

**JENNIFER C. ADAM**

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<http://hydro.cce.wsu.edu/index.htm>**Curriculum Vitae (August, 2020)****PROFESSIONAL EXPERIENCE*****Berry Distinguished Professor, 2019 to present***

- Department of Civil and Environmental Engineering, Washington State University

***Professor, 2020 to present***

- Department of Civil and Environmental Engineering, Washington State University

***Associate Professor, 2014 to 2020***

- Department of Civil and Environmental Engineering, Washington State University

***Associate Director, 2014 to 2017***

- State of Washington Water Research Center

***Assistant Professor, 2008 to 2014***

- Department of Civil and Environmental Engineering, Washington State University

***Peace Corps Volunteer, 1997 to 1999***

- Secondary Mathematics Education, Solomon Islands

**EDUCATION*****University of Washington, Ph.D., 2007***

- Department of Civil and Environmental Engineering
- Dissertation Title: "Understanding the causes of streamflow changes in the Eurasian Arctic"
- Advisor: Dr. Dennis P. Lettenmaier (now at UCLA)

***University of Washington, M.S.C.E., 2002***

- Department of Civil and Environmental Engineering
- Thesis Title: "Adjustment of global gridded precipitation for systematic bias"
- Advisor: Dr. Dennis P. Lettenmaier (now at UCLA)

***University of Colorado, Boulder, B.S. (with distinction), 1997***

- Department of Civil, Environmental, and Architectural Engineering (name at time of graduation: Jennifer C. Mullis), EIT passed Spring 1997
- Research Project Title: "The interrelationships between ammonia and manganese removal during nitrification"
- Advisor: Dr. Marc A. Edwards (now at Virginia Tech, Blacksburg, VA)

**SPECIALIZATION**

My group works to enable humans and the environment to adapt to global change. To do this, we study the connections between climate, hydrology, land use, and ecological (natural and agricultural) processes. This includes understanding how climate variations and direct human influences interact to alter land surface hydrologic processes at watershed, regional, and global scales. We apply process-based models in integrated modeling frameworks to explore these interactions. Developing these tools necessitates a tightly-integrated interdisciplinary approach; indeed, I believe that the grand challenges of today need to be solved in an interdisciplinary setting. I have experience leading multiple large multi-disciplinary research programs, including "BioEarth" that engages ~40 faculty and students in atmospheric sciences, biological systems, communications, computer sciences, earth and environmental sciences, and economics; the "Columbia River Supply and Demand Forecast" which is improving water supply

management in Washington State; and “ColumbiaFEW” which is aimed at exploring innovations in technology and institutions that can increase resilience among food, energy, and water sectors.

## **AWARDS and HONORS**

- University Coalition on Water Resources (UCOWR) Mid-Career Award for Applied Research, Honorable Mention, 2019
- Largest New Team Grant Award (PI J. Yoder): Office of Research, WSU, 2019
- Endowed Professorship, Berry Distinguished Professor, 2019 to present
- Outstanding Research Faculty Award, Department of Civil & Environmental Engineering, WSU, 2018
- Outstanding Research Faculty Award, Department of Civil & Environmental Engineering, WSU, 2016
- Team Award (PI J. Yoder): Bruce Gardner Prize for Applied Policy Analysis, Agricultural and Applied Economics Association, 2016
- Outstanding Research Faculty Award, Department of Civil & Environmental Engineering, WSU, 2015
- Editors’ Citation for Excellence in Referring for *Earth’s Future*, 2015
- Team Interdisciplinary Award for our Yakima Basin Integrated Plan Cost-Benefit Analysis (PI J. Yoder) sponsored by CAHNRS, 2016
- INSIGHT Into Diversity Magazine’s Top 100 Inspiring Women in STEM Award, 2015
- Leon Luck Faculty Award as the Most Effective Professor, Department of Civil & Environmental Engineering, WSU, 2014
- Outstanding Research Faculty Award, Department of Civil & Environmental Engineering, WSU, 2014
- Reid Miller Teaching Excellence Award, College of Engineering & Architecture, WSU, 2011
- Outstanding Teaching Faculty Award, Department of Civil & Environmental Engineering, WSU, 2011
- American Society of Civil Engineers (ASCE) Excellence in Civil Engineering Education (ExCEED) Training Fellow, July 2009
- Cooperative Institute for Research in Environmental Sciences (CIRES) postdoctoral visiting fellowship (University of Colorado), 2007-2008 (declined)
- Center for Water and Watershed Studies Andy Studebaker Travel Fellowship, Dec., 2006
- Climate and Cryosphere (CliC) Travel Award, Apr., 2005
- Society of Women Engineers, Outstanding Female Graduate Student, Department of Civil and Environmental Engineering, University of Washington, 2003
- Milo S. Ketchum Award for Outstanding Undergraduate, University of Colorado Department of Civil, Environmental, and Architectural Engineering, 1997
- 1<sup>st</sup> Place Undergraduate Division, American Society of Civil Engineers Student Paper Competition, 1997
- 3<sup>rd</sup> Place Undergraduate Division, Water Environment Federation Student Paper Competition, 1997
- University of Colorado Undergraduate Research Opportunities Program Research Grant, 1996

## **AFFILIATIONS**

### ***National Organizations***

- American Geophysical Union, 2001 to present
- American Meteorological Society, 2003 to present
- Ecological Society of America, 2011 to 2016

### ***Honorary Societies***

- Tau Beta Pi, University of Colorado chapter, 1997
- Chi Epsilon, University of Colorado chapter, 1995

#### TRAINING RECEIVED

- WSU Provost's Faculty Leadership Development Program, Spring Semester, 2011
- Training Fellow for American Society of Engineers (ASCE) Excellence in Civil Engineering Education (ExCEED) workshop, July 12-17, 2009, Flagstaff, AZ
- WSU Productive Proposal Writing (PPW) Series, 2008-2009 academic year
- Outward Bound Wilderness Leadership Training, Summer Semester, 1995

#### PEER REVIEWED PUBLICATIONS

Total number of citations as of June, 2020: 7,024 (Research Gate)

H-Index as of June, 2020: 19 (Research Gate)

ESI papers: 2 (Web of Science)

- 41) \*Hanan, E.J., J. Ren, C.L. Tague, C.A. Kolden, J.T. Abatzoglou, R. Bart, M. Kennedy, M.L. Liu, and **J.C. Adam**, 2020. Climate change and suppression effects on fire regimes at actionable scales. *PNAS* (submitted).
- 40) \*Malek, K., P. Reed, **J.C. Adam**, T. Karimi, and M.P. Brady, 2020. Water rights shape crop yield and revenue volatility tradeoffs for adaptation in snow dependent systems. *Nat Commun* 11, 3473. <https://doi.org/10.1038/s41467-020-17219-z>.
- 39) \*Malek, K., **J.C. Adam**, J. Yoder, P. Reed, J. Givens, C.O. Stockle, M.P. Brady, T. Karimi, K. Rajagopalan, M.L. Liu, 2020. Irrigation Water rights strongly influence yield and revenue volatility tradeoffs for farmers adapting to reduced snowpack and increasing scarcity. *Nature Scientific Reports* (in review).
- 38) \*Li, S., Z. Lao, Z. Liu, R. Wang, M. Liu, **J.C. Adam**, 2019. The spatio-temporal characteristics of drought across Tibet, China: Derived from meteorological and agricultural drought indices. *Theoretical and Applied Climatology*, doi: 10.1007/s00704-018-2733-9.
- 37) Qiu, J., Q. Yang, X. Zhang, M. Huang, **J.C. Adam** and K. Malek, 2019. Implications of water management representations for watershed hydrologic modeling in the Yakima River Basin, *Hydrol. Earth Syst. Sci.*: doi: 10.5194/hess-23-35-2019.
- 36) Khan, M.A., C.O. Stockle, R. Nelson, T. Peters, **J.C. Adam**, B. Lamb, C. Jinshu, and S. Waldo, 2019. Estimating biomass and yield using METRIC evapotranspiration and simple growth algorithms, *J. Agronomy*: doi: 10.2134/agronj2018.04.0248.
- 35) \*Malek, K., **J.C. Adam**, C. Stockle, M. Brady, K. Rajagopalan, 2018. When should irrigators invest in more water-efficient technologies as an adaptation to climate change? *Water Resources Research*: doi: 10.1029/2018WR022767.
- 34) \*Hanan, E., C. Tague, J. Choate, M. Liu, C. Kolden, and **J. Adam**, 2018. Accounting for disturbance history in models: using remote sensing to constrain carbon and nitrogen pool spin-up. *Ecological Applications*: 28(5): 1197-1214.
- 33) Givens, J., J. Padowski, C. Guzman, K. Malek, R. Witinok-Huber, B. Cosens, M. Briscoe, J. Boll, and **J. Adam**, 2018. Incorporating Social System Dynamics in the Columbia River Basin: Food-Energy-Water Resilience and Sustainability Modeling in the Yakima River Basin. *Frontiers in Environmental Science*: 6:104. Doi: 10.3389/fenvs.2018.00104.
- 32) \*Liu, M.L., **J.C. Adam**, Z. Zhu, and R. B. Myneni, 2018. Vegetation dynamics play a role in changing water fluxes over the conterminous U.S. during 1983-2009, *J. Hydrology*: doi: 10.1016/j.hydrol.2018.07.068.
- 31) \*Rajagopalan, K.R., K. Chinnayakanahalli, C.O. Stockle, R. Nelson, A. Hamlet, M. Brady, M. Barber, C. Kruger, K. Malek, G. Yorgey, S. Dinesh, and **J.C. Adam**, 2018. Impacts of near-term regional climate change on agricultural production in the Columbia River basin. *Water Resources Research*: doi: 10.1002/2017WR020954.
- 30) \*Malek, K., **J.C. Adam**, C.O. Stockle, and T. Peters, 2018. Climate change reduces water availability

- for agriculture by decreasing non-evaporative irrigation losses. *Journal of Hydrology*, doi: 10.1016/j.hydrol.2017.11.046.
- 29) \*Reyes, J.R., C. Tague, R.D. Evans, and **J.C. Adam**, 2017. Assessing the impact of parameter uncertainty on modeling grass biomass using a hybrid carbon allocation strategy. *Journal of Advances in Modeling Earth Systems*: doi: 10/1002/2017MS001022.
  - 28) \*Malek, K., C.O. Stöckle, R. Nelson, K.J. Chinnayakanahalli, Liu, M., Rajagopalan, K., Barik, M., and **J. C. Adam**, 2017. VIC-CropSyst: A regional-scale modeling platform to simulate the nexus of climate, hydrology, cropping systems, and human decisions, *Geoscientific Model Development*, doi: 10.5194/gmd-10-3059-2017.
  - 27) \*Barik, M.G., **J.C. Adam**, M.E. Barber, and B. Muhunthan, 2017. Improved landslide susceptibility prediction for sustainable forest management in an altered climate. *Engineering Geology*: doi:10.1016/j.enggeo.2017.09.026.
  - 26) Li, D., M.L. Wrzisien, M. Durand, **J.C. Adam**, and D.P. Lettenmaier, 2017. How much western United States streamflow originates as snow? *Geophysical Research Letters*, doi: 10.1002/2017GL073551.
  - 25) Allen, E., J. Stephens, G. Yorgey, C.E. Kruger, S. Aahamed, **J. C. Adam**, 2017. Climate science information needs among natural resource decision-makers in the Northwest U.S.? *Climate Services*, doi: 10.1016/j.ciser.2017.03.002.
  - 24) Yoder, J., **J.C. Adam**, M. Brady, J. Cook, S. Katz, S. Johnston, K. Malek, J. McMillan, and Q. Yang, 2016. Benefit-cost analysis of integrated water resource management: the Yakima Basin Integrated Plan. *J. Am. Water Resources Assoc.*, doi: 10.1111/1752-1688.12507.
  - 23) Nergui, T., R.D. Evans, **J.C. Adam**, and S.H. Chung, 2016. Relationships between the El Nino Southern Oscillation, precipitation, and nitrogen wet deposition rates in the contiguous United States, *Global Biogeochemical Cycles*, doi: 10.1002/2016GB005439.
  - 22) \*Gould, G.K., M.L. Liu, M.E. Barber, K.A. Cherkauer, P.R. Robichaud, and **J.C. Adam**, 2015. The effects of climate change and extreme wildfire events on runoff erosion over a mountain watershed in the western U.S., *J. Hydrology*, doi: 10.1016/j.jhydrol.2016.02.025.
  - 21) Clark, M.P., Y. Fan, D.M. Lawrence, **J.C. Adam**, D. Bolster, M. Kumar, L.R. Leung, D. Scott Mackay, C. Shen, S.C. Swenson, X. Seng, et al, 2015. Improving the representation of hydrologic processes in Earth System Models, *Water Resources Research*, doi: 10.1002/2015WR017096.
  - 20) \*Reyes, J.J., J. Schellberg, S. Siebert, M. Elsaesser, **J.C. Adam**, and F. Ewert, 2015. Refining estimates of nitrogen uptake in grasslands: Application of the nitrogen dilution curve, *Agronomy for Sustainable Development*, doi 10.1007/s13593-015-0321-2.
  - 19) Stöckle, C.O., A.R. Kemanian, R.L. Nelson, **J.C. Adam**, R. Sommer, B. Carlson, 2014. CropSyst model evolution: From field to regional to global scales and from research to decision support systems, *Environmental Modeling and Software*, 62, 361-369.
  - 18) \*Liu, M., K. Rajagopalan, S. H. Chung, X. Jiang, J. Harrison, T. Nergui, A. Guenther, C. Miller, J. Reyes, C. Tague, J. Choate, E.P. Salathé, C.O. Stöckle, and **J. C. Adam**, 2014. What is the importance of climate model bias when projecting the impacts of climate change on land surface processes? *Biogeosciences*, doi: 10.5194/bg-11-1/2014.
  - 17) **Adam, J.C.**, J.C. Stephens, S.H. Chung, M.P. Brady, R.D. Evans, C.E. Kruger, B.K. Lamb, M.L. Liu, C.O. Stöckle, J.K. Vaughan, K. Rajagopalan, J.A. Harrison, C.L. Tague, A. Kalyanaraman, Y. Chen, A. Guenther, F.Y. Leung, L.R. Leung, A.B. Perleberg, J. Yoder, E. Allen, S. Anderson, B. Chandrasekharan, K. Malek, T. Mullis, C. Miller, T. Nergui, J. Poinsatte, J. Reyes, J. Zhu, J.S. Choate, X. Jiang, R. Nelson, J.H. Yoon, G.G. Yorgey, K.J. Chinnayakanahalli, A.F. Hamlet, B. Nijssen, V. Walden, 2014. BioEarth: A regional biosphere-relevant earth system model to inform agricultural and natural resource management decisions, *Climatic Change*, doi: 10/1007/210584-014-1115-2.
  - 16) Brown, S., A. Easley, D. Montfort, **J.C. Adam**, B. Van Wie, A. Olusola, C. Poor, C. Tobin, A. Flatt, 2014. Effectiveness of an interactive learning environment utilizing a physical model, *Journal of Professional Issues in Engineering Education and Practice*, 140(3), 04014001.

- 15) \*Liu, M., **J.C. Adam**, and A.F. Hamlet, 2013. Spatial-temporal variations of evapotranspiration and runoff/precipitation ratios responding to the changing climate in the Pacific Northwest during 1921-2006, *Journal of Geophysical Research: Atmospheres*, doi: 10.1029/2012JD018400.
  - 14) \*Van Wie, J.B., **J.C. Adam**, and J.L. Ullman, 2013. Conservation tillage in dryland agriculture impacts watershed hydrology, *Journal of Hydrology* doi: 10.1016/J.HYDROL.2012.12.030.
  - 13) Weedon, G.P., S. Gomes, P. Viterbo, J. Shuttleworth, E. Blythe, H. Osterle, **J.C. Adam**, N. Bellouin, O. Boucher, and M. Best, 2011. Creation of the WATCH Forcing Data and its use to assess global and regional reference crop evaporation over land during the twentieth Century, *Journal of Hydrometeorology* 12, 823-848, doi: 10.1175/2011JHM1369.1.
  - 12) Tan, A., **J.C. Adam**, and D.P. Lettenmaier, 2011. Change in spring snowmelt timing in Eurasian Arctic Rivers, *Journal of Geophysical Research* 116, D03101, doi:10.1029/2010JD014337.
  - 11) Rawlins, M.A., M. Steele, M.M. Holland, **J.C. Adam**, et al. 2010. Analysis of the Arctic System for Freshwater Cycle Intensification: Observations and Expectations, *Journal of Climate* 23 (21) 5715-5737. (Note: there are 30 authors in total on this publication.)
  - 10) Adam, J.C.**, A. F. Hamlet, and D. P. Lettenmaier, 2008. Implications of global climate change for snowmelt hydrology in the 21st century, *Hydrological Processes* 23(7) 962-972.
  - 9) Maurer, E.P., **J.C. Adam**, and A.W. Wood, 2008. Climate Model based consensus on the hydrologic impacts of climate change to the Rio Lempa basin of Central America, *Hydrology and Earth System Sciences* 5: 3099-3128.
  - 8) Adam, J.C.**, and D.P. Lettenmaier, 2008. Application of new precipitation and reconstructed streamflow products to streamflow trend attribution in Northern Eurasia. *Journal of Climate* 21(8): 1807-1828.
  - 7) Adam, J.C.**, I. Haddeland, F. Su, and D. P. Lettenmaier, 2007. Simulation of reservoir influences on annual and seasonal streamflow changes for the Lena, Yenisei and Ob' rivers, *Journal of Geophysical Research* 112, D24114, doi:10.1029/2007JD008525.
  - 6) Adam, J.C.**, E.A. Clark, D.P. Lettenmaier, and E.F. Wood, 2006. Correction of global precipitation products for orographic effects. *Journal of Climate* 19(1): 15-38.
  - 5) Su, F., **J.C. Adam**, K.E. Trenberth, and D.P. Lettenmaier, 2006. Evaluation of surface water fluxes of the pan-Arctic land region with a land surface model and ERA-40 reanalysis. *Journal of Geophysical Research* 111, D05110, doi:10.1029/2005JD006387.
  - 4) Barnett T.P., **J.C. Adam**, and D.P. Lettenmaier, 2005. Potential impacts of a warming climate on water availability in snow-dominated regions. *Nature* 438: 303-309.
  - 3) Su, F., **J.C. Adam**, L.C. Bowling, and D.P. Lettenmaier, 2005. Streamflow simulations of the terrestrial Arctic domain. *Journal of Geophysical Research* 110, D08112, doi:10.1029/2004JD005518.
  - 2) Adam, J.C.**, and D.P. Lettenmaier, 2003. Adjustment of global gridded precipitation for systematic bias. *Journal of Geophysical Research* 108, D9, doi:10.1029/2002JD002499.
  - 1) Maurer, E.P., A.W. Wood, **J.C. Adam**, D.P. Lettenmaier, and B. Nijssen, 2002. A long-term hydrologically-based data set of land surface fluxes and states for the conterminous United States. *Journal of Climate* 15: 3237-3251.
- \*publications first-authored by students, postdoctoral fellows, and research faculty who are/were in my group

#### **BOOK CHAPTER**

- 1) Shiklomanov, A., T.J. Bohn, D.P. Lettenmaier, R. Lammers, **J.C. Adam**, P. Romanov, and M. Rawlins, 2010: "Interactions between Land Cover/Use Change and Hydrology" in *Arctic Land Cover and Land Use Change in a Changing Climate*, G. Gutman, ed., Springer-Verlag.

#### **TECHNICAL DOCUMENTS, TRADE JOURNALS, FACTSHEETS, CONFERENCE PROCEEDINGS**

- 14) Hall, S.A., E. Allen, **J.C. Adam**, G.G. Yorgey, K. Rajagopalan, M.P. Brady, C.E. Kruger, M. Barik, and C.O. Stockle. In revision. Modeling Environmental Change: A Guide to Understanding Uncertainty. Washington State University Extension Publication, Pullman, WA.
- 13) Allen, E., S.A. Hall, G. Yorgey, K. Rajagopalan, **J.C. Adam**, M. Brady, M. Barber, C.O. Stockle, M. Barik, C.E. Kruger, 2020. Modeling environmental change: Scenarios in the Washington Water Supply and Demand Forecast. Washington State University Extension Publication, Pullman, WA.
- 12) Hall, S., **J.C. Adam**, M. Barik, J. Yoder, M. Brady, D. Haller, M. Barber, C. Kruger, G. Yorgey, M. Downes, C. Stockle, B. Aryal, T. Carlson, G. Damiano, S. Dhungel, C. Einberger, K. Hamel-Reiken, M. Liu, K. Malek, S. McClure, R. Nelson, M. O'Brien, J. Padowski, K. Rajagopalan, Z. Rakib, B. Rushi, and W. Valdez, 2016. Columbia River Basin Long-Term Water Supply and Demand Forecast, Washington State Legislative Report, <https://fortress.wa.gov/ecy/publications/SummaryPages/1612001.html>.
- 11) Kruger, C.E., **J.C. Adam**, and G. Yorgey, 2015. Forecasting water supply and demand for the Columbia River basin, Irrigation Leader Magazine 6: 18-19.
- 10) Yoder, J., **J. Adam**, M. Brady, J. Cook, S. Katz, D. Brent, S. Johnston, K. Malek, J. McMillan, and Q. Yang, 2014. [Benefit-Cost Analysis of the Yakima Basin Integrated Plan Projects](#). State of Washington Water Research Center. December. Available at <https://swwrc.wsu.edu/2014ybibp>. 196.pp.
- 9) McDonald, M., L. Dilley, M.E. Barber, R. Mahler, **J.C. Adam**, M. Wolcott, and A. Ford, 2013. Small-scale Energy Storage for Integration of Renewable Supplies with Smart Grids, Energy and Sustainability IV, WIT Transactions on Ecology and the Environment, 176, ISSN 1743-3541, Bucharest, Romania, June 2013.
- 8) Barber, M.E., **J.C. Adam**, K. Rajagopalan, G. Yorgey, and R. Mahler, 2013. Impacts of Climate and Municipal Water Demand Changes on Ecological Flows in the Columbia River Basin, USA, Ecosystems and Sustainable Development IX, WIT Transactions on Ecology and the Environment, 175, ISSN 1743-3541, Bucharest, Romania, June 2013.
- 7) Barber, M.E., **J.C. Adam**, M. Brady, K. Chinnayakanahalli, K. Rajagopalan, S. Dinesh, C. Kruger, C. Stockle, and G. Yorgey, 2012. Global Change Implications on Long-Term Water Supply and Demand Forecasts in the Columbia River Basin, WIT Transactions on Ecology and the Environment, 168:77-86.
- 6) Easley A., S. Brown, **J.C. Adam**, D.B. Montfort, and B.J. VanWie, 2012. Open channel flow misconceptions and ontological categories, ASEE Annual Conference and Exposition, Conference Proceedings.
- 5) Van Wie, B., D. Thiessen, M. Compere, X. Toro, **J.C. Adam**, S. Brown, A. Easley, X. Li, K. Lee, and M. Colpan, 2012. Multi-disciplinary Hands-on Desktop Learning Modules and Modern Pedagogies, Frontiers in Education Annual Conference, Conference Proceedings.
- 4) Schlect, W.D., B. Van Wie, P. Golter, R.F. Richards, **J.C. Adam**, A.M. Ater Kranov, M. Compere, E. Maurer, D.C. Davis, and O.O. Adesope, 2012. Multi-Disciplinary Hands-on Desktop Learning Modules and Modern Pedagogies, ASEE Annual Conference and Exposition, Conference Proceedings.
- 3) Yorgey, G.G., K. Rajagopalan, K. Chinnayakanahalli, M.P. Brady, M.E. Barber, R. Nelson, C.S. Stockle, C.E. Kruger, S. Dinesh, K. Malek, J. Yoder, and **J.C. Adam**, 2011. Columbia River Basin Long-Term Water Supply and Demand Forecast, Washington State Legislative Report, <http://www.ecy.wa.gov/biblio/1112011.html>.
- 2) Weedon et al., 2009. The WATCH Forcing Data 1958-2001: A meteorological forcing data for land surface- and hydrological-models. WATCH Technical Report 22.
- 1) Bowling, L.C., K.A. Cherkauer, and **J.C. Adam**, 2008. Current capabilities in soil thermal representation within a large scale hydrology model. Proceedings, Ninth International Conference on Permafrost, June 29 - July 3.

## GRANTS & CONTRACTS

Total funding granted since 2008: \$25,131,852

Funding granted for projects with J.C. Adam as PI: \$11,084,487

- 35) "Washington State University Project for Providing Support to Climate-Smart Culvert Design", University of Washington (Amount \$42,450; PI M.L. Liu, 2019-2020).
- 34) "A Review of the Forest Evapotranspiration for Different Site-Specific Conditions", USDA Forest Service (Amount \$46,459; PI **J.C. Adam**, 2019-2020).
- 33) "Columbia River Basin Water Supply Investment Plan: A Strategy to Develop Water Supply to Meet Water Demand Needs through 2040", Washington State Department of Ecology (Amount \$1,559,285; PI J.C. Adam; 2019-2022).
- 32) "2020 Modified Flows Irrigation Depletion Calculations". Department of Energy BPA. (Amount \$436,255.02; **PI J.C. Adam**; 2018-2020).
- 31) "Technology for trade: Improving water use and allocation efficiency in agriculture and beyond". USDA Water for Agriculture Coordinated Agricultural Project (Amount \$5,166,223; PI J. Yoder; 2018-2022).
- 30) "Defining Net Ecological Benefit for Implementation of ESSB 609-1AA No C1800148". Washington State Department of Ecology (Amount \$4,046; PI J. Yoder; 2018).
- 29) "Irrigation Depletion Methodology Development". Department of Energy BPA. (Amount \$135,038; **PI J.C. Adam**; 2018).
- 28) "FY2017 Grant Application (Program 104b) State Water Resources Research Institute Program". USGS. (Amount \$77,414; PI J. Yoder; 2016-2017).
- 27) "Forecast: State Caucus". Washington State Department of Ecology (Amount \$39,999; **PI J.C. Adam**, 2017-2020).
- 26) "FY2016 Grant Application (Program 104b) State Water Resources Research Institute Program (Amount \$92,335; PI J. Yoder; 2015-2016).
- 25) "Increasing Regional to Global-Scale Resilience in FEW Systems through Coordinated Management of Storage in Concert with Innovations in Technology and Institutions". National Science Foundation (Amount \$2,687,614; **PI J.C. Adam**; 2016-2020).
- 24) "FEW Workshop - Addressing the Food-Energy-Water System Trilemma: Balancing Reliance on Technological and Institutional Solutions", National Science Foundation (Amount \$44,953; PI J. Padowski, 2015).
- 23) "Development and Updating of Rainfall and Runoff Intensity-Duration-Frequency Curves for Washington State Counties", (Amount \$27,500; PI Y. Demissie, 2015-2016).
- 22) "FireEarth; Advancing Resilience to Compounding Disasters: An Integrated Natural-Human Systems Assessment of Wildfire Vulnerability", National Science Foundation Award to U. Idaho (Amount \$2,800,000; PI C. Kolden; 2015-2016).
- 21) "A Review of the Forest Evapotranspiration for Different Site-Specific Conditions", USDA Forest Service (Amount \$158,831; PI **J.C. Adam**, 2015-2017).
- 20) "FY2015 Grant Application (Program 104b) State Water Resources Research Institute Program (Amount \$92,335; PI J. Yoder; 2014-2015).
- 19) "Columbia River Basin Water Supply Investment Plan: A Strategy to Develop Water Supply to Meet Water Demand Needs through 2035", Washington State Department of Ecology (Amount \$1,829,000; PI **J.C. Adam**; 2013-2017).
- 18) "Request for a Ground Penetration Radar (GPR) System: GSSI SIR-4000 for Agricultural and Hydrologic Studies on Key Sub-Surface Processes", WSU Voiland School of Engineering and Architecture (Amount \$30,186; PI M.L. Liu; 2014-2014).
- 17) "FY2014 Grant Application (Program 104b) State Water Resources Research Institute Program (Amount \$92,335; PI J. Yoder; 2014-2015).
- 16) "Evaluation of the Yakima Basin Integrated Plan", State of Washington Legislature (Amount \$300,000; PI J. Yoder; 2013-2014).

- 15) “An Integrated Engineering and Economic Analysis of the Columbia River Treaty Renegotiation using Game Theory”, State of Washington Water Research Center (Amount \$18,000; PI M.P. Brady; 2013-2014).
- 14) “Integration of Energy Storage and Microgrid Technologies”, Energy Systems Innovation Center (ESIC) (Amount \$34,000; PI M.E. Barber; 2012-2013).
- 13) “Watershed Integrated System Dynamics Modeling (WISDM): Feedbacks among biogeochemical simulations, stakeholder perceptions, and behavior”, United States Department of Agriculture (Amount \$1,495,640; PI C. Huyck Orr; 2012-2016).
- 12) “Earth, Ecosystems, and Society” Fellowship, WSU Center for Environmental Research, Education, and Outreach (Amount \$40,000; **J.C. Adam** and C.E. Kruger; 2012-2013).
- 11) “Progress towards assessing the large-scale impacts of forest fires on runoff erosion across the Pacific Northwest”, State of Washington Water Research Center (Amount \$27,000; PI **J.C. Adam**; 2012-2013).
- 10) “Understanding Biogeochemical Cycling in the Context of Climate Variability Using a Regional Earth Systems Modeling Framework”, United States Department of Agriculture (Amount \$3,053,000; PI **J.C. Adam**; 2011-2016).
- 9) “Woman to Woman Mentoring for Success in the Field of Ecohydrology”, National Science Foundation Advance Grant to WSU, EXCELinSE (Amount \$4,984; PI **J.C. Adam**; 2011).
- 8) “Multi-Disciplinary Project-Based Paradigm that Uses Hands-on Desktop Learning Modules and Modern Learning Pedagogies”, National Science Foundation CCLI (Amount \$600,000; PI B. Van Wie; 2010-2013).
- 7) “Columbia River Basin Water Supply Investment Plan: A Strategy to Develop Water Supply to Meet Water Demand Needs through 2030”, Washington State Department of Ecology (Amount \$974,500 total between original amount and supplement; PI **J.C. Adam**; 2009-2012).
- 6) “IGERT: Nitrogen Systems: Policy-oriented Integrated Research and Education”, National Science Foundation (Amount \$3,030,702; PI B. Lamb; 2009-2014).
- 5) “REU: Fundamental Understanding of Mercury Cycling in Lakes and Use of Reservation-Based Research to Recruit American Indians into Environmental Engineering and Science”, National Science Foundation (Amount \$5,738; PI M. Beutel; 2010)
- 4) “Understanding the vulnerability of Columbia Basin irrigated agriculture to predicted climate changes using a coupled hydrological-crop model”, State of Washington Water Research Center (Amount \$28,000; PI **J.C. Adam**; 2010-2011).
- 3) “Washington State University – ICEWATER Project”, Inland Northwest Research Alliance (Amount \$80,000; PI M. Barber; 2009-2010).
- 2) “Adaptive management of mountain forests to prevent mass wasting under climate change”, State of Washington Water Research Center (Amount \$27,500; PI **J.C. Adam**; 2009-2010).
- 1) “Climate change impacts on runoff generation for the design of sustainable stormwater infrastructure”, Transportation Northwest (Amount \$46,522; PI **J.C. Adam**; 2009-2010).

## **SERVICE ACTIVITIES**

### ***Service to State, University, College, and Department***

- WSU Office of Research (OR) Research Week Panelist: “Interdisciplinary Projects Focused on Humans in the Environment”: Oct. 22, 2019
- WSU Office of Research (OR) Research Strengths Committee: Member (2019)
- WSU VCEA ESIC Director Search: Committee Member (2018-2019)
- WSU VCEA AGI Director Search: Committee Member (2019-2020)
- WSU VCEA Dean Search: Advisory Committee Member (2016-2017)
- WSU President Search: Advisory Committee Member (2015-2016)
- Associate Director (25% position) of the State of Washington Water Research Center (2014 – 2017)

- Presentations to High School Students and Teachers
  - WSU Honors College Summer of Excellence event: “Unlocking the Mystery of the Hydraulic Jump”, 2011, 2012, 2013
  - WSU “Imagine TOMORROW” event: “Unlocking the Mystery of the Hydraulic Jump”, 2012
- Involvement in Events Sponsored by the WSU Office of Research
  - Panelist on “Preparing for your first grant” (fall 2017)
  - Presentation on “How to prepare when you get funded” (spring 2013)
  - Panelist for WSU Research Summit (spring 2012)
  - Panelist for post-movie discussion for viewing of “Carbon Nation” (fall 2011)
- Center for Environmental Research, Education, and Outreach Executive Committee Member, 2012 to 2013
- VCEA Faculty Advisory Committee Member, 2018 to present
- Civil and Environmental Engineering Leadership Committee Member, 2018 to present
- Civil and Environmental Water Area Coordinator, 2015 to present
- Chair, Civil and Environmental Graduate Studies Committee, 2015 to 2016
- Civil and Environmental Graduate Studies Committee, 2013 to present
- Civil and Environmental Undergraduate Studies Committee, 2009 to 2012
- Center for Institutional Research Computing (CIRC) Advisory Committee Member, 2018 to present
- Mentor for Society of Women Engineers Mentoring Program to increase retention of women in engineering fields, 2010 to 2015
- Mentor for Team Mentoring Program (TMP) to increase retention in under-represented groups in STEM disciplines, 2010 to 2013
- WiSTEM (Women in Stem) Panel Member, Pullman, WA, Oct 19, 2016
- Panel Member of work-life discussion for Society of Women Engineers (SWE), Pullman, WA, Mar 31, 2017
- Drive to 25 (Dto25) Research and Expenditures Faculty Working Group, 2017

***Service to Profession***

- Vice President (VP) for the International Association of Hydrological Sciences (IAHS) Commission on Water Resource Systems (ICWRS), 2019-present.
- Member of Organizing Committee, CUAHSI workshop to envision a terrestrial modeling system to encode and formalize the knowledge from WSC and INFEWS projects, Chapel Hill, NC, Mar 20-22, 2019.
- Northwest Climate Conference Organizing Committee Member (2017, 2018, 2019)
- Organization of Regional Meetings
  - Co-organized and sponsored the “Inaugural Meeting of Columbia River Basin Water Systems Modelers” in Boise, Idaho (July 30, 2012); joint between Boise State University, Idaho National Laboratory, University of Idaho, and Washington State University
  - Organized and sponsored a poster session entitled “Climate, Land Use, and Agricultural and Natural Resources: Activities in Interdisciplinary Research, Education, and Outreach” in Pullman, Washington (June 26, 2012; November 19, 2013; October 7, 2014; February 25, 2016)
- Service to the American Meteorological Society (AMS)
  - Hydrology Committee (2013 to 2017)
  - Co-Chair for session at 2015, 2016, and 2017 AMS Annual Meetings on Evaporation
- Service to the American Geophysical Union (AGU)
  - Hydrology Section Horton Research Student Grant Program (2012-2015)
  - Co-convener for Fall 2011 Session on Earth Systems Modeling (GC08)

- Invited participant to the Consortium of Universities for the Advancement of Hydrologic Sciences, Inc. (CUAHSI) workshop on INSPIRE (Improving Hydrologic Process Representation in Weather, Climate and Earth System Models), Boulder, CO, Oct 5-6, 2015.
- Invited participant to the Agricultural Model Intercomparison Project (AgMIP) workshop on incorporating water into agricultural models, NASA Goddard, NY, Apr 30-May 1, 2013.
- Invited participant to the Consortium of Universities for the Advancement of Hydrologic Sciences, Inc. (CUAHSI) workshop on Earth System Modeling, Boulder, CO, Nov 11-12, 2013.
- Journal Reviewer: *AGU Earth's Future*, *Atmosphere-Ocean*, *Atmospheric Research*, *Climate Dynamics*, *Climate Research*, *Climate Risk Management*, *Environmental Modeling and Software*, *Environmental Research Letters*, *Geophysical Research Letters*, *Hydrology and Earth System Sciences Discussions*, *Ecosphere*, *Hydrology and Earth System Sciences*, *Hydrological Processes*, *Hydrological Sciences Journal*, *Journal of the American Water Resources Association*, *Journal of Environmental Informatics*, *Journal of Geophysical Research-Atmospheres*, *Journal of Geophysical Research-Biogeosciences*, *Journal of Hydrology*, *Journal of Hydrologic Engineering*, *Journal of Hydrometeorology*, *Nature Climate Change*, *Nature Sustainability*, *Northwest Science*, *STOTEN*, *Water Resources Research*, *WSU Extension*
- Funding Agency Reviewer: *National Science Foundation*, *NASA*, *United States Geological Service*, *Canadian Foundation for Climate and Atmospheric Sciences*, *United States Bureau of Reclamation*, *United States Department of Agriculture*, *Center for Sustaining Agriculture and Natural Resources*, *WSU Seed Grants*
- Proposal Panel: *NSF (2016, 2017, 2018, 2019)*, *USDA (2017)*, *NASA (2017)*
- Technical Documentation Reviewer: *United States Bureau of Reclamation*, *Washington State Department of Ecology*, *Puget Sound Climate Science Synthesis*, *Washington State Academy of Sciences*

#### **Custom Model & Data Preparation**

- Involved in preparing global meteorological data to the WATCH water and global change program at the UK Meteorological Office. These data were made available to the public. 2008 - present
- Involved in running custom model simulations and preparing hydrologic data for The Nature Conservancy (TNC), 2008 – 2011

#### **OUTREACH ACTIVITIES**

- Related to our 2016 Water Supply and Demand Forecast
  - State Agency Outreach Caucus (Union Gap; July 31, 2017; Feb 13, 2018; Oct 2, 2018; March 26, 2020)
  - Project-specific stakeholder meetings (Richland, Wenatchee, Spokane; June 2016)
  - Columbia River Policy Advisory Group (January 29, 2015; August 4, 2016; September 7, 2017; December 6, 2017)
  - Water Resources Advisory Committee (March 16, 2015 and July 11, 2016)
  - Bonneville Power Administration and Chelan Public Utility District representatives (May 5, 2015)
  - Eastern Washington County Commissioners Policy Advisory Group (June 11, 2015 and July 15, 2016)
  - Agency discussion of the Columbia River Treaty (July 7, 2015)
  - State agency outreach meeting (August 4, 2016)
  - Columbia Basin Development League's Annual Conference (November 3, 2016)
  - Lake Roosevelt Forum's Conference (November 15, 2016)
  - The Washington Small Fruit Conference (December 2, 2016)
- BioEarth stakeholder workshops
  - Carbon and Nitrogen Management (Seattle; Feb 27, 2013)

- Water Supply Issues (Seattle; Feb 28, 2013)
- Rangeland Management (Richland; Feb 25, 2014)
- Water Quality (Vancouver; Mar 12, 2015)
- Integrated Agricultural Scenarios (Richland; February 16, 2016)
- FireEarth stakeholder workshops
  - Water’s Vulnerability to Fire (Portland, OR; May, 2019)
  - Water’s Vulnerability to Fire (North Bend, WA; Oct, 2018)
  - Creating a Fire Resilient Community (Ketchum, ID; June, 2017)
- ColumbiaFEW stakeholder workshops
  - Annual Team and Stakeholder Advisory Group Meeting (May, 2018)
  - Annual Team and Stakeholder Advisory Group Meeting (September, 2019)

**TEACHING**

***Various Guest Lectures***

- Engineering 120: “Undergraduate Research in Water Resources” (spring 2020)
- Open Channel Flow: “Review of Fluids” Parts 1 and 2, “Velocity Distribution in an Open Channel”, “Specific Energy” (spring 2020)
- Nitrogen Cycling: “Integrated Modeling” (fall 2009, fall 2010, fall 2011, fall 2012)
- Global Change Ecology: “Global Change Modeling” (spring 2013)
- Honors College Junior Course: “Interdisciplinary Research” (spring 2013, fall 2014, fall 2016, spring 2017, fall 2018)
- Honors College Freshman Course: “Undergraduate Research” (fall 2012)
- Fundamentals in Engineering Exam Review for Hydraulic Engineering (most semesters)
- Graduate Seminar: “Technical Writing” (various semesters)
- Open Channel Flow: “What is Hydraulic Engineering discussion” (fall 2010)
- Sustainability: “Greenhouse Effect” (spring 2009, spring 2010)

***Courses Taught***

**1) *Hydroclimatology (CE 550, 3 credits)***

- Department of Civil and Environmental Engineering, Washington State University
- New course development

**2) *Sustainable Development in Water Resources (CE 456, 3 credits)***

- Department of Civil and Environmental Engineering, Washington State University
- New course development

**3) *Water Resources Engineering (CE 351, 3 credits)***

- Department of Civil and Environmental Engineering, Washington State University
- Existing course; new elements to course for hands-on inquiry-based learning (NSF funds)

**4) *Graduate Seminar (CE 580, 1 credit)***

- Department of Civil and Environmental Engineering, Washington State University

Student evaluations for CE 351, CE 456, and CE 550.

<b>Course Number</b>	<b>Course Title</b>	<b>Semester</b>	<b>Student Enrollment</b>	<b>*Average Evaluation</b>
CE 351	Water Resources Engineering	Spring 2020	61	In progress
CE 351	Water Resources Engineering	Fall 2019	31	4.60
CE 351	Water Resources Engineering	Spring 2019	53	4.06
CE 550	Hydroclimatology	Fall 2018	12	4.92
CE 351	Water Resources Engineering	Spring 2018	56	4.52
CE 550	Hydroclimatology	Fall 2017	11	4.82
CE 351	Water Resources Engineering	Spring 2017	52	4.48

CE 351	Water Resources Engineering	Fall 2016	47	4.40
CE 550	Hydroclimatology	Fall 2015	16	4.16
CE 351	Water Resources Engineering	Spring 2015	49	4.50
CE 550	Hydroclimatology	Spring 2014	10	4.87
CE 351	Water Resources Engineering	Fall 2013	63	4.00
CE 552	Hydroclimatology	Fall 2012	9	4.15
CE 351	Water Resources Engineering	Spring 2012	68	4.59
CE 552	Hydroclimatology	Fall 2011	10	4.66
CE 351	Water Resources Engineering	Spring 2011	59	4.65
CE 552	Hydroclimatology	Spring 2011	10	4.94
CE 456	Sustainable Development in Water Resources	Fall 2010	31	4.51
CE 552	Hydroclimatology	Spring 2010	9	4.64
CE 351	Water Resources Engineering	Fall 2009	54	4.47
CE 456	Sustainable Development in Water Resources	Fall 2009	32	4.38
CE 351	Water Resources Engineering	Spring 2009	63	4.62
CE 543	Hydroclimatology	Fall 2008	6	4.55
CE 351	Water Resources Engineering	Spring 2008	60	4.32

\* Student evaluations on a scale of 1 to 5, with 5 representing the highest possible rating.

## ADVISING

### *Undergraduate Students*

- Faculty Advisor for less than 10 undergraduate students per semester.
- Undergraduates advised in research activities: (19 students total)  
 Claire Pierson, EPF Intern from France (2008); Chelsea Nicholas (2009); Esther Lynch (2009); Will Cyrier (2009); Samantha Ortega (2009); David Johnson (2010); Julian Reyes (2010); Lisa Chen (2010); Cory Tobin (2010 to 2011); Schyler Hect (2011); Paige Pruisner (2011), REU student from CU, Boulder; Destry Seiler (2011 to 2012, 2014); Alicia Flatt (2011 to 2012); Chad Warren (2011 to 2012); Timothy Ho (2011 to 2012); Mark Urlacher (2012 to 2013); Destry Seiler (2014-2016); Gianna Damiano (2015-2016); Patrick Robichaud (2017-present)

### *Graduate Students*

- Major Professor (Graduate Committee Chair/Co-Chair for 8 Ph.D. and 18 M.S.)  
 Ashish Kondal, Ph.D., 2022 (exp), co-chaired by Kirti Rajagopalan  
 Xu “Jacky” Chen, Ph.D., 2022 (exp), co-chaired by Kirti Rajagopalan  
 Rojina Desai, M.S., in Civil Engineering, 2021 (exp)  
 Jonathan Gendron, M.S., in Civil Engineering, 2021 (exp)  
 Matt Yourek, Ph.D., 2021 (exp), co-chaired by Jan Boll  
 Rebecca Gustine, M.S., in Civil Engineering, 2020, *Climate change causes a western Cascades watershed to become less flammability-limited: Is fuel treatment now a potential solution?*  
 Jianning Ren, Ph.D., 2020, *How does vegetation influence the interaction between climate change, insect disturbance and wildfire?*  
 Tung Nguyen, Ph.D., 2020, *Soil and geologic controls on catchment streamflow and groundwater response to climate change*  
 Yunus Cevahir, M.S., in Civil Engineering, 2019, *Hydrologic sensitivity of a critical Turkish watershed to inform water resource management in an altered climate*  
 Julian Reyes, Ph.D., 2018, *Characterizing rangeland ecosystems and their sustainable management in a changing climate* (currently a AAAS Policy Fellow for the USDA)  
 Keyvan Malek, Ph.D., 2016, co-chaired by Claudio Stöckle, *Impacts of climate change and irrigation strategies on surface water availability, return flows, and crop yields in the Yakima*

- River basin of Washington* (currently at Cornell University)
- Kirti Rajagopalan, Ph.D., 2016, *Integrated hydrologic, cropping systems, and water management modeling to forecast the impacts of climate change and economic factors on Columbia River basin agricultural productivity* (Assistant Professor in Biological Systems Engineering, WSU)
- Heather Baxter, M.S., 2018, non-thesis coursework-only option (Currently at the United States Army Corps)
- Arif Rabbani, M.S., 2017, *Modeling the impacts of climate change and forest management activities on evapotranspiration* (currently at the Pacific Northwest National Laboratory)
- Rushi Begum, M.S., 2016, *Assessing the environmental and economic impacts of change in the Columbia River Treaty*
- Ryan Hull, M.S., 2016, *Upscaling of ecohydrologic models across the Pacific Northwest* (Currently at the Pacific Northwest National Laboratory)
- Shifa Dinesh, M.S., 2014, non-thesis coursework-only option
- Gregory Gould, M.S., 2013, *Large-scale assessment of post-fire erosion over the Salmon River basin in Idaho* (currently at Washington State Department of Ecology)
- Andrew Easley, M.S., 2012, co-chaired by Shane Brown, *Assessment of hands-on inquiry-based learning in undergraduate engineering courses to improve understanding of open channel flow concepts*
- Jennifer Johnston, M.S., 2011, non-thesis project option, *Analysis of climate change impacts on the seasonal storage of water in snowpacks globally* (Currently at the National Resource Conservation Service)
- Jack Butler, M.S., 2011, non-thesis coursework-only option
- David Johnson, M.S., 2011, non-thesis coursework-only option
- Erika Ottenbreit, M.S., 2011, *Modeling climate change impacts on suspended sediment in the Potlatch River basin of Idaho* (currently in consulting)
- Gregory Karlovits, M.S., 2010, *Monte Carlo simulation to characterize runoff uncertainty in a changing climate* (currently an engineer with U.S. Army Corps)
- Joshua Van Wie, M.S., 2010, *Hydrologic modeling of conventional and conservation farming practices in dryland agricultural region of Washington and Idaho* (currently in consulting)
- Muhammad Barik, M.S., 2010, *Landslide susceptibility mapping to inform landuse management decisions in an altered climate* (currently in consulting)
- Graduate Committee Member for Ph.D. (24 students)
  - Mao, Fangjiao, Ph.D. in Civil Engineering, 2022 (exp)
  - Abduljaleel, Yasir, Ph.D. in Civil Engineering, 2021 (exp)
  - Zhao, Jie, Ph.D. in Civil Engineering, 2021 (exp)
  - Kenny Nyirenda, Ph.D. in Civil Engineering, 2021 (exp)
  - Ames Fowler, Ph.D. in Civil Engineering, 2021 (exp)
  - Yao Huang, Ph.D. in Civil Engineering, 2020 (exp)
  - Benjamin Kuffour, Ph.D. in Civil Engineering, 2020 (exp)
  - Mark Siegenthaler, Ph.D. in Civil Engineering, 2020 (exp)
  - Merhawi Gebremichael, Ph.D. in Civil Engineering, 2020
  - Mengqi Zhao, Ph.D. in Civil Engineering, 2020
  - Maureira, Fidel, Ph.D. in Biological Systems Engineering, 2020
  - Abid Sarwar, Ph.D. in Biological Systems Engineering, 2019
  - Abdelmoneim Mohamed, Ph.D. in Biological Systems Engineering, 2019
  - Rubayet Mortuza, Ph.D. in Civil Engineering, 2019
  - Edom Moges, Ph.D. in Civil Engineering, 2018
  - Sulochan Dhungel, Ph.D. in Civil Engineering, University of Utah, 2018
  - Muhammad Azeem Khan, Ph.D. in Biological Systems Engineering, 2017
  - Tsengel Nergui, Ph.D. in Environmental Science, 2017

- Sarah Anderson, Ph.D. in Biology, 2017  
 Natalie Martinkus, Ph.D. in Civil Engineering, 2016  
 Lisa Dilley, Ph.D. in Civil Engineering, 2016  
 Justin Poinsette, Ph.D. in Biology, 2017  
 Nadia Frye-Lustig, Ph.D. in Civil Engineering, 2016  
 Robert Jeffers, Ph.D. in School of Earth and Environmental Sciences, 2013
- Graduate Committee Member for M.S. (24 students)  
 Kallibek Kazbekov, M.S. in Civil Engineering, 2020  
 Destry Seiler, M.S. in Civil Engineering, 2019  
 Will Forney, M.S. in Environmental Sciences, 2018  
 Anna Vandermeer, M.S. in Civil Engineering, 2018  
 Ames Fowler, M.S. in Civil Engineering, 2018  
 Zannatul Haque, M.S. in Civil Engineering, 2016  
 Quentin Baret, M.S. in Civil Engineering, 2016  
 Rubayet Mortuza, M.S. in Civil Engineering, 2015  
 Ross Wickham, M.S. in Civil Engineering, 2015  
 Veronica Carillo, M.S. in Civil Engineering, 2015  
 Cody Miller, M.S. in School of the Environment, 2014  
 Tristan Mullis, M.S. in Computer Sciences, 2014  
 Anne Baghdanov, M.S. in Civil Engineering, 2013  
 Alicia Flatt, M.S. in Civil Engineering, 2013  
 Matthew McDonald, M.S. in Civil Engineering, 2013  
 Evan Miller, M.S. in Civil Engineering, 2013  
 Mark LaVanway, M.S., in Civil Engineering, 2012  
 Lanka Desilva, M.S. in Civil Engineering, 2011  
 Craig Jordan, M.S. in Civil Engineering, 2011  
 Kara Goodwin, M.S. in School of Earth and Environmental Sciences, 2010  
 Travis Lopes, M.S. in Civil Engineering, 2010  
 Lu Liu, M.S. in Civil Engineering, 2009  
 Dian Wen, M.S. in Civil Engineering, 2009  
 Amanda Tan, University of Washington M.S., 2008

***Honors and Awards by Graduate Student Advisees***

- Patrick Robichaud, current BSCE, 2020 AAAS Student E-Poster Competition, 1<sup>st</sup> Place
- Kirti Rajagopalan, PhD 2016, WSU CEE Dissertation Award, 2016
- Keyvan Malek, PhD 2016, UCOWR Dissertation Award, Honorable Mention, 2016
- Julian Reyes, PhD 2018, Fulbright Fellowship, University of Bonn, Germany, 2011-2012
- Julian Reyes, PhD 2018, National Science Foundation Graduate Research Fellowship, granted in 2012
- Greg Karlovits, MS 2010, American Geophysical Union (AGU) Outstanding Student Paper Award, Fall 2010
- Erika Ottenbreit, MS 2010, American Water Resources Association (AWRA) Fellow, 2010-2011

***Postdoctoral Associates***

- Fabio Scarpate, 2019-present, *INFEWS*
- Keyvan Malek, 2017-2018, *INFEWS* (now at Cornell University)
- Erin Hanan, 2015–2018, *FireEarth* (now Assistant Professor at the University of Nevada, Reno)
- Alexandra Richey, 2015 – 2017, *Groundwater sustainability* (now Assistant Professor in WSU)
- Muhammad Barik, 2014 – 2017, *Columbia River Supply and Demand Forecast* (now at the University of Alabama)
- Kiran Chinnayakanahalli, 2010 – 2011, *Coupling of a large-scale hydrologic model to a crop systems model to forecast Columbia River basin surface water supply and irrigation water*

*demand under climate change* (now at Air Worldwide consulting)

- Mingliang Liu, 2011- 2012, *Development of a regional-scale Biosphere-relevant Earth Systems Model (BioEarth) to inform land use management* (now Research Assistant Professor at WSU)

#### **Host for Visiting Scientist**

- Jocelito Cruz (Brazil), VIC-CropSyst modeling (2019-2020)
- Sisi Li (Chinese Academy of Sciences), training on hydrologic modeling (2017-2018)
- Yekta Ozkan (Turkey Ministry of Food Agriculture and Livestock), training on climate change (spring 2013)
- Sinan Anan and Ozgul Altuntas (Turkey Ministry of Food Agriculture and Livestock), training on remote sensing of evaporation (winter 2015-2016)

#### **INVITED TALKS, POSTERS, and SEMINARS**

- 41) Guzman, C., J. Givens, J. Padowski, K. Malek, M. Briscoe, S. Hall, and **J.C. Adam**, 2019. Integration of socio-cultural-environmental data in the Columbia River Basin: Food-Energy-Water Resilience Assessment. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 40) **Adam, J.C.**, 2019. Columbia Basin Irrigated Agriculture in the Context of Global Change. *University of Idaho Department of Biological Engineering Seminar*. Moscow, ID, Mar 25.
- 39) **Adam, J.C.**, 2018. Increasing Resilience across the Food, Energy, and Water Sectors in the Columbia River Basin. *AGU Webinars: The Food-Energy-Water Nexus: Connecting Science and Policy*, Sep. 6.
- 38) **Adam, J.C.**, 2018. Eco-Hydrologic Modeling Towards Sustainable Agricultural and Forested Landscapes. *Washington State University School of the Environment Seminar*, Pullman, WA, Mar 26.
- 37) **Adam, J.C.**, 2017. Water Supply and Demand Forecast for the Columbia River Basin. *Center for Environmental Law and Policy Conference*. Seattle, WA, Dec. 14.
- 36) **Adam, J.C.**, 2017. ColumbiaFEW: Increasing resilience across the food, energy, and water sectors in the Columbia River Basin. *University of Montana Seminar*, Missoula, MT, Oct 30.
- 35) **Adam, J.C.**, 2017. Integrated Modeling to Inform Agricultural and Natural Resource Management Decisions. *WSU Center for Institutional Research Computing*, Pullman, WA. Oct 24.
- 34) **Adam, J.C.**, 2017. Water in 2035: Water Supply and Demand Forecast for the Columbia River Basin. *American Water Resources Association – Washington*. Seattle, WA, Oct 3.
- 33) **Adam, J.C.**, 2017. Climate Change Impacts: Water Resources and Agriculture in the Columbia River Basin. *Washington State Academy of Sciences*. Seattle, WA, Sep. 14.
- 32) **Adam, J.C.**, 2017. BioEarth: A regional Biosphere-relevant Earth system model to inform agricultural and natural resource management decisions. *OSU Climate Impacts Research Consortium* (webinar). Jun. 26.
- 31) **Adam, J.C.**, 2017. How much runoff originates as snow? A progression of studies using the VIC model. *Washington State Water Availability Supply Committee* (webinar). Jun. 16.
- 30) \*Hanan, E.J., C. Tague, J. Choate, M. Liu, and **J.C. Adam**, 2017. Combining remote sensing data with mechanistic carbon cycling models to project biogeochemical and hydrologic fluxes in disturbance prone watersheds. *American Meteorological Society 31<sup>st</sup> Conference on Hydrology*. Seattle, WA., Jan. 24.
- 29) \*Hanan, E., **Adam, J.C.**, Choate, J., Kolden, C., Liu, M., Tague, N, 2016. Simulating the effects of climate change on postfire carbon, nitrogen, and water balance in chaparral and mixed conifer watersheds. University of Idaho Department of Geography seminar. Moscow, ID, Nov. 30.
- 28) **Adam, J.C.**, 2016. Columbia Basin water and agriculture in a changing climate. *USDA-ARS Liaison Committee Meeting*, Pullman, WA. Oct 13.
- 27) **Adam, J.C.**, R. Hull, C.L. Tague, and M.L. Liu, 2016. Where should fine-resolution heterogeneity be captured within Earth system models? *Observations and Modeling Across Scales: Symposium in Honor of Eric Wood*. Princeton University, Jun. 2-3.

- 26) **Adam, J.C.**, et al., 2016. BioEarth: A regional biosphere-relevant Earth system model to inform agricultural and natural resource management decisions. *Seminar given at PNNL*, Richland, WA. Mar. 11.
- 25) **Adam, J.C.**, et al., 2016. Columbia Basin water and agriculture in a changing climate, *Agriculture in a Changing Climate: Implications for Educators, Industry, and Producers Workshop*. Kennewick, WA, Mar. 9-11.
- 24) **Adam, J.C.**, R.E. Hull, C.L. Tague, J. Reyes, and M.L. Liu, 2015. Where should fine-resolution spatial heterogeneity be captured within Earth System Models, *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 23) **Adam, J.C.**, 2015. Impacts of a changing climate on water resources availability and cropping systems. Washington State Tree Fruit Association (WSTFA) Annual Meeting. Yakima, WA, Dec. 7.
- 22) **Adam, J.C.**, and K. Rajagopalan, 2015. Direct and Indirect effects of climate change on cereal productivity in the Pacific Northwest region of the U.S., REACCH International Meeting, Minneapolis, MN, Nov. 13-14.
- 21) **Adam, J.C.**, 2015. The Columbia River basin long-term water supply and demand forecast. *American Water Resources Association-WA 2015 State Conference*, Oct. 22.
- 20) **Adam, J.C.**, 2015. Scientific inputs to managing natural and agricultural resources in a changing climate. *WSU Extension Agricultural and Natural Resources Unit Summer Meeting*, Spokane, WA, Jul 22.
- 19) **Adam, J.C.**, K. Rajagopalan, C.O Stockle, G. Yorgey, C.E. Kruger, K. Chinnayakanahalli, R. Nelson, 2014. Assessing the impacts of climate change on agricultural production in the Columbia River basin: incorporating water management. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 18) **Adam, J.C.**, C.L. Tague, M.L. Liu, E. Garcia, J. Reyes\*, J. Choate, T. Mullis, R. Hull, J. Vaughan, A. Kalyanaraman, and T. Nguyen, 2014. Upscaling a catchment-scale ecohydrology model for regional-scale earth system modeling. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 17) **Adam, J.C.**, C.L. Tague, M.L. Liu, E. Garcia, K. Rajagopalan, S. H. Chung, X. Jiang, J. Harrison, T. Nergui, A. Guenther, C. Miller, J. Reyes, J. Choate, E.P. Salathé, C.O. Stöckle, 2014. Climate Model Bias and Land Surface Heterogeneity: Two Factors that Impact the Usefulness of Earth System Models for Natural Resource Management. *CUAHSI biennial colloquium*, Shepherdstown, WV, Jul. 28-30.
- 16) \*Rajagopalan, K., and **Adam, J.C.**, 2013. Integrated Modeling over the Pacific Northwest Region for Sustainable Natural and Agricultural Resource Management. Invited talk, *AWRA Annual Water Resources Conference*, Portland, OR, Nov. 4-7.
- 15) **Adam, J.C.**, 2013. "Integrated Modeling for Sustainable Natural and Agricultural Resource Management in the Columbia River Basin," Pacific Northwest National Laboratory Seminar, Richland, WA, Jul 19.
- 14) **Adam, J.C.**, 2013. "Integrated Modeling for Sustainable Natural and Agricultural Resource Management in the Columbia River Basin," Department of Agronomy Seminar, Purdue University, Purdue, IN, Apr. 15.
- 13) **Adam, J.C.**, 2013. "Integrated Modeling for Sustainable Natural and Agricultural Resource Management in the Columbia River Basin," University of Washington Earth and Space Sciences Seminar, Seattle, WA, Feb. 7.
- 12) **Adam, J.C.**, C.O. Stockle, and C.E. Kruger, 2012. "Regional-Scale Earth System Models to Inform Land and Water Management Decisions: Limitations and Current Developments," *ASA, CSSA, and SSSA International Annual Meetings*, Cincinnati, OH, Nov 3-6.
- 11) **Adam, J.C.**, 2012. "Direct and Indirect Impacts of Climate Change on Cropping Systems in Eastern Washington," *Water, Washington and the World: 5<sup>th</sup> Annual Meeting of the Washington State Academy of the Sciences*, Seattle, WA, Sep 20.

- 10) **Adam, J.C.**, 2012. "A Regional-Scale Earth System Model to Inform Land Management Decisions," *Annual Meeting of the American Association for the Advancement of the Sciences (AAAS)*, Vancouver, BC, Canada. Feb. 17.
- 9) **Adam, J.C.**, 2012. "A Regional-Scale Earth System Model to Inform Natural and Agricultural Resource Management Decisions," *University of Idaho Climate Panorama Series*, Moscow, ID, Feb 13.
- 8) **Adam, J.C.**, 2011. Water and Sustainability in the Columbia Basin. *Center for Sustaining Agriculture and Natural Resources (CSANR) Advisory Committee Meeting*, Ellensburg, WA, Dec. 13.
- 7) \*Chinnayakanahalli, K., **J.C. Adam**, C.S. Stockle, R. Nelson, M. Brady, K. Rajagopalan, M.E. Barber, S. Dinesh, K. Malek, G. Yorgey, C. Kruger, T. Marsh, and J. Yoder, 2011. Incorporating agricultural management into an earth system model for the Pacific Northwest region: Interactions between climate, hydrology, agriculture, and economics, *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 6.
- 6) **Adam, J.C.**, 2011. Columbia River Basin Water Supply and Demand Forecast for the 2030s, *Idaho water Resources Research Institute Hydrology Seminar*, Moscow, ID, Oct. 11.
- 5) **Adam, J.C.**, 2011. Progress Towards Earth System Modeling of the Pacific Northwest Region, *University of Idaho Climate Panorama Series*, Moscow, ID, Apr. 20.
- 4) **Adam, J.C.**, 2011. Earth System Modeling: A Framework for Interdisciplinary Research, *WSU Soils Seminar*, Pullman, WA, Jan 31.
- 3) **Adam, J.C.**, 2010. Climate change impacts on Pacific Northwest Hydrology, *WSU Biological Systems Engineering Seminar*, Pullman, WA, Feb. 5.
- 2) **Adam, J.C.**, 2009. Numerical modeling of the impacts of climate change on Pacific Northwest hydrology, *WSU Chemical Engineering Seminar*, Oct. 12.
- 1) **Adam, J.C.**, and D.P. Lettenmaier, 2007. Application of the VIC model to explore the role of permafrost in observed Eurasian Arctic streamflow changes, *Eurasian Hydroclimatology Workshop*, Fairbanks, AK, Nov. 11-14.

#### **OTHER MEETING ABSTRACTS**

- 172) \*Robichaud, P.J.L and **J.C. Adam**, 2020. Climate change is reducing water storage in the Pacific Northwest. *AAAS Annual Meeting*, Seattle, WA, Feb. 13-16.
- 171) Niemeyer, R., C.L. Tague, **J.C. Adam**, W. Burke A.B. Perleberg, and C. Schnepf, 2019. Forest restoration, streamflow, and stakeholder engagement: Integrating forest owner & manager input with hydro-ecological simulations. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 170) \*Cevahir, Y., **J.C. Adam**, M.L. Liu, and J. Sheffield, 2019. Climatic sensitivity of a critical Turkish watershed to inform water resource management in an altered climate. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 169) \*Ren, J., E.J. Hanan, J.T. Abatzoglou, C.L. Tague, M.L. Liu, C. Kolden and **J.C. Adam**, 2019. What are the relative roles of future climate change and fire suppression in changing wildfire regime in central Idaho? *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 168) Malek, K., P.M. Reed, **J.C. Adam**, M.P. Brady and T. Karimi, 2019. What are vulnerabilities and adaptation limits to climate change impacts on irrigated agriculture in the Pacific Northwest? *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 167) \*Gustine, R., E.J. Hanan, **J.C. Adam**, J. Ren, E. Garcia, A. LaBarge, M.L. Liu, C. Kolden, and J.T. Abatzoglou, 2019. Is forest management a safeguard against a climate change-altered wildfire regime in the City of Seattle's largest source watershed? *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 166) Hanan, E.J., J. Ren, C.L. Tague, **J.C. Adam**, J.T. Abatzoglou, and C. Kolden, 2019. Don't get too comfy: The postburn return of severe fire risk under climate change. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.

- 165) \*Xu, C., M.L. Liu, **J.C. Adam**, J.T. Abatzoglou, and K. Rajagopalan, 2019. Evaluation of ENSO Impact on Hydroclimatic Variability. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 164) \*Yourek, M.A., K. Rajagopalan, M.L. Liu, J. Boll and **J.C. Adam**, 2019. Agricultural yield loss due to interruption of western U.S. water rights in a future climate. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 163) \*Ren, J., E.J. Hanan, J. Hicke, C.L. Tague, M. Kennedy, R. Bart, M.L. Liu, C. Kolden, J.T. Abatzoglou, and **J.C. Adam**, 2019. What is the role of beetle outbreak in driving large fires in Trail Creek under climate change? *Northwest Climate Conference*, Portland, OR, Oct 8-10.
- 162) \*Gustine., B., J. Ren, E.J. Hanan, M.L. Liu, C. Kolden, J.T. Abatzoglou, **J.C. Adam**, A. LaBarge, and E. Garcia, 2019. What are the relative roles of fire suppression and climate change in driving wildfire regime in the Cedar River Watershed? *Northwest Climate Conference*, Portland, OR, Oct 8-10.
- 161) Niemeyer, R., C.L. Tague, **J.C. Adam**, C. Schnepf, A. Perleberg, W. Burke, 2019. Forest thinning and climate change in the interior northwest. *Northwest Climate Conference*, Portland, OR, Oct 8-10.
- 160) Yoder, J., M. Barik, and J.C. Adam, 2019. Water supply and demand forecast for the Columbia River Basin. *University Coalition on Water Resources (UCOWR)*, Snowbird, UT., Jun. 11-13.
- 159) Maureira, F., E. Ramos-Real, K. Rajagopalan, **J.C. Adam**, and C. Stockle, 2019. Implications of potential introduction of new high-value vegetable crops in the irrigated central Washington state. *ASABE annual meeting*, Boston, MA, Jul. 7-10.
- 157) \*Rajagopalan, K., J. Yoder, J. Abatzoglou, **J.C. Adam**, K. Allen, M. Brady, M.E. Barber, J. Cook, D. Haller, L. Kot, C.E. Kruger, M. Liu, B. Nijssen, J. Padowski, T. Peters, N. Pickering, C. Schuman, C. Stockle, G. Yorgey, and R. Young, 2018. Technology for Trade: A Conceptual Framework to Improve Water Use for Agriculture and Beyond. *American Geophysical Union Fall Meeting*, Washington DC, Dec. 10-14.
- 156) Niemeyer, R., C.L. Tague, **J.C. Adam**, C. Schnepf, and A. Perleberg, 2018. Forest thinning in dry forests: Improving the resilience of forest health and streamflow in the Pacific Northwest. *American Geophysical Union Fall Meeting*, Washington DC, Dec. 10-14.
- 155) \*Ren, N., E. Hanan, J. Hicke, C.L. Tague, M. Liu, C. Kolden, J. Abatzoglou, and **J.C. Adam**, 2018. Topographic controls on spatial patterns of hydrologic processes following mountain pine beetle infestation. *American Geophysical Union Fall Meeting*, Washington DC, Dec. 10-14.
- 154) \*Yourek, M., J. Boll, M. Liu, M. Huang, C. Stockle, and **J.C. Adam**, 2018. Impacts of changes in land use and climate on the food-energy-water nexus – Part A: Downscaling land use/cover change scenarios to the Columbia River Basin. *American Geophysical Union Fall Meeting*, Washington DC, Dec. 10-14.
- 153) \*Malek, K., M. Yourek, R. Begum, M. Huang, K. Rajagopalan, M. Liu, J. Boll, C. Stockle, and **J.C. Adam**, 2018. Impacts of changes in land use and climate on the food-energy-water nexus – Part B: Application of downscaled land use/cover change scenarios in the Columbia River Basin. *American Geophysical Union Fall Meeting*, Washington DC, Dec. 10-14.
- 152) \*Hanan, E., N. Tague, R. Bart, M. Kennedy, M. Liu, C. Kolden, J. Abatzoglou, and **J.C. Adam**, 2018. Effects of forest management and climate change on wildfire activity in the Inland Northwest. *American Geophysical Union Fall Meeting*, Washington DC, Dec. 10-14.
- 151) \*Yourek, M., K. Rajagopalan, M. Liu, M. Huang, and **J.C. Adam**, 2018. Downscaling land-use/cover change scenarios from the Global Change Assessment Model to the Columbia River Basin. *Northwest Climate Conference*, Boise, ID, Oct 10-11.
- 150) \*Malek, K., **J.C. Adam**, C. Stockle, M. Brady, and K. Rajagopalan, 2018. When should irrigators invest in more water-efficient technologies as an adaptation to climate change? *Northwest Climate Conference*, Boise, ID, Oct 10-11.
- 149) \*Ren, J., E. Hanan, C.L. Tague, R. Bart, M. Kennedy, M. Liu, C. Kolden, J. Abatzoglou, and **J.C. Adam**, 2018. Effects of fire suppression and climate change on wildfire activity in the Inland Northwest. *Northwest Climate Conference*, Boise, ID, Oct 10-11.

- 148) \*Hanan, E., C.L. Tague, R. Bart, M. Kennedy, M. Liu, C. Kolden, J. Abatzoglou, and **J.C. Adam**, 2018. Effects of fire suppression and climate change on wildfire activity in mixed-pine forests of the Inland Northwest. *Ecological Society of America Annual Meeting*, New Orleans, LA, Aug 5-10.
- 147) Padowski, J.C., **Adam, J.C.**, Boll, J., Katz, S., McLarty, D. 2018. Building resilience in FEW systems through innovations in technology and institutions for coordinated resource management. *University Council on Water Resources*, Pittsburgh PA, Jun 26-28.
- 146) \*Malek, K., **J.C. Adam**, A. Richey, B. Rushi, C. Stockle, J. Yoder, M. Barik, S.-Y. Lee, K. Rajagopalan, M. Brady, M. Barber, and J. Boll, 2017. Two Case Studies to Quantify Resilience across Food-Energy-Water Systems: the Columbia River Treaty and Adaptation in Yakima River Basin Irrigation Systems. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 145) Givens, J., J. Padowski, K. Malek, C. Guzman, R. Witinok-Huber, J. Boll, and **J. Adam**, 2017. Incorporating social system dynamics into the Food-Energy-Water system resilience-sustainability modeling process. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 144) Padowski, J., **J. Adam**, J. Boll, T. Fortenbery, J. Givens, M. Goldsby, S. Hampton, J. Harrison, S. Katz, C. Kruger, M. Liu, D. McLarty, C. Stockle and J. Yoder, 2017. Strategies to move from conceptual models to quantify resilience in FEW systems. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 143) \*Rajagopalan, K., **J.C. Adam**, K. Malek, C. Stockle, M. Liu, and M. Brady, 2017. Integrated Adaptive Scenarios for Agriculture: Synergies and Tradeoffs. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 142) \*Ren, J., E. Hanan, C.L. Tague, M. Liu, and **J.C. Adam**, 2017. Modeling the effects of drought events on forest ecosystem functioning historically and under scenarios of climate change. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 141) \*Robichaud, P.J.L., **J.C. Adam**, and J. Ren, 2017. Creating an Erosion Vulnerability Map for the Columbia River Basin to Determine Reservoir Susceptibility to Sedimentation Before and After Wildfires. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 140) \*Hanan, E.J., C.L. Tague, R. Bart, M. Kennedy, J. Abatzoglou, C. Kolden, and **J.C. Adam**, 2017. Effects of fire suppression under a changing climate in Pacific Northwest mixed-pine forests. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 139) \*Nguyen, T., H. Pham, M. Bachmann, C.L. Tague, and **J.C. Adam**, 2017. Soil and geologic controls on recharge and groundwater flow response to climate change: A case study of the Yakima River Basin. *American Geophysical Union Fall Meeting*, New Orleans, LA, Dec. 11-15.
- 138) \*Hanan, E.J., C.L. Tague, R. Bart, M. Kennedy, J. Abatzoglou, C. Kolden, and **J.C. Adam**, 2017. Effects of fire suppression and climate change on wildfire activity in the Pacific Northwest. Conference on Fire Prediction Across Scales. Columbia University. New York, NY, Oct.
- 137) \*Hanan, E.J., C.L. Tague, J. Choate, M. Liu, C. Kolden, and **J.C. Adam**, 2017. Using remote sensing to account for disturbance history in process-based, carbon cycling models. Conference on Fire Prediction Across Scales. Columbia University. New York, NY, Oct.
- 136) \*Liu, M., **J.C. Adam**, C. Stockle, K. Malek, K. Rajagopalan, M. Brady, 2017. Sensitivities of Agricultural Nitrogen and Water Use Efficiency to Climate Change and Climate Variability over the Pacific Northwest by Using with VIC-CropSyst Version 3. *8th Annual Northwest Climate Conference: Working Together to Build a Resilient Northwest*. Tacoma, WA, October 9.
- 135) \*Malek, K. **J.C. Adam**, C. Stockle, M. Brady, K. Rajagopalan, and J. Yoder, 2017. Downstream water availability consequences of investment in new irrigation technologies. *8th Annual Northwest Climate Conference: Working Together to Build a Resilient Northwest*. Tacoma, WA, October 9.
- 134) \*Rushi, B. M. Bari. S.-Y. Lee, K. Rajagopalan, M. Brady, J. Petrie, M. Barber, J. Boll, and **J.C. Adam**, 2017. Columbia River Treaty Renegotiation: Potential Impacts on Agriculture, Hydropower and Flood Risk in the Context of an Altered Climate. *8th Annual Northwest Climate Conference: Working Together to Build a Resilient Northwest*. Tacoma, WA, October 9.

- 133) \*Ren, J., E. Hanan, C. Kolden, J. Abatzoglou, C.L. Tague, M. Liu, and J. C. Adam, 2017. Assessing the relative contribution of climate change versus forest management in driving large wildfires. *8th Annual Northwest Climate Conference: Working Together to Build a Resilient Northwest*. Tacoma, WA, October 9.
- 132) \*Nguyen, T., H. Pham, M. Bachmann, C.L. Tague, and **J.C. Adam**, 2017. Soil and geologic controls on recharge and groundwater flow response to climate change: A case study of the Yakima River Basin. *8th Annual Northwest Climate Conference: Working Together to Build a Resilient Northwest*. Tacoma, WA, October 9.
- 131) \*Hanan, E.J., C.L. Tague, J. Choate, M. Liu, C. Kolden, and **J.C. Adam**, 2017. Accounting for disturbance history in watershed-scale models: using remote sensing to constrain carbon and nitrogen pool spin-up. Ecological Society of America (ESA). Portland, OR, Aug. 6-11.
- 130) \*Malek, K., **J.C. Adam**, M. Brady, C. Stockle, 2017, Downstream water availability consequences of investment on new irrigation technologies, American Society of Biological and Agricultural Engineering, Jul 16-19, Spokane, WA.
- 129) \*Nguyen, T.T., and **J.C. Adam**, 2017. Soil and geologic controls on recharge and groundwater flow response to climate change: A case study of the Yakima River Basin. *MODFLOW and More Conference*, Golden, CO, May 2017.
- 128) \*Malek, K., **J.C. Adam**, C. Stockle, M. Brady, 2017. How Are Regional Water and Energy Cycles Affected by Improvements in Irrigation Efficiency? *American Meteorological Society*, Seattle, WA, Jan 22-26.
- 127) \*Hanan, E.J., C. Tague, J. Choate, and **J.C. Adam**, 2016. Combining remote sensing and watershed modeling for regional-scale carbon cycling studies in disturbance-prone systems. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 126) \*Reyes, J.J., C.L. Tague, and **J.C. Adam**, 2016. Assessing the impact of parameter uncertainty in modeling grass biomass using a hybrid allocation strategy. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 125) \*Malek, K., **J.C. Adam**, C. Stockle, and M. Brady, 2016. Downstream consequences of switching to more efficient irrigation technologies. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 124) \*Rushi, B.R., M. Barik, S.Y. Lee, K. Rajagopalan, M. Brady, J. Petrie, M. Barber, J. Boll and **J.C. Adam**, 2016. Columbia River Treaty renegotiation: Potential impacts on agriculture, hydropower and flood risk in the context of an altered climate. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 123) \*Nguyen, T., C. Tague, and **J.C. Adam**, 2016. The role of catchment soil and geologic properties in governing mountain streamflow response to climate change. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 122) \*Rabbani, G.A., **J.C. Adam**, W.J. Elliot, and H. Liu, 2016. Forest surface energy balance and evapotranspiration estimated from four eddy covariance towers. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 121) \*Barik, M., B. Rushi, K. Malek, K. Rajagopalan, S. Hall, C. Kruger, M. Brady, C. Stockle, and **J.C. Adam**, 2016. Assessment of long-term irrigation water availability over the highly managed and economically important agricultural region of the Columbia River basin. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 12-16.
- 120) \*Malek, K., **J.C. Adam**, C. Stockle, and M. Brady, 2016. How does climate change impact farmers' investment decisions? *7th Annual Northwest Climate Conference*, Stevenson, WA. Nov 14-16.
- 119) \*Rajagopalan, K., **J.C. Adam** and C.E. Kruger, 2016, Forecasting Water Supply and Demand for the Columbia River Basin and beyond. Skagit Ag Summit. Mt. Vernon, WA, March 2016.
- 118) \*Reyes, J.J., C.L. Tague, C. Kruger, K.A. Johnson, and **J.C. Adam**. 2016. Integrated response of grassland biomass along co-varying gradients of climate and grazing management using an eco-hydrologic model. Poster at the Agriculture in a Changing Climate Workshop, Kennewick, WA, Mar 9-11

- 117) Allen, E., J. Stephens, G. Yorgey, C. Kruger, S. Ahamed, **J. Adam**, 2016. What do Agricultural Decision-Makers in the Northwest US Need to Know about Climate Change? Pacific Northwest Agriculture in a Changing Climate Conference. Kennewick WA, March 9-11.
- 116) \*Malek, K., J. C. Adam, C. Stockle, M. Brady, 2016, When Should Irrigators Invest in More Water Efficient Technology, Pacific Northwest Direct Seed Association, Kennewick, WA, January 12-13.
- 115) \*Nguyen, T., and **J.C. Adam**, 2015. Impacts of climate change on groundwater recharge and streamflow in headwater catchments in the Yakima River basin. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 114) Nergui, T., R.D. Evans, **J.C. Adam**, and S.H. Chung, 2015. The El Niño Southern Oscillation (ENSO)-induced modulations in precipitation and nitrogen wet deposition rates in the continental United States. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 113) \*Richey, A., J. Richey, and **J.C. Adam**, 2015. Assessing the use of remote sensing and crop growth model to improve modeled streamflow in Central Asia. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 112) \*Reyes, J.J., C.L. Tague, C.E. Kruger, K.A. Johnson, and **J.C. Adam**, 2015. Integrated response of grassland biomass along co-varying gradients of climate and grazing management using an eco-hydrologic model. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 111) Li, D. M. Wrzesien, M. Durand, **J.C. Adam**, and D.P. Lettenmaier, 2015. How much of the streamflow in the U.S. originates as snow? *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 110) \*Barik, M., M.L. Liu, C.O. Stockle, J. Abatzoglou, and **J.C. Adam**, 2015. Is snowpack drought an increasing threat in the Pacific Northwest? *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 109) \*Barik, M., M. Liu, K. Malek, K. Rajagopalan, B. Rushi, R. Nelson, C. Kruger, M. Brady, C. Stockle, and **J.C. Adam**, 2015. Modeled crop yield response to various types of drought events in the Pacific Northwest. *Northwest Climate Science Conference*, Coeur d'Alene, ID, Nov. 3-5.
- 108) Baret, Q., S.H. Chung, **J.C. Adam**, and V. Walden, 2015. Impact of aerosols from wildfires on crop growth in the Pacific Northwest, PNW Science Climate Conference, Coeur d'Alene, ID, Nov. 3-5.
- 107) \*Reyes, J.J., C.L. Tague, C.E. Kruger, K.A. Johnson, and **J.C. Adam**, 2015. Coupled response of grassland biomass to changes in climate and grazing management using an eco-hydrologic model. *Northwest Climate Science Conference*, Coeur d'Alene, ID, Nov. 3-5.
- 106) \*Malek, K., **J.C. Adam**, C.O. Stockle, and M.P. Brady, 2015. When would irrigators invest in more water-efficient technologies as an adaptation to climate change? *Northwest Climate Science Conference*, Coeur d'Alene, ID, Nov. 3-5.
- 105) \*Rajagopalan, K., **J.C. Adam** et al., 2015. Indirect impacts of climate change through changes in water availability on agricultural production in the Columbia River basin. *Northwest Climate Science Conference*, Coeur d'Alene, ID, Nov. 3-5.
- 104) \*Rushi, B., M. Barik, K. Rajagopalan, S.L. Lee, M. Brady, J. Petrie, M. Barber, and **J.C. Adam**, 2015. The impacts of the Columbia River Treaty scenarios on agriculture, hydropower production, and flood risk in a future climate. *Northwest Climate Science Conference*, Coeur d'Alene, ID, Nov. 3-5.
- 103) \*Baxter, H., T. Nguyen, **J.C. Adam**, M. Barik, M. Barber, A. Hossain, 2015. Impacts of future changes on low flow in highly-connected river-aquifer systems: A case study of the Spokane River and the Spokane Valley-Rathdrum Prairie Aquifer. *Northwest Scientific Association*, Pasco, WA, Apr. 1-4.
- 102) \*Baxter, J., **J.C. Adam**, T. Nguyen, M. Barik, A. Hossain, and M.E. Barber, 2015. Spokane River low flow trends and modeling in a changing environment, *Universities Council on Water Resources Annual Conference*, Henderson, NV, Jun. 16-18.
- 101) \*Reyes, J., **J.C. Adam**, and C.L. Tague, 2015. Assessing environmental controls on biomass in grasslands using an eco-hydrologic model. *Ecological Society of America Annual Meeting*, Baltimore, MD, Aug 9-14.

- 100) \*Malek, K., S. Claudio, **J. Adam**, R. Nelson, and M. Brady, 2015. When would irrigators invest in more water-efficient technologies as an adaptation to climate change? *ASABE annual meeting*, New Orleans, LA, Jul. 26-29
- 99) \*Rajagopalan, K., K. Malek, M. Barik, M.L. Liu, R. Nelson, C.O. Stockle, C.E. Kruger, M.P. Brady, and **J.C. Adam**, 2015. Food for thought: strategies for sustainable agricultural production in the Columbia River basin in an altered future. NOAA Climate Prediction Applications Science Workshop (CPASW), Mar 24-26, 2015.
- 98) \*Liu, M. K. Malek, **J.C. Adam**, C.O. Stockle, K. Rajagopalan, and R. Nelson, 2014. Changing water and nitrogen use efficiency over agricultural lands of the inland Pacific Northwest during the 21st century: implications for adaptation. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 97) \*Malek, K., **J.C. Adam**, J. Yoder, M. Brady, and C. Stockle, 2014. Informing sustainable irrigation management strategies in response to implementation of Washington State's Yakima Basin Integrated Plan (YBIP). *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 96) \*Reyes, J.J., C.L. Tague, J.S. Choate, and J.C. **Adam**, 2014. Eco-hydrologic modeling of rangelands: Evaluating a new carbon allocation approach and simulating ecosystem response to changing climate and management regimes. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 95) Chandrasekharan, B., K. Rajagopalan, K. Malek, M. Brady, **J.C. Adam**, and C.O. Stockle, 2014. A comparative study of spatial aggregation methodologies under the BioEarth framework. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 14-18.
- 94) \*Rajagopalan, K., K. Chinnayakanahalli, R. Nelson, C. Stockle, C. Kruger, M. Brady, and **J.C. Adam**, 2014. Food for thought: crop yields in the Columbia River basin in an altered future. *ASA, CSSA, and SSSA International Annual Meeting*, Long Beach, CA, Nov 2-4.
- 93) Adam, J.C.**, J.C. Stephens, S.H. Chung, M.P. Brady, R.D. Evans, C.E. Kruger, B.K. Lamb, M.L. Liu, C.O. Stockle, J.K. Vaughan, K. Rajagopalan, J.A. Harrison, C.L. Tague, A. Kalyanaraman, Y. Chen, A. Guenther, F.Y. Leung, L.R. Leung, A.B. Perleberg, J. Yoder, E. Allen, S. Anderson, B. Chandrasekharan, K. Malek, T. Mullis, C. Miller, T. Nergui, J. Poinsatte, J. Reyes (*presenting*), J. Zhu, J.S. Choate, X. Jiang, R. Nelson, J.H. Yoon, G.G. Yorgey, K.J. Chinnayakanahalli, A.F. Hamlet, B. Nijssen, V. Walden, 2014. BioEarth: A regional biosphere-relevant earth system model to inform agricultural and natural resource management decisions. *PNW Science Climate Conference*, Seattle, WA, Sep. 9-10.
- 92) \*Baxter, H., T. Nguyen, M. Barber, A. Hossain, and **J.C. Adam**, 2014. Impacts of future changes on groundwater recharge and low flow in highly-connected river-aquifer systems: A case study of the Spokane River and the Spokane Valley-Rathdrum Prairie Aquifer. *PNW Science Climate Conference*, Seattle, WA, Sep. 9-10.
- 91) \*Malek, K., C.O. Stockle, **J.C. Adam**, R. Nelson, K. Chinnayakanahalli, and K. Rajagopalan, 2014. Impacts of irrigation management on water and energy fluxes over the Yakima River basin. *PNW Science Climate Conference*, Seattle, WA, Sep. 9-10.
- 90) \*Rajagopalan, K., K. Chinnayakanahalli, R. Nelson, C. Stockle, C. Kruger, M. Brady, and **J.C. Adam**, 2014. Food for thought: crop yields in the Columbia River basin in an altered future. *PNW Science Climate Conference*, Seattle, WA, Sep. 9-10.
- 89) \*Reyes, J.J. M. Liu, C.L. Tague, J.S. Choate, R.D. Evans, K.A. Johnson, and **J.C. Adam**, 2014. Eco-hydrologic modeling of rangelands: Evaluating a new carbon allocation approach and incorporating grazing impacts on ecosystem processes. *PNW Science Climate Conference*, Seattle, WA, Sep. 9-10.
- 88) \*Malek, K., J.C. Adam, C.O. Stockle, and R. Nelson, 2014. How does irrigation management change water and energy fluxes to the atmosphere. *AMS conference on mountain meteorology*, Portland, OR, Aug. 18-22.

- 87) \*Malek, K., C.O. Stockle, J.C. Adam, R. Nelson, and K. Chinnayakanahalli, 2014. Impacts or irrigation management on water and energy fluxes over the Yakima River basin. *ASABE annual meeting*, Montreal, Canada, Jul. 13-16.
- 86) \*Rajagopalan, K., Chinnayakanahalli, K.J., Nelson, R., Stockle, C., Kruger C., Brady, M., **Adam, J.C., 2013.** Food for thought: crop yields in the Columbia River basin in an altered future. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 85) \*Reyes, J.J., M. Liu, C.L. Tague, J.S. Choate, R.D. Evans, K.A. Johnson, and **J.C. Adam**, 2013. Incorporating grazing into an eco-hydrologic model: Simulating coupled human and natural systems in rangelands. *American Geophysical Union Fall Meeting*, San Francisco, CA, Dec. 9-13.
- 84) **Adam, J.C.**, J.C. Stephens, S.H. Chung, M.P. Brady, R.D. Evans, C.E. Kruger, B.K. Lamb, M.L. Liu, C.O. Stöckle, J.K. Vaughan, K. Rajagopalan, J.A. Harrison, C.L. Tague, A. Kalyanaraman, Y. Chen, A. Guenther, F.Y. Leung, L.R. Leung, A.B. Perleberg, J. Yoder, E. Allen, S. Anderson, B. Chandrasekharan, K. Malek, T. Mullis, C. Miller, T. Nergui, J. Poinsatte, J. Reyes (*presenting*), J. Zhu, J.S. Choate, X. Jiang, R. Nelson, J.H. Yoon, G.G. Yorgey, K.J. Chinnayakanahalli, A.F. Hamlet, B. Nijssen, 2013. BioEarth: A regional biosphere-relevant earth system model to inform agricultural and natural resource management decisions. *4th annual Pacific Northwest Climate Science Conference*, Portland, OR, Sep. 5-6.
- 83) \*Reyes, J.J., M. Liu, C.L. Tague, J.S. Choate, R.D. Evans, K.A. Johnson, and **J.C. Adam**, 2013. Incorporating grazing into an eco-hydrologic model: Simulating coupled human and natural systems in grasslands. Poster presented at the *4th annual Pacific Northwest Climate Science Conference*, Portland, OR, Sep. 5-6.
- 82) \*Nergui, T., B.K. Lamb, R.D. Evans, **J.C. Adam**, and S.H. Chung, 2013. Correlations between inter-annual climate variability and nitrogen wet deposition in the United States. Poster presented at the *4th annual Pacific Northwest Climate Science Conference*, Portland, OR, Sep. 5-6.
- 81) Mullis, T., M. Liu, A. Kalyanaraman, J.K. Vaughan and **J.C. Adam**, 2013. Demonstration of Kepler workflows for efficient management of eco-hydrological model simulations over the Pacific Northwest region. Poster presented at the *4th annual Pacific Northwest Climate Science Conference*, Portland, OR, Sep. 5-6.
- 80) \*Liu, M., **J.C. Adam**, et al., 2013. "Uncertainties in impact studies of future climate change on natural and agricultural ecosystems by using modeled climate data with bias correction," *Ecological Science of America (ESA)*, Minneapolis, MN, Aug. 4-9.
- 79) \*Liu, M., **J.C. Adam**, C. Tague, 2013. "Zooming out from small patches and watersheds to regions: What is missing out in the modeling world?" *Ecological Science of America (ESA)*, Minneapolis, MN, Aug. 4-9.
- 78) \*Malek, K., C. Stockle, **J.C. Adam**, R. Nelson, and K. Chinnayakanahalli, 2013. Impacts of climate change and irrigation management strategies on soil moisture, evapotranspiration, irrigation water availability, and crop productivity," *American Society of Agricultural and Biological Engineers (ASABE)*, Kansas City, MO, Jul. 24.
- 77) **Adam, J.C.**, K. Rajagopalan, K. Chinnayakanahalli, M. Brady, C. Stockle, and C. Kruger, 2013. "Integrated modeling for natural and agricultural resource management," *University Coalition on Water Resources (UCOWR)*, Lake Tahoe, NV, Jun. 11.
- 76) Orr, C.H., **J.C. Adam**, A. Beall, M.E. Barber, and T. Nguyen, 2012. "Using linked models to study interactions between water use decisions and climate change-driven watershed processes in the Pacific Northwest region," *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 2-7.
- 75) \*Gould, G., **J.C. Adam**, C. Warren, M.E. Barber, J. Wagenbrenner, P. Robichaud, and K. Cherkauer, 2012. "Large-Scale Simulation of the Effects of Climate Change on Runoff Erosion Following Extreme Wildfire Events," *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 2-7.
- 74) \*Liu, M., **J.C. Adam**, R.D. Evans, Z. Zhu, and R.B. Myneni, 2012. "Responses of terrestrial water cycles to changes in climate and phenology over the Conterminous U.S. during 1983-2011," *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 2-7.

- 73) \*Rajagopalan, K. K. Chinnayakanahalli, **J.C. Adam**, K. Malek, R. Nelson, C. Stockle, M. Brady, S. Dinesh, M.E. Barber, G. Yorgey, and C. Kruger, 2012. "Integrated Modeling to Assess the Impacts of Changes in Climate and Socio Economics on Agriculture in the Columbia River Basin," *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 2-7.
- 72) Nergui, T., N. Thomas, M. Liu, B.K. Lamb, **J.C. Adam**, and S.H. Chung, 2012. "Evaluating Inter-Annual Climate Variability of Nitrogen Wet Deposition in the United States Using Wavelet Analysis," *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 2-7.
- 71) **Adam, J.C.**, K. Rajagopalan, C.O. Stockle, C.E. Kruger, M.P. Brady, M.E. Barber, K.J. Chinnayakanahalli, G.G. Yorgey, R.L. Nelson, S. Dinesh, K. Malek, J. Yoder, S. Chung, J.K. Vaughan, F. Leung, B.K. Lamb, R.D. Evans, J. Harrison, J. Stephens, A. Guenther, A. Kalyanaraman, L.R. Leung, M. Liu, C.L. Tague, A.B. Perleberg, Y. Chen, T.M. Norton, X. Jiang, and J. Zhu, 2012. "BioEarth: A Regional-Scale Earth System Model to Inform Land and Water Management Decisions," *ASA, CSSA, and SSSA International Annual Meetings*, Cincinnati, OH, Nov 3-6.
- 70) Barber, M.E., **J.C. Adam**, M. Brady, K. Chinnayakanahalli, S. Dinesh, C. Kruger, T. Peters, K. Rajagopalan, C. Stockle, J. Yoder, and G. Yorgey, 2012. "Climate Change Impacts on 2030 Water Supply and Demand in the Columbia River Basin," *3<sup>rd</sup> Annual Pacific Northwest Climate Science Conference*, Boise, ID, Oct. 1-2.
- 69) Kruger, C.E., **J.C. Adam**, A. Carter, E. Whitefield, and S. Eigenbrode, 2012. "Leaders of large regional agricultural projects: Panel discussion on agriculture and climate change in the Pacific Northwest," *3<sup>rd</sup> Annual Pacific Northwest Climate Science Conference*, Boise, ID, Oct. 1-2.
- 68) **Adam, J.C.**, M.E. Barber, M.P. Brady, C.O. Stockle, C.E. Kruger, K. Chinnayakanahalli, K. Rajagopalan, G.G. Yorgey, R. Nelson, K. Malek, and S. Dinesh, 2012. "Regional-Scale Integrated Modeling Applications for Sustainable Land and Water Resource Management", *Consortium of Universities for the Advancement of the Hydrologic Sciences (CUAHSI) 3<sup>rd</sup> Biennial Colloquium on Hydrologic Science and Engineering*, Boulder, CO, Jul. 14-19.
- 67) \*Rajagopalan, K., K.J. Chinnayakanahalli, **J.C. Adam**, R.L. Nelson, C.O. Stockle, M.P. Brady, K. Malek, S. Dinesh, M.E. Barber, G.G. Yorgey, and C.E. Kruger, 2012. "Assessing the Impact of Climate Change on Columbia River Basin Agriculture through Integrated Modeling," *Fourth International Conference on Climate Change*, Seattle, WA, Jul. 12-13.
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- 65) **Adam, J.C.**, K. Rajagopalan, C.O. Stockle, C.E. Kruger, M.P. Brady, M.E. Barber, K.J. Chinnayakanahalli, G.G. Yorgey, R.L. Nelson, S. Dinesh, K. Malek, J. Yoder, S. Chung, J.K. Vaughan, F. Leung, B.K. Lamb, R.D. Evans, J. Harrison, J. Stephens, A. Guenther, A. Kalyanaraman, L.R. Leung, M. Liu, C.L. Tague, A.B. Perleberg, Y. Chen, T.M. Norton, X. Jiang, J. Zhu, and J. Yoon, 2012. "Understanding Biogeochemical cycling in the context of climate variability using a regional Earth system modeling framework," *NSF EaSM-1 PI Meeting*, Washington, DC, Jul 9-11.
- 64) **Adam, J.C.**, M.E. Barber, and C.E. Kruger, 2012. "Regional-Scale Integrated Modeling to Inform Land and Water Management Decisions in an Altered Climate: Current Developments", Idaho National Laboratories Mountain West Water Institute (MWWI) "Water Ways and Means", Idaho Falls, ID, May 15.
- 63) Yorgey, G.G., C.E. Kruger, **J.C. Adam**, K.J. Chinnayakanahalli, K. Rajagopalan, M.E. Barber, M.P. Brady, R.L. Nelson, C.O. Stockle, S. Dinesh, K. Malek, J. Yoder, and T.L. March, 2011. Forecasting water supply and demand in the Columbia River Basin. *Washington State Horticultural Association Annual Meeting*, Dec 7-9.
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- 58) Chung S., **J.C. Adam**, R. Gonzalez-Abraham, B.K. Lamb, 2011. Introduction of a New Earth System Modeling Framework for Understanding Biogeochemical Cycling in the Pacific Northwest: BioEarth Overview and Initial Nitrogen Deposition Analyses, *Pacific Northwest Climate Science Conference*, Seattle, WA, Sep 13-14.
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- 55) \*Reyes, J.J., **J.C. Adam**, C.L. Tague, and J.S. Choate, 2011. Impacts of atmospheric nitrogen deposition on terrestrial ecosystems: Implications for climate change. *Gordon Research Conference, Catchment Science: Interactions of Hydrology, Biology, and Geochemistry*. Lewiston, ME, Jul 11-15.
- 54) **Adam, J.C.**, and J.M. Johnston, 2011. Predicted Changes of the Relative Magnitude of Water Storage Capacity in Seasonal Snowpack to Artificial Reservoirs at the Global Scale, *UCOWR/NIWR Annual Conference*, Boulder, CO, Jul. 11-15.
- 53) Van Wie, B.J., et al., 2011. Multi-Disciplinary Project-Based Paradigm that Uses Hands-on Desktop Learning Modules and Modern Learning Pedagogies, *American Society for Engineering Education (ASEE) Annual Conference*, Vancouver, B.C. Canada, Jun 26-29.
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- 50) Vaughan, J.K., et al., 2011. A New Project – An Earth Systems Modeling Framework for Understanding Biogeochemical Cycling in the Context of Climate Variability, *1<sup>st</sup> INTERFACE Meeting on How DO We Improve Earth System Models?* Captive Island, FL, Feb 28- Mar 3.
- 49) Van Wie, B.J., et al., 2011. Multi-Disciplinary Project-Based Paradigm that Uses Hands-on Desktop Learning Modules and Modern Learning Pedagogies, *NSF TUES Workshop*, Washington D.C., Jan 27-28.
- 48) \*Karlovits, G.S., and **J.C. Adam**, 2011. Probabilistic Climate Change Analysis for Stormwater Runoff in the Pacific Northwest, *American Meteorological Society (AMS) 25<sup>th</sup> Conference on Hydrology*, Seattle, WA, Jan 25.
- 47) \*Karlovits, G.S., and **J.C. Adam**, 2010. Monte Carlo Simulation to Characterize Stormwater Runoff Uncertainty in a Changing Climate, *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 13-17.

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- 31) Rawlins, M.A., M. Steele, M.M. Holland, **J.C. Adam**, et al, 2009. Analysis of the Arctic System for freshwater cycle intensification: observations and expectations, *AGU Fall Meeting Abstracts*, San Francisco, CA, Dec. 14-18.
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- 23) Barber, M., R. Mahler, and **J. Adam**, 2009. Climate Change and Western Prior Appropriation Water Laws in the United States: Compatible or Conflict? *Water Policy 2009 – International Conference at CULS*, Prague, Czech Republic, June 22-26.
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