrit de Rooij, Giuliano Di Baldassarre, Jessica M. Driscoll, Doris Duethmann, Ravindra Dwivedi, Ebru Eris, William H. Farmer, James Feiccabrino, Grant Ferguson, Ennio Ferrari, Stefano Ferraris, Benjamin Fersch, David Finger, Laura Foglia, Keirnan Fowler, Boris Gartsman, Simon Gascoïn, Eric Gaume, Alexander Gelfan, Josie Geris, Shervan Gharari, Tom Gleeson, Miriam Glendell, Alena Gonzalez Bevacqua, María P. González-Dugo, Salvatore Grimaldi, A. B. Gupta, Björn Guse, Dawei Han, David Hannah, Adrian Harpold, Stefan Haun, Kate Heal, Kay Helfricht, Mathew Herrnegger, Matthew Hipsey, Hana Hlaváčiková, Clara Hohmann, Ladislav Holko, Christopher Hopkinson, Markus Hrachowitz, Tissa H. Illangasekare, Azhar Inam, Camyla Innocente, Erkan Istanbuluoglu, Ben Jarihani, Zahra Kalantari, Andis Kalvans, Sonu Khanal, Sina Khatami, Jens Kiesel, Mike Kirkby, Wouter Knoben, Krzysztof Kochanek, Silvia Kohnová, Alla Kolechkina, Stefan Krause, David Kreamer, Heidi Kreibich, Harald Kunstmann, Holger Lange, Margarida L. R. Liberato, Eric Lindquist, Timothy Link, Junguo Liu, Daniel Peter Loucks, Charles Luce, Gil Mahé, Olga Makarieva, Julien Malard, Shamshagul Mashtayeva, Shreedhar Maskey, Josep Mas-Pla, Maria Mavrova-Guirguinova, Maurizio Mazzoleni, Sebastian Mernild, Bruce Dudley Misstear, Alberto Montanari, Hannes Müller-Thomy, Alireza Nabizadeh, Fernando Nardi, Christopher Neale, Nataliia Nesterova, Bakhram Nurtaev, Vincent O. Odongo, Subhabrata Panda, Saket Pande, Zhonghe Pang, Georgia Papacharalampous, Charles Perrin, Laurent Pfister, Rafael Pimentel, Maria J. Polo, David Post, Cristina Prieto Sierra, Maria-Helena Ramos, Maik Renner, José Eduardo Reynolds, Elena Ridolfi, Riccardo Rigon, Monica Riva, David E. Robertson, Renzo Rosso, Tirthankar Roy, João H.M. Sá, Gianfausto Salvadori, Mel Sandells, Bettina Schaefli, Andreas Schumann, Anna Scolobig, Jan Seibert, Eric Servat, Mojtaba Shafiei, Ashish Sharma, Moussa Sidibe, Roy C. Sidle, Thomas Skaugen, Hugh Smith, Sabine M. Spiessl, Lina Stein, Ingelin Steinsland, Ulrich Strasser, Bob Su, Jan Szolgay, David Tarboton, Flavia Tauro, Guillaume Thirel, Fuqiang Tian, Rui Tong, Kamshat Tussupova, Hristos Tyralis, Remko Uijlenhoet, Rens van Beek, Ruud J. van der Ent, Martine van der Ploeg, Anne F. Van Loon, Ilja van Meerveld, Ronald van Nooijen, Pieter R. van Oel, Jean-Philippe Vidal, Jana von Freyberg, Sergiy Vorogushyn, Przemyslaw Wachniew, Andrew J. Wade, Philip Ward, Ida K. Westerberg, Christopher White, Eric F. Wood, Ross Woods, Zongxue Xu, Koray K. Yilmaz & Yongqiang Zhang. 2019. Twenty-three unsolved problems in hydrology (UPH) – a community perspective, *Hydrological Sciences Journal*, 64:10, 1141-1158, doi: 10.1080/02626667.2019.1620507

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Link, T. E. and J. A. Gravelle\*. 2010. Mica Creek Study Results Fill Knowledge Gap. *Western Forester*, v. 55, n. 5, pp 8-10.

Link, T.E., C. Pearson, C. Jones, B. Fitt, C. Davis and A. Wolf. 2001. Status of water resources in the United States of America, 2000. Prepared for the Third World Center for Water Resource Management, Mexico City, Mexico. 110 pp.



**Technical Reports:**

- Link, T. E., T. R. Johnson, R. Keefe, and R. Becker. 2020. The effectiveness of Idaho's Class I stream shade rule: Analysis of before-after control-impact effective shade data. Final Technical Report prepared for Idaho Department of Environmental Quality, 95 pp.
- Link, T. E., C. Pearson, C. Jones, B. Fitt, C. Davis and A. Wolf. 2001. Status of water resources in the United States of America, 2000. Prepared for the Third World Center for Water Resource Management, Mexico City, Mexico. 110 pp.

**Professional Meeting Papers, Workshops, Showings, Recitals:**

- Russell, M., J. Eitel, T. E. Link, and C. Silva. Important airborne lidar metrics of canopy structure for estimating snow interception. AGU Fall Meeting, New Orleans, LA. Dec 13-17, 2021
- Strickfaden, K., A.M. Marshall, L. Svancara, D.E. Ausband, and T.E. Link. The virtual measurement stake: An R package allowing for snow depth measurements at remote camera stations. Science of the Service, Pacific Region, U.S. Fish and Wildlife Service. 5 May 2021.
- Strickfaden, K., A.M. Marshall, L. Svancara, D.E. Ausband, and T.E. Link. The virtual measurement stake: An R package allowing for snow depth measurements at remote camera stations. Idaho Chapter of The Wildlife Society Conference. 22-25 February 2021.
- Marshall, A. M., Link, T. E., Flerchinger, G. N., and Lucash, M. S.. Ecohydrologic modeling in a boreal deciduous forest: model evaluation for application in non-stationary climates. AGU Fall Meeting, held virtually. Dec 1-17, 2020.
- Godsey, S., Hale, K., Havens, S., Marks, D. G., Kormos, P., Trujillo, E., Hedrick, A. R., Enslin, C. L., Winstral, A. H., McNamara, J. P., and Link, T. E. Drivers of spatiotemporal heterogeneity in precipitation, snowpack storage, and surface water inputs at the rain-snow transition in water-limited western US mountains. AGU Fall Meeting, held virtually. Dec 1-17, 2020.
- Keppeler, E., A. Coble, J. Wagenbrenner, T. E. Link, H. Barnard, and B. Penaluna. Long-term low flow responses to forest harvest treatments in the Pacific Northwest. 7th Interagency Conference on Research in the Watersheds. Tifton, GA (held virtually). November 16-19, 2020.
- Link, T. E., K. Strickfaden, D. Ausband, A. Marshall, and L. Svancara. Locating snow refugia in complex terrain: Leveraging automated image data to adapt wildlife and habitat management practices. North American Congress for Conservation Biology, Denver, CO (held virtually), July 27-31, 2020.
- Marshall, A. M., T. E. Link, A. Robinson, and J. T. Abatzoglou. Higher snowfall intensity reduces warming impacts on winter snow ablation: an update to an OSPA-winning presentation. AGU Fall Meeting, San Francisco, CA. Dec 9-13, 2019. *Invited*
- Marshall, A. M., T. E. Link, and M. S. Lucash. Energy and water balances in boreal forest with discontinuous permafrost: Implementation of a physically-based hydrological model at sites with varying disturbance histories. AGU Fall Meeting, San Francisco, CA. Dec 9-13, 2019.
- Godsey, S., C. L. Enslin, S. Havens, D. G. Marks, P. Kormos, A. R. Hedrick, K. Hale, E. Trujillo, A. H. Winstral, J. P. McNamara, T. E. Link, M. Robertson, and M. Johnson. Modeling snow distribution, melt and flows in the rain-to-snow transition zone. AGU Fall Meeting, San Francisco, CA. Dec 9-13, 2019.
- Marshall, A., T. E. Link, J. Abatzoglou, G. Flerchinger, D. Marks, and L. Tedrow. Warming Alters Hydrologic Heterogeneity: Simulated Climate Sensitivity of Hydrology-based Microrefugia in the Snow-to-Rain Transition Zone. 27th IUGG General Assembly, Montreal, Canada. July 8-18, 2019.

- Link, T. E. and E. Du. Long-term effects of forestry on summer baseflow at Mica Creek, Idaho. NCASI Western Regional Meeting, Vancouver, WA. Sep 25, 2019. *Invited*
- Marshall, A. M., J. Duffin, and T. E. Link. Interdisciplinary Graduate Education in Water Resources: Successes and Challenges and a Case Study Research Project from an IGERT Program. AGU Fall Meeting, Dec 10-14, 2018.
- Marshall, A. M., T. E. Link, J. T. Abatzoglou, and C. Tennant. Climate-Driven Changes in Interannual Variability of Snowpack Amount and Timing: Interactive Data Visualizations for Understanding Complex Patterns. INVITED. AGU Fall Meeting, Dec 10-14, 2018.
- Deval, C., E. S. Brooks, J. Gravelle, T. E. Link, and M. Dobre. Multi-Decadal Response of Stream Water Quality to Commercial Forest Management Operations in a Mountainous Watershed. AGU Fall Meeting, Dec 10-14, 2018.
- Marshall, A. M., T. E. Link, A. Robinson, and J. T. Abatzoglou. Higher Snowfall Intensity Reduces Warming Impacts on Mid-Winter Snow Ablation and Accumulation. AGU Fall Meeting, Dec 10-14, 2018. Outstanding Student Presentation Award (OSPA) winner.
- Russell, M., J. Eitel, A. Maguire, and T. E. Link. Novel laser-based approach for mapping snow interception at high spatial and temporal resolution. AGU Fall Meeting, Dec 10-14, 2018.
- Link, T. E., G. Stewart, B. Ehinger, M. Teply, C. P. Hawkins, and H. Haemmerle. The Eastside Type N Riparian Effectiveness Project (ENREP): A New Interdisciplinary Study to Assess the Effects of Forest Practices in the Interior Pacific Northwest, USA. AGU Fall Meeting, Dec 10-14, 2018.
- Link, T. E., L. Wei, H. Zhou, A. T. Hudak, K. Kavanagh, J. D. Marshall, and A. M. Marshall. Anomalous increasing annual streamflows driven by the demise of western white pine dominated ecosystems. INVITED. AGU Fall Meeting, Dec 10-14, 2018.
- Kumar, M., X. Chen, B. Seyednasrollah, T. Zi, T. E. Link, B. L. McGlynn, and J. D. Albertson. Improving process representations in models: An exercise in scientific exploration or a societal need? AGU Fall Meeting, Dec 10-14, 2018.
- Marshall, A. M., T. E. Link, J. Abatzoglou, G. Flerchinger, D. Marks, and L. Tedrow. Warming increases spatial hydrological homogeneity: Sensitivity of fluxes in a catchment dominated by wind redistribution of snow. Presented at SnowHydro — International Conference on Snow Hydrology. Heidelberg, Germany, 11-15 Feb. 2018.
- Marshall, A. M., T. E. Link, J. Abatzoglou, G. Flerchinger, D. Marks, and L. Tedrow. Warming increases spatial hydrological homogeneity: Sensitivity of fluxes in a catchment dominated by wind redistribution of snow. Presented at International Network for Alpine Research Catchment Hydrology, 3rd Annual Workshop. Schneefernerhaus, Zugspitze, Germany, 7-9 Feb. 2018.
- Duffin, J., M. Russell, B. Fuentes, A. Rizzo, T. E. Link, D. Caamaño, R. King, and R. Barra. Cross-cultural field experiences in earth and social Sciences for Chilean and American graduate students. Abstract ED53D-0187. Presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.
- Zhou, Y., M. Kumar, and T. E. Link. Estimating the longwave radiation underneath the forest canopy in a snow-dominated setting. Abstract C53B-1029. Presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.
- Cooper, C., Edwards, P. Foard, M. Hirsch, S., Hovanceck, D., Link, T., Marshall, A., Russell, M., Witinok-Huber, R. (October 2017). Climate change research in the mountainous headwater regions of the Columbia River Basin. Pacific Northwest Climate Conference (poster).

- Marshall, A., Link, T.E., Tedrow, L., and Flerchinger, G. (April 2017). Sensitivity of snow and hydrological dynamics to climate in a catchment characterized by wind-driven redistribution of snow. Western Snow Conference (oral presentation).
- Soderquist, B., K. Kavanagh, T. E. Link, M. S. Seyfried, and E. K. Strand. Growing season conditions mediate the dependence of aspen on redistributed snow under climate change. Abstract B11D-0500. Presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
- Godsey, S., C. Tennant, A. A. Harpold, T. E. Link, S. Rajagopal, and L. Larsen. Do existing classification systems capture mountain snowpack heterogeneity? Accounting for spatial variability in a changing environment. Abstract C13F-05. Presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
- Seyfried, M. S., G. N. Flerchinger, T. E. Link, and J. P. McNamara. Implications of topographically induced variations in solar radiation for water balance, vegetation and soil development. Abstract H51J-02. Presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
- Niemeyer, R. J., A. L. Bentley-Brymer, J. D. Holbrook, A. A. Suazo, J. D. Wulfhorst, B. A. Newingham, T. E. Link, and K. T. Vierling. Interdisciplinary science for land managers: Lessons learned in the context of public land management. Abstract PA43B-2225. Presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 12-16 Dec.
- Srivastava, A., E. S. Brooks, W. J. Elliot, T. E. Link, J. Q. Wu, and J. A. Gravelle. Application of the WEPP model to simulate the water balance of a forested watershed, interior US Pacific Northwest. Presented at the AgroEnviron Conference, Purdue University, May 23-27, 2016.
- Niemeyer, R. J., T. E. Link, R. Heinse, M. S. Seyfried, G. N. Flerchinger, and P. Z. Klos. Does woodland encroachment impact water?: An ecohydrology study of western juniper (*Juniperus occidentalis*) and other semi-arid conifers in the western U.S. Abstract H11C-1355. Presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Enslin, C., D. Marks, S. E. Godsey, P. R. Kormos, M. S. Seyfried, J. P. McNamara, and T. E. Link. A hydrometeorological dataset across the rain-to-snow transition at Reynolds Creek Critical Zone Observatory, Idaho. Abstract C33D-0845. Presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Soderquist, B, K. Kavanagh, T. E. Link, M. Seyfried, and E. Strand. Projecting the dependence of sage-steppe vegetation on redistributed snow in a warming climate. Abstract B53G-0647. Presented at 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Niemeyer, R., T. E. Link, G. Flerchinger, S. Johnson, M. Seyfried, and B. Soderquist. Future drought vulnerability in tree stands: Understanding soil moisture dynamics to develop resilience strategies for climate change in the Pacific Northwest. Presented at the 6th Annual Pacific Northwest Climate Conference, Nov. 3-5, Coeur D'Alene, ID.
- Soderquist, B, K. Kavanagh, T. E. Link, M. Seyfried, R. Niemeyer, and E. Strand. Projecting the dependence of aspen productivity on redistributed snow in a warming climate. Presented at the 6th Annual Pacific Northwest Climate Conference, Nov. 3-5, Coeur D'Alene, ID.
- Bentley Brymer, A. L., Holbrook, J. D., Niemeyer, R. J., Suazo, A. A., Wulfhorst, J.D., Rachlow, J. L., Vierling, K. T., Link, T. E., & Newingham, B. A. (2015, June). Merging ecosystem services and social processes for a social-ecological impact assessment on U.S. public land. Paper presented at the International Symposium on Society and Natural Resource Management, the annual meeting of the International Association for Society and Natural Resources, Charleston, South Carolina, USA.
- Patton, N. M. Seyfried, K. Lohse, and T. E. Link. Controls of Parent Material and Topography on Soil Carbon Storage in the Critical Zone. Abstract H51D-0648. Presented at 2014 Fall Meeting,

AGU, San Francisco, Calif., 15-19 Dec.

- Klos, P. Z., T. E. Link, W. Durrett, R. Heinse, M. Seyfried, and E. Leonard. Influence of contrasting aspect, lithology, and vegetation on saprolite genesis in complex terrain: Reynolds Creek Critical Zone Observatory. Abstract H51D-0649. Presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Seyfried, M., T. E. Link, P. Z. Klos, N. Patton, and K. Lohse. Ecohydrological Implications of Contrasting Slope and Aspect in Complex Terrain. Abstract H51D-0641. Presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Link, T. E. and D. Carson. A Comparison of Snowpack Mass and Energy Dynamics Across a Canopy Discontinuity and Small-Scale Elevational Gradient. Abstract C43E-0457. Presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Musselman, K, J. Pomeroy, and T. E. Link. Ray Trace Modeling to Determine Optimal Forest Canopy Gap Size for Reduced Solar Irradiance During Snowmelt: Field Verification and Continental Scale Application. Abstract C41D-07. Presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Soderquist, B., K. Kavanagh, T. E. Link, E. Strand, and M. Seyfried. Simulating the Dependence of Sagebrush Steppe Vegetation on Redistributed Snow in a Semi-Arid Watershed. Abstract H34B-03 Presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Wei, L., A. Hudak, T. E. Link, J. Marshall, K. Kavanagh, H. Zhou, J. Abatzoglou, R. Pangle, G. Flerchinger, R. Denner. Why has streamflow in a northern Idaho creek increased while flows from many other watersheds in the US Pacific Northwest have decreased over the past sixty years? Abstract B31E-0054 Presented at 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Hudak, A.T., P. Fekety, L. Wei, J. Marshall, T. Link, K. Kavanagh and M. Falkowski. An integrated measurement and modeling approach for predicting landscape-level carbon and water budgets at the Priest River Experimental Forest in northern Idaho, USA. ForestSAT Conference, Lake Garda, Italy, 4-7 Nov 2014. (oral presentation, published abstract).
- T. E. Link, J. A. Gravelle, J. A. Hubbart, D. Karwan, and E. Du. 2014. The Mica Creek Project: A comprehensive assessment of environmental effects of contemporary harvest practices in the interior Pacific Northwest, USA. International Union of Forest Research Organizations (IUFRO) 24th World Congress. Salt Lake City, UT, Oct. 5-11, 2014.
- B. Soderquist, K. L. Kavanagh, T. E. Link, M. Seyfried, and A. Winstral. 2014. Simulating the dependence of aspen (*Populus tremuloides*) net primary production on redistributed snow. International Union of Forest Research Organizations (IUFRO) 24th World Congress. Salt Lake City, UT, Oct. 5-11, 2014.
- J. Hubbart, T. E. Link, and W. Elliot. 2014. Effects of contemporary harvest practices on water yield and snowpack dynamics in the continental-maritime region of the USA. International Union of Forest Research Organizations (IUFRO) 24th World Congress. Salt Lake City, UT, Oct. 5-11, 2014.
- L. Wei, T. E. Link, A. Hudak, J. Marshall, and K. L. Kavanagh. 2014. Long-term changes in climate, forest vegetation, and streamflow in the Priest River Experimental Forest, northern Idaho. International Union of Forest Research Organizations (IUFRO) 24th World Congress. Salt Lake City, UT, Oct. 5-11, 2014.
- A. T. Hudak, J. Sandquist, T. Jain, J. Byrne, P. Fekety, M. J. Falkowski, L. Wei, J. D. Marshall, T. E. Link, and K. L. Kavanagh. 2014. Biomass and carbon stores estimated in 2011 and 1934 at Priest River Experimental Forest, northern Idaho, USA. International Union of Forest Research

Organizations (IUFRO) 24th World Congress. Salt Lake City, UT, Oct. 5-11, 2014.

- S. Dickerson-Lange, J. Lundquist, R. Gersonde, T. E. Link, J. Lutz, S. Malloch, A. Nolin, and A. Snover. 2014. Testing an empirical model of snowpack duration using citizen science field observations from the mountains of the Pacific Northwest. 5th Annual Pacific Northwest Climate Science Conference, Sep. 9-10, 2014.
- T. E. Link, M. S. Seyfried, S. Bryden, J. P. McNamara, and P. Z. Klos. 2013. Soil temperature and water dynamics on contrasting aspects in the rain-snow transition zone. Abstract H51F-1266 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- W. Tinkham, A. M. Smith, H-P. Marshall, T. E. Link, M. J. Falkowski, and A. H. Winstral. 2013. Quantifying spatial distribution of snow depth errors from LiDAR using Random Forests. Abstract H13J-1497 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- R. J. Niemeyer, T. E. Link, R. Heinse, and M. S. Seyfried. 2013. Conifer encroachment and hydrology: Altered above and below ground hydrologic fluxes in western juniper (*Juniperus occidentalis*). Abstract H21F-1125 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- B. Soderquist, K. Kavanagh, T. E. Link, M. S. Seyfried, and A. H. Winstral. 2013. Simulating the Dependence of Aspen on Redistributed Snow. Abstract H23C-1273 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- M. S. Seyfried and T. E. Link. 2013. Soil Temperature Variability in Complex Terrain measured using Distributed a Fiber-Optic Distributed Temperature Sensing. Abstract H23F-1349 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- D. G. Marks, M. L. Reba, A. H. Winstral, M. Kumar, and T. E. Link. 2013. Patterns of snowcover energetics over different land cover and topographic position with variations in climate. Abstract C41B-0608 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- G. N. Flerchinger; D. G. Marks; M. L. Reba, and T. E. Link. 2013. Measurement and Modeling of Vertical Temperature, Humidity and Wind Profiles Through Aspen Stands in a Mountain Basin. Abstract H43D-1489 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- M. Kumar, B. Seyednasrollah, and T. E. Link. 2013. In search of radiation minima for balancing the needs of forest and water management in snow dominated watersheds (Invited). Abstract C51D-05 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- P. W. Robinson, D. Neal, D. Frome, K. Kavanagh; A. Davis, P. E. Gessler, H. Hess, Z. A. Holden, T. E. Link, B. A. Newingham, and A. M. Smith. 2013. Mountainous Ecosystem Sensor Array (MESA): a mesh sensor network for climate change research in remote mountainous environments. Abstract IN41C-1617 Presented at 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- M. Seyfried, T. E. Link, S. Bryden. 2013. Soil temperature and water dynamics on contrasting aspects in the rain-snow transition zone. Abstract 1048 Presented at the Davos Atmosphere Cryosphere Assembly (DACA-13), Davos, Switzerland, 8-12 July.
- D. Marks, A. Winstral, T. E. Link, M. Reba, and M. Kumar. 2013. Rain on snow: the impact of climate warming on the spatial variability of snow and mountain hydrology. Abstract 997 Presented at the Davos Atmosphere Cryosphere Assembly (DACA-13), Davos, Switzerland, 8-12 July.
- T. E. Link, C. Ellis, J. W. Pomeroy, R. R. Lawler, R. Essery, and D. Marks. 2013. The effect of canopy gaps on incoming radiation at the snow surface and implications for snowpack retention in forested regions. Abstract 686 Presented at the Davos Atmosphere Cryosphere Assembly (DACA-13), Davos, Switzerland, 8-12 July. INVITED.

- D. Marks, M. Reba, A. Winstral, T. E. Link, M. Kumar. 2013. Sensitivity of snowcover energetics to variations in climate, land cover and topographic position. Abstract 1020 Presented at the Davos Atmosphere Cryosphere Assembly (DACA-13), Davos, Switzerland, 8-12 July.
- T. E. Link, J. W. Pomeroy, R. R. Lawler, C. Ellis, D. Marks, and R. Essery. 2013. A Sensitivity Study of Radiant Energy During Snowmelt in Small Canopy Gaps. Marmot Basin 50th Anniversary Workshop. Kananaskis Country, AB. 21-22 Feb. 2013. INVITED
- T. E. Link, M. Kumar, J. Pomeroy, B. Seyednasrollah, C. Ellis, R. Lawler, and R. Essery. 2012. Opportunities and challenges to conserve water on the landscape in snow-dominated forests: The quest for the radiative minima and more... Abstract GC51F-03 To be presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec. INVITED.
- P. Z. Klos, J. Abatzoglou, J. Blades, M. Clark, C. Currie, M. Dodd, S. Eigenbrode, T. Hall, A. Haruch, J. Hicke, P. Higuera, J. Holbrook, V. Jansen, K. Kemp, A. Lamar, A. Lankford, T. E. Link, T. Magney, A. Meddens, L. Mitchell, B. Moore, P. Morgan, B. Newingham, R. Niemeyer, B. Soderquist, A. Suazo, C. Teston, K. Vierling, V. Walden, C. Walsh. 2012. Indicators of climate change in Idaho: The intersection of biophysical change with social perception across a diverse landscape. Presented at the Pacific Northwest Climate Conference, Boise, Idaho, 2 Oct 2012.
- T. E. Link, P. Z. Klos, J. T. Abatzoglou, and K. Kavanagh. 2011. Assessing the climatic water deficit in a changing climate: A new index to evaluate the potential importance of subsurface storage in mountain ecosystems. Abstract GC31A-1018 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- K. Kavanagh, A. Davis, P. Gessler, H. Hess, Z. Holden, T. E. Link, B. A. Newingham, A. M. Smith, and P. Robinson. 2011. Development of a three dimensional wireless sensor network for terrain-climate research in remote mountainous environments. Abstract B13A-0524 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- S. Bryden, T. E. Link, M. S. Seyfried, and J. P. McNamara. 2011. Coupled snow dynamics, soil moisture, and soil temperatures in complex terrain of a semi-arid mountainous watershed. Abstract C33E-0687 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- W. T. Tinkham, C. M. Hoffman, M. J. Falkowski, A. M. Smith, T. E. Link, and H. P. Marshall. 2011. Spatial accounting for errors in LiDAR-derived products: Snow volume and snow water equivalent estimation. Abstract C33D-0672 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- D. G. Marks, M. L. Reba, A. H. Winstral, T. E. Link, and M. Kumar. 2011. Sensitivity of the snowcover energetics to land cover and topographic position to variations in climate. Abstract C33E-0690 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- P. Z. Klos, A. Chain, L. A. Vierling, T. E. Link, and B. Finegan. 2011. Throughfall heterogeneity in forested landscapes as a focal mechanism for deep percolation: yes or no? Abstract H33E-1360 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec.
- T. E. Link, D. Marks, M. S. Seyfried, G. Flerchinger, and A. Winstral. 2011. The Reynolds Creek Experimental Watershed: An environmental observatory for the 21<sup>st</sup> century. NSF sponsored workshop: Design of Global Environmental Gradient Experiments using International CZO Networks. Newark, DE, November 8-10, 2011.
- T. E. Link, R. Essery, J. Pomeroy, D. Marks, R. Lawler. 2011. A sensitivity study of radiant energy during snowmelt in non-uniform forests. IAHS Decade on Predictions in Ungauged Basins (PUB), Final Meeting. Canmore, AB, May 11-14, 2011.
- P. Z. Klos, K. B. Kemp, J. J. Blades, T. E. Link, P. Morgan, P. E. Higuera, T. E. Hall. 2010. Assessing the effects of changing climate on the transformation and vulnerability of coupled hydrologic,

ecologic, and human systems using an interdisciplinary spatiotemporal methodology. IAHS Decade on Predictions in Ungauged Basins (PUB), Final Meeting. Canmore, AB, May 11-14, 2011.

- K. Friedrichs, T. E. Link and J. A. Gravelle. 2011. Habitat change assessment in a northern Idaho managed forest. Land Grant and Sea Grant National Water Conference, Washington, D.C., January 31 - February 1, 2011.
- P. Z. Klos, K. B. Kemp, J. J. Blades, T. E. Link, P. Morgan, P. E. Higuera, T. E. Hall. 2010. Assessing the effects of changing climate on the transformation and vulnerability of coupled hydrologic, ecologic, and human systems using an interdisciplinary spatiotemporal methodology. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., H33C-1145.
- J. P. McNamara; T. E. Link; D. G. Marks; M. S. Seyfried; M. Kumar; P. R. Kormos. 2010. On the value local knowledge in conceptualizing physically-based models. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., H31L-05 INVITED.
- T. E. Link, G. N. Flerchinger, G. M. Chauvin, D. G. Marks, A. H. Winstral, M. S. Seyfried, and E. Du. 2010. Application of a long-term water balance of a semi-arid mountainous catchment to understand potential impacts of climate change. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., H31I-02 INVITED.
- E. Du, T. E. Link, and J. T. Abatzoglou. 2010. Evaluating hydrologic responses to climate changes in an inland Pacific Northwest forested headwater catchment using numerical modeling. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., C13C-06 INVITED.
- K. Kavanagh, T. E. Link, M. S. Seyfried, and K. B. Kemp. 2010. The fate of aspen in a world with diminishing snowpacks. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., B31E-0355.
- L. Meromy, N. P. Molotch, T. E. Link, S. R. Fassnacht, E. Herchmer, S. Roberts, and R. Rice. 2010. Subgrid variability of snow water equivalent at operational snow stations in the western United States. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., Abstract C33C-0541.
- T. E. Link, D. Carson, and D. G. Marks. 2010. Quantification of snowpack mass and energy dynamics across a canopy discontinuity. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., Abstract C33C-0547.
- M. S. Seyfried, C. Mendoza, and T. E. Link. 2010. Use of fiber optic, distributed temperature sensing to describe snow cover dynamics in complex terrain. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., Abstract C33C-0549.
- W. T. Tinkham, A. M. Smith, T. E. Link, A. T. Hudak, M. J. Falkowski, and D. G. Marks. 2010. Spatial assessment of snow volume using LiDAR and field measurements. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., Abstract C33C-0555.
- T. E. Link and R. R. Lawler. 2010. Spatiotemporal Distribution of All-wave Radiation in Discontinuous Canopies with Application to Snowmelt Prediction. Eastern Snow Conference, Hancock, MA, June 8-10, 2010.
- M. L. Reba, D. Marks, A. Winstral, and T. E. Link. 2010. Melt energetics of twenty-five years of distributed, physically-based snowcover simulations in a small headwater catchment in the semi-arid western United States. Eastern Snow Conference, Hancock, MA, June 8-10, 2010.
- D. Marks, R. Essery, T. E. Link, A. Winstral, M. Reba, and J. Pomeroy. 2009. Accounting for canopy shading and emissivity in simulated radiation fields over a complex mountainous region. Eos Trans. AGU, 90(22), Fall Meet.. Suppl., Abstract C23D-06 INVITED.
- R. Lawler and T. E. Link. 2009. Quantifying all-wave radiation in discontinuous canopies with

application to snowmelt prediction. *Eos Trans. AGU*, 90(22), Fall Meet.. Suppl., Abstract C31B-0449.

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- T.E. Link, R. Essery, J. Pomeroy, D. Marks, R. Lawler. 2009. A sensitivity study of radiant energy during snowmelt in non-uniform forests. AGU Chapman Conference: Examining Ecohydrological Feedbacks of Landscape Change Along Elevation Gradients in Semiarid Regions. Boise and Sun Valley, October 4-8, 2009.
- T. E. Link. 2009. Interactions of topography, snow, vegetation, and radiation in complex terrain. AGU Chapman Conference field tour: Examining Ecohydrological Feedbacks of Landscape Change Along Elevation Gradients in Semiarid Regions. Reynolds Creek Experimental Watershed, October 4, 2009. INVITED
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- J. A. Hubbart, T. E. Link, and E. Du. 2007. Measured and modeled water balances for three snow

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- H. Ahmadi, A. Malekian, T. E. Link, H. M. Asgari, M. Tahmouras, and M. Biniyaz. 2007. Estimation of daily suspended sediment yield based on neural networks and neuron-fuzzy techniques, Integrated Watershed Management Conference, American Institute of Hydrology, Reno, NV, April 22-15, 2007.
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- T. E. Link. 2007. Evaluating the environmental effectiveness of contemporary forest practices: Inland Empire including eastern British Columbia. Society of American Foresters Annual Convention. Portland, OR, Oct. 24, 2007. Invited Presentation.
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- M. L. Reba, D. Marks, T. E. Link, J. Pomeroy, and A. Winstal. 2007. Evaluation of measured and simulated turbulent components of a snow cover energy balance model in order to refine the turbulent transfer algorithm.
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- T.E. Link, R. Essery, J.P. Hardy, D. Marks, J.W. Pomeroy, M. Reba, and J.E. Sicart. 2006. Sub-canopy radiant energy during snowmelt in uniform and non-uniform forests spanning a latitudinal transect, In: Abstracts with Programs. AGU – San Francisco, California, December 2006. American Geophysical Union, Washington, DC.
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- L. Gray, J.A. Hubbard, K. Kavanagh, T.E. Link, and R. Pangle. 2006. Persistent Cold Air Drainage and Modeled Nocturnal Leaf Water Potential in Complex Forested Mountainous Terrain, In: Abstracts with Programs. AGU – San Francisco, California, December 2006. American Geophysical Union, Washington, DC.
- J. Boll, B. Cosens, F. Fiedler, T.E. Link, P. Wilson, C. Harris, M. Tuller, G. Johnson, and B. Kennedy. 2006. University of Idaho Water of the West Initiative: Development of a sustainable,

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- T.E. Link, J.A. Gravelle, J.A. Hubbard, and D.L. Karwan. 2006. Abiotic impacts of contemporary forest harvest practices in a mountainous catchment in the continental/maritime hydroclimatic region of the western U.S. Annual meeting of the North American Benthological Association (NABS), Anchorage, Alaska, June 2006. Invited Presentation.
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- Link, T., K. Kavanagh, J. Marshall J. Braatne, H.-S. Han, T. Cundy, W. Chung and S. Daley-Laursen. 2005. Collaborative watershed studies of ecosystem responses to current forest harvest practices in the Rocky Mountains, USA. 5<sup>th</sup> National Conference on Science, Policy and the Environment: Forecasting Environmental Changes, National Council for Science and the Environment, February 3-4, 2005 Washington, DC.
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- Link, T.E., D. Marks, J. Pomeroy, A. Winstral, J. Hardy, M. Seyfried, G. Flerchinger, R. Essery, and J. Sicart. 2004. Characterizing snow deposition, snowcover energetics, and melt from plot to

catchment scale in mountain basins (abs.). In: Abstracts with Programs: AGU-CGU Joint Assembly – Montreal, Canada, 2004. American Geophysical Union, Washington, DC.

- Link, T.E., D. Marks, J. Pomeroy, J. Hardy, A. Rowlands, and J. Sicart. 2004. Small-scale spatial variability of sub-canopy radiant energy during snowmelt (abs.). In: Abstracts with Programs: AGU-CGU Joint Assembly – Montreal, Canada, 2004. American Geophysical Union, Washington, DC. *Invited Presentation*.
- Link, T.E., M.J. Tribbeck, D. Marks, and A. Winstral. 2003. Intercomparison of 2 models to simulate snowcover dynamics beneath forest canopies (abs.). In: Abstracts with Programs. AGU - San Francisco, 2003. American Geophysical Union, Washington, DC.
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- Keim, R.F., A. Skaugset, M. Weiler, and T.E. Link. 2003. Persistent spatial variability of throughfall amounts and intensity beneath forest canopies (abs.). In: Abstracts with Programs. AGU - San Francisco, 2003. American Geophysical Union, Washington, DC.
- Marks, D., A. Winstral, and T.E. Link. 2003. Influence of terrain and vegetation canopies on snowcover energetics during melt, International Union of Geodesy and Geophysics General Assembly, June 30 -July 11, 2003, Sapporo, Japan.
- Hardy, J., R. Melloh, G. Koenig, J. Pomeroy, D. Marks, and T.E. Link. 2003. Solar radiation transmission through conifer canopies, International Union of Geodesy and Geophysics General Assembly, June 30-July 11, 2003, Sapporo, Japan. *Invited Presentation*.
- Keim, R.F., T.E. Link, and A.E. Skaugset. 2003. Stochastic effects of forest canopies on extreme precipitation events and initiation of shallow landslides. Joint European Geophysical Society/ American Geophysical Union Spring Meeting, April 7-11, 2003, Nice, France. Winner, Best Student Presentation.
- Link, T.E., M. Unsworth, and D. Marks. 2002. The interception dynamics of a seasonal temperate rainforest. Pacific Northwest Regional Water Quality Conference, February 20-21, 2002, Vancouver, Washington.
- Link, T.E., M. Unsworth, D. Marks, and G. Flerchinger. 2001. Simulation of water and energy fluxes in an old growth seasonal temperate rainforest using the Simultaneous Heat and Water (SHAW) model (abs.). In: Abstracts with Programs. AGU - San Francisco, 2000. American Geophysical Union, Washington, DC. *INVITED PRESENTATION*.
- Link, T.E., M. Unsworth, D. Marks, and G. Flerchinger. 2000. Measurement and modeling of hydrologic processes in relation to the carbon exchange of a seasonal temperate rainforest (abs.). In: Abstracts with Programs. AGU - San Francisco, 2000. American Geophysical Union, Washington, DC.
- Marks, D., T.E. Link, A. Winstral, and D. Garen. 2000. Simulating snowmelt processes during rain-on-snow over a semi-arid mountain basin. International Symposium on Snow, Avalanches, and Impact of the Forest Cover, May 22-26, 2000, Innsbruck, Austria. *Invited Presentation*.
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#### **Grants and Contracts Awarded:**

- 2021. Timothy E. Link. Eastside Type N Riparian Effectiveness Project (ENREP), 3rd Biennium. Washington Department of Natural Resources (WADNR). \$811,192. Total project budget: \$5,796,931.
- 2021. Jeff Langman and Timothy Link. Use of Stable and Radiogenic Isotopes for Identification of Major Infiltration Zones and Source-Water Mixing in the Revett Formation, Bunker Hill Mine. Bunker Hill Mining Company. \$96,935. Total project budget: \$219,334.
- 2020. Vierling, Link, K. Eitel, Paveglio, Cohn, Engels, Wolfenden, J. Eitel. Team SINEW: Sustaining Idaho's Needs in Environment and Water. University of Idaho Presidential Initiative on Water and Sustainability. \$13,315.
- 2019. Timothy Link, Timothy Johnson, and Robert Keefe. Idaho Stream Shade Rule Effectiveness Study: Data Analysis and Report Preparation. Idaho Department of Environmental Quality (IDEQ). \$28,378.
- 2019. Timothy Link. Eastside Type N Riparian Effectiveness Project (ENREP), 2nd Biennium. Washington Department of Natural Resources (WADNR). \$980,425.
- 2019. Timothy Link, David Ausband, Adrienne Marshall, and Leona Svancara. Estimating the spatial and temporal extent of snowpack properties in complex terrain: leveraging novel data to adapt wildlife and habitat management practices to climate change. USGS Northwest Climate Adaptation Science Center, \$253,294.
- 2018. Timothy Link. Eastside Type N Riparian Effectiveness Project (ENREP) — Equipment Supplemental. Washington Department of Natural Resources (WADNR), \$42,100.
- 2018. Timothy Link. Eastside Type N Riparian Effectiveness Project (ENREP). Washington Department of Natural Resources (WADNR), \$369,320 (2018, received); Total UI budget through 2025: \$2,050,670.
- 2018. Timothy Link. The Mica Creek Project: A comprehensive, contemporary forest hydrology study for the 21st century. National Council for Air and Stream Improvement (NCASI), \$139,145.
- 2017. Melissa Lucash, Robert Scheller, Wendi Cooksey, Timothy Link, Brian Buma, David Verbyla, Jason

- Vogel, Vladimir Romanovsky, Dmitry Nicolsky. Collaborative Research: Regional impacts of increasing fire frequency on carbon dynamics and species composition in the boreal forest. NSF-OPP, \$1,400,000 (UI component: \$203,592).
2016. Timothy Link, Effects of climate and land cover change on long-term carbon and water budgets, USFS-RMRS, \$15,860.
2014. Robert Keefe and Timothy Link, Design of a monitoring study, QAPP, and SOP for evaluating the effectiveness of Idaho's new Class I stream shade rule, Idaho Dept. of Environmental Quality, \$79,992.
2013. Douglas Shinneman, Timothy Link, Kathleen Kavanagh, Eva Strand, Susan McIlroy, Scott Powell, Robert Scheller, John Campbell, Daniel Marks, Mark Seyfried, and Adam Winstral, Projecting climate change effects on aspen distribution and productivity in the central and northern Rockies by coupling hydrological and landscape-disturbance models, USGS Northwest Climate Science Center, \$476,295.
2013. Jessica Lundquist, Jim Lutz, Susan Dickerson-Lange, Anne Nolin, Timothy Link, Amy Snover, Rolf Gersonde, and Steve Malloch. Forest Management Tools to Maximize Snow Retention under Climate Change, USGS Northwest Climate Science Center, \$199,849.
2013. Andy Hudak, Terrie Jain, John Byrne, John Marshall, Timothy Link, and Katy Kavanagh. Effects of forest management and succession on long-term carbon and water budgets. USDA Forest Service, Western Wildlands Environmental Threat Assessment Center, \$86,457.
2011. Timothy Link. Modeling snow, soil moisture, and streamflow impacts on water, soil, and vegetation resources in semi-arid basins, add-on. USDA-ARS Northwest Watershed Research Center, \$22,000.
2010. Katy Kavanagh, Herbert Hess, Timothy Link, Beth Newingham, and Alistair Smith. MRI: Development of a smart 3-D wireless sensor network for terrain-climate research in remote mountainous environments. NSF-DBI, \$563,326.
2010. Timothy Link. Modeling snow, soil moisture, and streamflow impacts on water, soil, and vegetation resources in semi-arid basins, add-on. USDA-ARS Northwest Watershed Research Center, \$12,000.
2009. Timothy Link. Benton dam data archiving. USFS-RMRS, \$10,000.
2009. Timothy Link. Modeling snow, soil moisture, and streamflow impacts on water, soil, and vegetation resources in semi-arid basins. USDA-ARS Northwest Watershed Research Center, \$16,271.
2009. Timothy Link, Peter Goodwin, Danny Marks, and Jim McNamara. Collaborative Research: A WATERS testbed to investigate the impacts of changing snow conditions on hydrologic processes in the western United States. NSF-CBET, \$502,553 (UI Component: \$250,517).
2007. Noah Molotch, William Yeh, Steven Fassnacht, and Timothy Link, Scaling Snow Observations from the Point to the Grid Element: Supporting NOHRSC's National Snow Analysis System. NOAA-NWS, \$375,000.
2006. Timothy Link, Impact of forest treatments and climate change on hydrologic regimes: Assessment of mechanisms that affect hydrologic alteration. USDA National Research Initiative, Presidential Early Career Award for Scientists and Engineers, \$175,000.
2006. Timothy Link, Radiation Climatology of Forest Gaps: Development of a Mechanistic Model to Enhance Hydrologic Flows and Reduce Wildland Fire Hazards. UI College of Natural Resources McIntire-Stennis Grant, \$83,785.
2005. Timothy Link, Jeff Braatne, Paul Gessler, Han-Sup Han, Kathleen Kavanagh, John Marshall, and Andrew Robinson, University of Idaho: Collaborative Working Forests. U.S. Forest Service, \$272,300.



2005. Timothy Link, Stuart Hardegree, Danny Marks, Mark Seyfried, Steve Bunting, Fred Pierson, and Adam Winstral, Great Basin Restoration Initiative Remote Sensing Project. USDA ARS Northwest Watershed Research Center, BLM Owyhee Uplands Project, Utah State University, and the Natural Resources Conservation Service, \$152,973.
2004. Timothy Link, Jeff Braatne, Paul Gessler, Han-Sup Han, Kathleen Kavanagh, John Marshall, and Andrew Robinson, University of Idaho: Collaborative Working Forests. U.S. Forest Service, \$243,000.
2003. Andrew Robinson and Timothy Link. Developing, improving, and linking tree-level models of crown dynamics for the projection of stand-level hydrological processes. UI College of Natural Resources McIntire-Stennis Grant, \$50,997.
2003. Timothy Link, Paul Gessler, Han-Sup Han, Kathleen Kavanagh, John Marshall, and Andrew Robinson, Managed Forests as Productive Systems: A Research and Education Initiative. U.S. Forest Service, \$346,000.
2003. Timothy Link, Impact of forest treatments and climate change on hydrologic regimes. USDA National Research Initiative Competitive Grants Program, \$259,614.
2003. Danny Marks, John Pomeroy, Timothy Link and Janet Hardy. Influence of sub-grid variability on snow deposition and ablation in North American mountain environments: Implications for upscaling to meso-scale representations. NOAA Office of Global Programs, UI component: \$161,000, Project total: \$330,000.
2003. Jan Boll & Timothy Link, Modeling cumulative effects of hillside disturbances at a watershed scale. USFS Rocky Mountain Research Station, \$191,000.
2002. Timothy Link & Jeff Braatne. Comparative investigations of riparian microclimates. University of Idaho Seed Grant Program, \$9980.
2002. Timothy Link, University of Idaho Small Travel Grant. \$890.

#### As Senior Personnel:

- 2016-2021. Howard Wheeler et al. Global Water Futures: Solutions to Water Threats in an Era of Global Change. University of Saskatchewan. Canada First Research Excellence Fund (CFREF), \$77,800,000 CDN.
- 2013-2018. Howard Wheeler et al. Changing Cold Regions Network (CCRN). Natural Sciences and Engineering Research Council of Canada (NSERC), Climate Change and Atmospheric Research (CCAR) Initiative, \$5,000,000 CDN.
- 2010-2015. Alexander Fernald et al. CNH: Acequia Water Systems Linking Culture and Nature: Integrated Analysis of Community Resilience to Climate and Land-Use Changes. National Science Foundation, \$1,400,892.
- 2008-2013. Jean'ne M. Shreeve, Gregory Bohach, and Von Walden. Idaho EPSCoR RII: Water Resources in a Changing Climate. National Science Foundation (RII), \$15,000,000.
- 2007-2010. H. G. Frede, L. Breuer, and K. Vaché. Matter fluxes in Inner Mongolia as influenced by stocking rate (MAGIM). Deutsche Forschungsgemeinschaft, 2,900,000 €.
- 2006-2011. John W. Pomeroy, S. Carey, R. Essery, R. Granger, M. Hayashi, R. Janowicz, P. Marsh, S. Munro, A. Pietroniro, W. Quinton, K. Snelgrove, R. Soulis, C. Spence, and D. Verseghy. IP3: Improved Processes and Parameterisation for Predictions in Cold Regions, Canadian Foundation for Climate and Atmospheric Sciences, \$2,500,000 CDN.

- 2005-2008. Jean'ne M. Shreeve, Gregory Bohach, and Peter Goodwin. Idaho Research Infrastructure Improvement. National Science Foundation (RII), \$9,000,000.
- 2004-2007. Jan Boll, J. D. Wulfhorst, Murat Isik, and Robert Mahler. Evaluation of Conservation Practices in a Mixed-Land Use Watershed using Cumulative Effects Modeling and Interdisciplinary Analyses. USDA Conservation Effects Assessment Project (CEAP), \$600,000.

#### **Education and Program Development Grants Awarded:**

2015. Timothy Link and Adrian Harpold. Developing a Typology of Hydrologic Regime Shifts From <sup>L</sup><sub>SEP</sub> Climate-Induced Snowpack Changes in the Western U.S. EPSCoR Western Tri-State Consortium, \$13,000.
2013. Jan Boll, Brian Kennedy, Timothy Link, Manoj Shrestha, and John Tracy. IGERT: Adaptation to change in water resources: Science to inform decision-making across disciplines, cultures and scales. National Science Foundation, \$3,099,997.
2008. Robert Mahler, Jan Boll, Susan Childers, Kathleen Kavanagh, Timothy Link, John Marshall, Matt Morra, Christopher Peery, Barbara Williams, Frank Wilhelm. REU Site: Summer Research Experience for Undergraduates in Sustainable Water Resources. National Science Foundation, \$336,000.
2007. Timothy Link, Jan Boll, Maxine Dakins, Chad Hoffman, Edwin Krumpe, Penelope Morgan, Ron Robberecht, and David Schlater. Application of Lecture Capture Technology (LCT) to Expand Degree Programs, Enhance Teaching and Learning and Transform Curricula. Idaho State Board of Education Technology Incentives Grant Program, \$80,000.
- 2006-2011. Jan Boll, Barbara Cosens, Fritz Fiedler, Timothy Link, Patrick Wilson, Gary Johnson, Markus Tuller, Brian Kennedy, and Chuck Harris, Water of the West: Towards a Sustainable, Interdisciplinary Water Resources Program. University of Idaho President's Strategic Initiative, \$1,666,358.
- 2005-2008. Fritz Fiedler, Kathleen Kavanagh, Jan Boll, Stephanie Hampton, Timothy Link, John Marshall, Christopher Peery, Markus Tuller, Barbara Williams, and J.D. Wulfhorst, Summer Research Experience for Undergraduates in Water Resources. National Science Foundation, \$350,000.
2002. Bob Mahler, Pat Wilson, Scott Wood, Marcus Tuller, Jan Boll, Timothy Link, Jeff Braatne, Barbara Williams, Karen Humes, and Mike Falter. Use of the web to enhance existing and develop new water-based courses to improve both campus and distance-based programs offered by the University of Idaho. Idaho State Board of Education, \$195,880.

#### **As Supporting Collaborator:**

2013. Gayle Dana, Sajjad Ahmad, Frederick Harris, and Thomas Jackman. Collaborative Research: The Western Consortium for Watershed Analysis, Visualization, and Exploration (WC-WAVE), National Science Foundation, EPSCoR, \$2,000,000
2008. Peter Goodwin, Steven Daley-Laursen, and Derek Nalle, and 23 supporting senior personnel, Pan-American Studies Institute (PASI): Human, Physical, and Natural Capital Investment in Patagonia: A Predictive Approach under the Sustainability Criterion, National Science Foundation, OISE – Americas Program, \$99,370.
- 2006-2008. Thorsten Wagener, Michael N. Gooseff, Lucy A. Marshall, Brian L. McGlynn, Priya Sharma, and 33 collaborators, Modular Curriculum for Hydrological Advancement - Toward an Online Faculty Learning Community for Hydrology Education, National Science Foundation, CCLI, \$149,205.

#### **Honors and Awards:**

Donald Crawford Graduate Faculty Mentoring Award, 2018

Alumni Award for Excellence: Inspirational Mentor, 2015

Outstanding Advisor, College of Natural Resources, University of Idaho, 2012

Presidential Early Career Award for Scientists and Engineers (PECASE), USDA-CSREES National Research Initiative, 2003.

## **SERVICE:**

### **Major Committee Appointments:**

Member, University of Idaho Sustainability Working Group, 2021-2022.  
 Idaho Water Workshop – co-organizer, 2021-2022  
 P&T committee for Dr. Erin Brooks, College of Agriculture and Life Sciences, 2021.  
 Chair, CNR Tenure and Promotion Committee. 2020.  
 P&T committee for Dr. Dylan Hedden-Nicely, College of Law, 2020.  
 University Level Promotions Committee. 2020  
 CNR Tenure and Promotion Committee, 2018-2019.  
 T&P committee for Dr. Elowyn Yager, Dept. of Civil Engineering, 2019.  
 Scientific Misconduct Committee. 2017-2018.  
 T&P committee for Dr. Brian Kennedy, Dept. of Fish and Wildlife Sciences, 2017.  
 Chair, Tenure and Promotion Committee, Dept. of Forest, Rangeland, and Fire Sciences, 2014.  
 Graduate Council, University Wide Programs representative, 2014.  
 T&P committee for Dr. Robert Heinse. Department of Plant, Soils, and Entomological Sciences, 2014.  
 University Promotions Committee. 2012. 41 tenure and promotion portfolios.  
 Department of Forest, Rangeland, and Fire Science, Third year review committee for Dr. Phil Higuera. 2012.  
 Department of Plant, Soils, and Entomological Sciences, Third year review committee for Dr. Robert Heinse. 2012.  
 Department of Geography Tenure and Promotions Review Committee for Dr. Jeff Hicke. 2011.  
 University Promotions Committee. 2011. 43 tenure and promotion portfolios.  
 Graduate Council, alternate College of Natural Resources Representative. Fall 2010 - Spring 2013.  
 Science, Technology, Engineering, Mathematics (STEM) P-20 Taskforce. Spring 2010.  
 Graduate Council, at-large member. Fall 2007 - Spring 2010.  
 Member: Idaho SNOTEL Advisory Board. 2009-present.  
 Responsible Conduct of Research, advisory committee member. 2007.  
 Member, Provost's Strategic Action Plan Implementation Team, Scholarly and Creative Activity. 2007-2008.  
 CNR Committee on Committees. Chairperson. 2007 - 2010.  
 Facilitator, CNR faculty vision session, Jan. 19, 2007  
 Curriculum Committee, CNR Ecology & Conservation Biology Program. 2006-present.  
 Departmental Design Team, Forest Resources, Rangeland Ecology & Management merger strategies, 2005-06  
 University of Idaho Water Resources Steering Committee, 2001-present  
 Search Committee Member:  
 Administrative Coordinator, Department of Soil and Water Systems, Fall 2021  
 Administrative Coordinator, Department of Soil and Water Systems, Summer 2021  
 Staff Watershed Scientist (Chair), 2020.  
 Postdoctoral Fellow in Hydrological Sciences (GEM3), 2020.  
 Director, Idaho Water Resources Research Institute, 2017.  
 Assistant Professor of Integrated Water Resources (Chair), 2016-2017.  
 Interim Director of Water Resources Program (Chair). 2015.  
 Assistant Professor of Ecosystem Modeling. 2014.  
 Head of Department of Forest, Rangeland, and Fire Sciences. 2012.  
 Assistant Professor of Ecosystem Services Economics. 2011.  
 Assistant/Associate Professor of Fluvial Geomorphology. Spring 2007.  
 Assistant Professor of Fire Science and Management. Spring 2007.

Assistant Professor of Soil Physics. Fall 2007/Spring 2008.  
 Assistant Professor of Fire Science and Management, Fall 2006-Spring 2007  
 Research Scientist III, Department of Forest Resources, Fall 2005  
 Ecohydrology post-doctoral fellow, Department of Forest Resources, Spring 2005  
 Aquatic ecology post-doctoral fellow, Department of Fish and Wildlife, Spring 2005  
 Assistant Professor of Limnology/Aquatic Ecology, Spring 2004

**Mentoring Committees:**

Dr. Alistair Smith, Associate Professor, College of Natural Resources, University of Idaho.  
 Dr. Luigi Boschetti (chair), Associate Professor, College of Natural Resources, University of Idaho.  
 Dr. Jan Eitel (chair), Researcher in Residence, College of Natural Resources, University of Idaho.  
 Dr. Dan Johnson, Assistant Professor, College of Natural Resources, University of Idaho.  
 Dr. Andrew Nelson, Assistant Professor, College of Natural Resources, University of Idaho.  
 Dr. Arjan Meddens, Research Professor, College of Natural Resources, University of Idaho.  
 Dr. Chloe Wardropper, Assistant Professor, College of Natural Resources, University of Idaho.

**Professional and Scholarly Organizations:**

American Geophysical Union, member, 1996-present  
 Cryosphere Section Executive Committee, 2006-present  
 Secretary, AGU Cryosphere Focus Group Executive Committee 2006-2010  
 American Institute of Hydrology, 2000-present  
 American Water Resources Association, 2002-present  
 International Association of Hydrological Sciences (IAHS)  
*Vice President*, IAHS International Commission on Snow and Ice Hydrology (ICSIH), 2015-2018, 2019-2022.  
 North American Benthological Society, 2006-present  
 Society of American Foresters, member, 2002-present

**Technical Reviews:**

**Proposal Review Panel:**

NSF Hydrological Sciences, November 2020  
 NASA Snow Science Panel, April 2014.  
 NASA Energy and Water Study (NEWS), NASA Terrestrial Hydrology Program (NTHP), September 2005.

**Proposal Reviewer:**

Canadian Foundation for Climate and Atmospheric Sciences (CFCAS)  
 Comisión Nacional de Investigación Científica y Tecnológica (CONICYT), Chile  
 Czech Science Foundation (GAČR), Czech Republic  
 Deutsche Forschungsgemeinschaft, Germany  
 Eesti Teadusagentuur (Estonian Research Council), Estonia  
 Future Forest Ecosystems Scientific Council of British Columbia (FFESC)  
 Global Water Futures: Solutions to Water Threats in an Era of Global Change, Canada  
 Global Water Futures Program – 2020, Canada  
 NASA Earth Systems Science Fellowship Competition  
 National Fish and Wildlife Foundation (NFWF)  
 National Science Foundation (NSF)  
 National Science Foundation (NSF) - Arctic Observing Network (AON) Program  
 Natural Sciences and Engineering Research Council of Canada (NSERC)  
 Nebraska NSF Established Program to Stimulate Competitive Research (EPSCoR)  
 Nevada Agricultural Experiment Station (NAES) Priority Grant Program  
 Stillinger Funds for Forestry & Botanical Research  
 Sustainable Forest Management Network (SFMN), Canada  
 Swiss National Science Foundation. Switzerland

USDA-CSREES National Research Initiative (NRI)  
US Department of Energy Office of Science

Book Proposal Reviewer:  
Cambridge University Press

Manuscript Reviewer:  
Advances in Water Resources  
Agricultural and Forest Meteorology  
Annals of Forest Science  
ASCE Journal of Hydrologic Engineering  
Atmosphere-Ocean  
Canadian Journal of Forest Research  
Earth System Science Data  
Ecohydrology  
Ecological Modelling  
Environmental Modelling and Software  
Environmental Research Letters  
Forest Science  
Forest Ecology and Management  
Frontiers in Forests and Global Change  
Hydrological Processes  
Hydrology and Earth System Sciences  
Hydrology Research  
International Association of Hydrologic Sciences (IAHS) Red Books  
International Journal of Forest Engineering  
Journal of the American Water Resources Association  
Journal of Applied Meteorology and Climatology  
Journal of Geophysical Research – Atmospheres  
Journal of Geophysical Research – Biogeosciences  
Journal of Geophysical Research – Earth Surface  
Journal of Hydrology  
Journal of Hydrometeorology  
Methods in Ecology and Evolution  
Physical Geography  
PLOS ONE  
Remote Sensing of Environment  
Soil Science Society of America Journal  
Transactions of the American Society of Agricultural and Biological Engineers  
Water Resources Research

Report Reviewer  
Future Forest Ecosystems Scientific Council of British Columbia (FFESC)

Tenure and Promotion External Referee  
University of Minnesota Duluth, Swenson College of Science and Engineering, 2021  
Oregon State University, Department of Forest Engineering, Resources & Management, 2019  
University of Minnesota, Department of Forest Resources, 2019  
Wilfrid Laurier University, Department of Geography & Environmental Studies, 2018.  
Syracuse University, Department of Civil and Environmental Engineering, 2017.  
Virginia Tech, College of Natural Resources, 2013.  
Colorado State University, Fall 2012

### **Professional Meeting Organization**

Session Organizer, 27<sup>th</sup> IUGG General Assembly. Advances in Snow Hydrology. 8 - 18 July 2019,  
Montreal, Canada.

Session Co-Organizer, Advances in snow hydrological modelling. SnowHydro 2018 Conference. 12 -

15 February 2018, Heidelberg, Germany.

Session Organizer, IAHS 2017 Scientific Assembly. Advances in cold-region hydrological models: Integration of process understanding and application to climate and landcover changes. 10 - 14 July, 2017, Port Elizabeth, South Africa.

Session Convener, AGU Cryosphere Special Session: Changes From Snow To Rain: Observation, Prediction, and Consequences. 2015 Fall Meeting.

Session Convener, AGU Special Session on Snow Hydrology: Flooding, Modeling, and Vegetation Interactions, 2014 Fall Meeting.

Participant, NSF - sponsored workshop: Design of Global Environmental Gradient Experiments using International CZO Networks. Newark, DE, November 8-10, 2011.

Break-out Session Leader, International Association of Hydrological Sciences, Predictability in Ungauged Basins (PUB) 2011: 'P3' Putting PUB into Practice Workshop, Canmore, Alberta, May 10-14, 2011.

Session Facilitator, Integrated and interdisciplinary Modeling for Water-Related Issues. Tri-State EPSCoR Consortium Meeting, Santa Ana Pueblo, NM, April 6-8, 2011.

Participant, SAHRA & NCAR - sponsored workshop: Progress, Challenges, and Priorities in Predicting the Water Cycle in Complex Terrain, Biosphere 2, Oracle, AZ, February 23-25, 2011.

Session Convener, AGU Special Session on Seasonal Snow Covers in a Changing Climate: Implications for Hydrological, Biogeochemical, and Ecological Processes, 2010 Fall Meeting

Session Convener, AGU Special Session on Innovations in Modeling of the Seasonal Snowpack and Interactions Between Vegetation and Snow, 2009 Fall Meeting

Session Convener, AGU Special Session on Monitoring, Measuring, and Modeling Snow Processes, 2008 Fall Meeting

Session Convener, AGU Special Session on Snowpack Dynamics in a Changing Climate, 2007 Fall Meeting

Session Convener, AGU Special Session on Snowcover-Vegetation Interactions, 2006 Fall Meeting

Participant, Summit on Forest Research for the 21st Century: Defining Strategic Directions and Rebuilding Capacity, National Association of University Forest Resource Programs (NAUFRP), Shepherdstown, WV, January 4-6, 2006.

Session Convener, AGU Special Session on Snow Hydrology, 2004 Fall Meeting.

Consultant. Third World Center for Water Resource Management, Mexico City, Mexico, 2000-2001.

Session Convener, AGU Special Session on Snow Hydrology, 2000 Fall Meetings.

Officer, Joint AWRA/AIH OSU Campus Chapter, 1998-2000.

Organized student field trips focused on snow hydrology, water management and environmental issues on the Columbia River system, urban hydrology and water quality issues, and rangeland riparian assessments. Organized monthly hydrology and water resources seminars. Co-created web-searchable student, faculty and course databases for the OSU water resources community.

### **Outreach Services:**

#### **Tour Organizer:**

Tour Organizer: Mica Creek Experimental Watershed. Field Tour for College of Natural Resources leadership. Aug. 10, 2018. 9 participants.

Reynolds Creek Critical Zone Observatory. Technical field tour for IGERT annual meeting participants and stakeholders. September 21, 2014. 34 participants.

Mica Creek Experimental Watershed. Technical Field Tour for SAF Annual Convention, Spokane, WA. Oct. 24, 2012.

Mica Creek Experimental Watershed, tour for U. S. Forest Service managers. Sep. 10, 2009. 26 student and agency participants.

Mica Creek Experimental Watershed, tour for University of Idaho alumni: Celebrating 100 years of forestry education. Sep. 12, 2009. 9 alumni participants.

Reynolds Creek Experimental Watershed, September 21, 2006.

Mica Creek Experimental Watershed, tour for forest engineers, August 3, 2006, 7 academic and agency participants.

Mica Creek Experimental Watershed, tour for university forest hydrologists and ecologists, June 29, 2006, 24 academic and agency participants.

Mica Creek Experimental Watershed. Idaho Association of Natural Resources and Community Development Extension Professionals (IANRACDEP), July 2005, ~40 extension professionals.

Mica Creek Experimental Watershed Outreach Tour Leader, July 13, 2004, 30 professional and academic participants.

Tour Participant:

Field Tour Participant. Mica Creek Experimental Watershed tour for forest industry public relations officers. Sep 29, 2015. ~50 attendees.

The Mica Creek Experimental Watershed. Technical field tour for University of Idaho and forest industry leadership. July 21, 2014. 32 participants.

Russell Creek Research Basin, Vancouver Island, British Columbia, Canada. Forest hydrology tour for ~30 industry and agency personnel, September 20, 2006.

Priest River Experimental Forest, tour for delegation from New Mexico, June 27, 2006

UI representative: Mica Creek Experimental Watershed tour for Ben Ysursa, Idaho Secretary of State, August 4, 2005.

Technical Panelist:

Climate Connect Workshop, Idaho Dept. of Fish and Game. March 10, 2020.

U. S. Fish and Wildlife Service Wolverine Science Workshop. Spokane, WA. Apr. 3-4, 2014. Synthesis of snow and climate change science as part of an expert panel that was assembled to address potential concerns regarding the listing of wolverines under the Endangered Species Act.

Technical Outreach Consultant:

Miscellaneous forest hydrology issues, Idaho Conservation League, 2005-present.

Hydrologic effects of forest fire hazard reduction treatments, Nez Perce Soil and Water Conservation District, 2005.

Technical peer-review:

Independent Scientific Peer-Review (ISPR). 2021. Riparian Characteristics and Shade Response Experimental Research Study. Technical document review for Washington Department of Natural Resources (WA DNR).

Independent Scientific Peer-Review (ISPR). 2020. Type N Experimental Buffer Treatment Study — Incompetent Lithologies. Chapter 4: Stream Temperature and Cover. Technical document review for Washington Department of Natural Resources (WA DNR).

Independent Scientific Peer-Review (ISPR). 2020. Type N Experimental Buffer Treatment Study in Hard Rock Lithologies Extended Study. Chapter 4: Stream Temperature and Cover. Technical document review for Washington Department of Natural Resources (WA DNR).

Independent Scientific Peer Review (ISPR). 2017. Eastside Modeling Effectiveness Project (EMEP). Technical document review for Washington Department of Natural Resources (WA DNR).

USFS Cumulative Watershed Effects of Fuel Management Workshop, April 5-6, 2005, Salt Lake City, Utah.

Technical presenter:

T. E. Link. The Mica Creek Paired Watershed Study: A Critical Update of Old Science. 2020 Forestry MiniCollege, Missoula, MT. 2 oral sessions, 31 total attendees, primarily small forest landowners and agency personnel. March 14, 2020

- T. E. Link\* and J. A. Gravelle. The Mica Creek Paired Watershed Study: A Critical Update of Old Science. Presented to the Idaho Forest Practices Advisory Committee. November 14, 2018, Coeur D'Alene, ID. ~50 attendees.
- J. A. Gravelle\* and T. E. Link. Fish Community Response Following Timber Harvest at Mica Creek Experimental Watershed. Presented to the Idaho Forest Practices Advisory Committee. November 14, 2018, Coeur D'Alene, ID. ~50 attendees.
- J. A. Gravelle\* and T. E. Link. Fish Community Response Following Timber Harvest at Mica Creek, Idaho. National Council on Air and Stream Improvement Annual Meeting. September 26, 2018, Vancouver, WA. ~25 attendees.
- Forest Practices Advisory Committee (FPAC), April 19, 2007, Boise, ID.
- Technical comment:  
Forest Stewardship Council (FSC) audit for Potlatch Corporation, July 15, 2003.
- Technical advisor:  
Bees to Bears Cold Air Refugia Project development team meeting. April 24, 2020
- Matter fluxes in Inner Mongolia as influenced by stocking rate (MAGIM). Invited field visit: Inner Mongolia Grassland Ecosystem Research Station (IMGERS), Xilinhot, China, June 10-13, 2009.
- USFS Rocky Mountain Research Station, Soil & Water Engineering Group, Technical Advisory Visit, July 8, 2003, Moscow, Idaho.
- Stakeholder panels:  
Member. Idaho Forest Practices Advisory Committee (FPAC). General Public Representative North. 2021 - 2023.
- Palouse Basin Advisory Committee (PBAC). University of Idaho Representative. 2021-2023
- Member. Idaho Forest Practices Advisory Committee (FPAC). General Public Representative North. 2018 - 2020.
- Stakeholder review panel: USDA Agricultural Research Service, Northwest Watershed Research Center, January 9, 2007, Boise, ID.
- Participant, Summit on Forest Research for the 21<sup>st</sup> Century: Defining Strategic Directions and Rebuilding Capacity, National Association of University Forest Resource Programs (NAUFRP), Shepherdstown, West Virginia, January 4-6, 2006.
- USDA Agricultural Research Service, Northwest Watershed Research Center, September 21, 2005, Boise, Idaho.
- USFS research logic model meeting, February 2, 2005, Riverside, California.
- Participant:  
Meeting Organizer and Participant for Wildlife Stakeholders. Novel methods for deriving snow data from remote cameras and applications to ungulate ecology and wildlife habitat management. Virtual meeting. approximately 8 attendees from the Coeur d'Alene tribe, U.S. Fish and Wildlife Service, and ID Dept. of Fish and Game. June 15, 2020
- Pan-American Studies Institute: Human, Physical, and Natural Capital Investment in Patagonia: A Predictive Approach under the Sustainability Criterion, August 10-22, 2009,



Concepcion, Chile.

Northern Rocky Mountains Ecological Observatory (NoRMEO) planning meetings, 2005-present.

EPSCoR research exchange to New Mexico – Sevilleta Long Term Ecological Research Site, Valles Caldera National Preserve, and Los Alamos National Laboratory, September 2005.

Public Presentations:

“Climate change in north Idaho: The snow and flow story” North Idaho Climate Action Network Speaker Series. October 29, 2014. 40 participants.

“Analyzing the effects of modern forest harvest practices.” Presentation to the Moscow Rotary Club. September 20, 2004.

Press Articles and Interviews:

“Flooding potential, severity will depend on storms”. Interview for KTVB. January 9, 2017.

“Teamwork in the Forest”. Summary of Mica Creek Research. Inspired Discoveries, University of Idaho Research Report 2015. <http://www.uidaho.edu/research2015>

“Rain projected to dominate western U.S. precipitation” *Eos* Transactions American Geophysical Union, Research Spotlight, Vol. 95, No. 44, November 4, 2014.

“Science Graphic of the Week: Map Shows Western U.S. May Suffer Huge Reductions in Snow”. Summary of Klos et al., 2014 GRL paper. Betsy Mason, Wired Magazine. August 14, 2014. >1600 social media postings. <http://www.wired.com/2014/08/science-graphic-of-the-week-rain-snow-transition/>

“Wolverine Wipeout”. Quoted on the USFWS decision on the ESA listing of wolverines. John Upton, Wonk on the Wildlife blog. August 12, 2014. <http://wonkonthewildlife.com/wolverine-wipeout/>

“Snow-Covered Mountains Will Become Waterfalls”. Summary of Klos et al., 2014 GRL paper. John Upton, Pacific Standard Magazine. June 25, 2014. <http://www.psmag.com/navigation/nature-and-technology/snow-covered-mountains-will-become-waterfalls-84321/>

“Forest Snow Can Melt Faster Than Flakes In Open Fields”. Interview for Inside Science News Service regarding recent snow hydrology publications by collaborators at University of Washington, Dec. 20, 2013.

“Scratching the Surface”. Interview for Sierra Magazine regarding snow structure and ecology, Jan/Feb 2012.

“Snowpack and Timber”, top story on AgDay television magazine, aired on 123 stations nationwide. April 7, 2009.

“Woods and Water” USDA Partners Video Magazine, “Fluid Planet” Episode 22. January 2009.

“Region's universities test podcasting: Professors using new technologies to connect” Spokesman Review, Spokane, WA. February 25, 2007. Interview regarding use of lecture-capture technologies in education.

USDA NRI Project Featured in National Research Initiative Competitive Grants Program Annual Report, Fiscal Year 2005, [http://www.csrees.usda.gov/funding/nri/pdfs/2005\\_ann\\_report.pdf](http://www.csrees.usda.gov/funding/nri/pdfs/2005_ann_report.pdf).

“TPL Research Gallery” quoted in Land & People, v. 18, n. 1, Trust for Public Lands, Spring 2006.

“Mica Creek measures up; Potlatch Corp. and UI rewarded with influx of federal funds for watershed research.” Interview regarding coupled hydrological/ecological research at UI. Moscow-Pullman Daily News, June 25, 2005.

“Watery wonders” interview regarding waterfall microclimates. Lewiston Morning Tribune, June 2, 2005.

“Watershed science as a catalyst for interdisciplinary research”, UI College of Natural Resources alumni magazine article, April 2005.

Grant helps research on logging practices: Effects of modern techniques studied. Lewiston Morning Tribune, September 19, 2004.

Research at the Mica Creek Experimental Watershed. Radio interview for Inland Journal, Spokane Public Radio, September 16, 2004.

“Grant will help UI explore impact of logging.” Spokesman Review, September 16, 2004.

“Clear-cut cooperation: Potlatch teams with university scientists for study near Santa; data should help both better understand effects of timber harvest.” Moscow-Pullman Daily News, July 24, 2004.

“Neighbors in the Spotlight.” Article regarding PECASE award. The Idaho Statesman, Boise, ID. November 15, 2003.

#### Miscellaneous:

Environmental Educator for Outdoor Adventure River Specialists (O.A.R.S). Delivered lectures and coordinated field exercises on climatology, meteorology, geomorphology, hydrology, water quality, ecohydrology, stream gauging. Middle Fork of the Salmon River, May 28-June 2, 2012.

Environmental Educator for Outdoor Adventure River Specialists (O.A.R.S). Delivered lectures and coordinated field exercises on climatology, meteorology, geomorphology, hydrology, water quality, ecohydrology, stream gauging. Main Salmon River, May 27-June 2, 2011. 25 commercial river guide participants.

Central Region Winner, Ben & Jerry’s Do Us a Flavor Contest, ‘Mojito’.

### **PROFESSIONAL DEVELOPMENT:**

#### **Scholarship:**

COMPASS Science Communication Workshop. March 21-22, 2019.

Conflict Resolution in Water Resources, Dr. Aaron Wolf. March 25-26, 2016.

Academic Leadership: A Seminar for Faculty Considering or Continuing in Academic Leadership Roles. Transformational Leadership & Training (TiLT) Program, October 24, 2009

“Write Winning Grants,” Grant Writers’ Seminars and Workshops, August 2002.