

ES476 Hydrology Poster Project Topics – Paper Selections (Updated Feb. 2, 2018)

Instructions: Read the primary publication assigned for your poster topic (previously sent out via email attachment). Conduct an online search and retrieve the “additional resource” paper as a PDF, to provide a second ancillary / support reading for use in compiling your poster content.

Nick Barerra

Turner DP, Conklin DR, Bolte JP. 2015. [Projected climate change impacts on forest land cover and land use over the Willamette River Basin, Oregon, USA.](#) Climatic Change. 133(2):335–348.

Additional Resource:

Whitlock C, Shafer SL, Marlon J (2003) The role of climate and vegetation change in shaping past and future fire regimes in the northwestern US and the implications for ecosystem management. *For Ecol Manag* 178:5–21

Emily Carlston

Gleason KE, Nolin AW, Roth TR. 2013. [Charred forests increase snowmelt: Effects of burned woody debris and incoming solar radiation on snow ablation.](#) Geophysical Research Letters. 40:4654–4661.

Additional Resource:

Brown, R. D., and P. W. Mote (2009), The response of Northern Hemisphere snow cover to a changing climate, *J. Climate*, 22(8), 2124–2145.

Hunter Collins

Nolin AW. 2012. [Perspectives on Climate Change, Mountain Hydrology, and Water Resources in the Oregon Cascades, USA.](#) Mountain Research and Development. 32:S35-S46.

Additional Resource:

Nolin AW, Daly C. 2006. Mapping “at-risk” snow in the Pacific Northwest, U.S.A. *Journal of Hydrometeorology* 7:1164–1171.

Tunya Devaphalin

Halmstad A, Najafi MReza, Moradkhani H. 2012. [Analysis of precipitation extremes with the assessment of regional climate models over the Willamette River Basin, USA.](#) Hydrological Processes. 27:2579–2590.

Additional Resource:

Hulse D, Gregory S, Baker JP, Consortium PNER. 2002. *Willamette River Basin Planning Atlas: Trajectories of Environmental and Ecological Change.* Oregon State University Press Corvallis: Oregon, USA.

Kyler Freiling

Rupp DE, Abatzoglou JT, Hegewisch KC, Mote PW. 2013. [Evaluation of CMIP5 20th century climate simulations for the Pacific Northwest USA.](#) Journal of Geophysical Research: Atmospheres. 118:10,884-10,906.

Additional Resource:

Mote, P. W., and E. P. Salathé Jr. (2010), Future climate in the Pacific Northwest, *Clim. Change*, 102, 29–50.

Crystal Harvel

Jung I-W, Chang H. 2012. [Climate change impacts on spatial patterns in drought risk in the Willamette River Basin, Oregon, USA.](#) Theoretical and Applied Climatology. 108:355-371.

Additional Resource:

Franczyk J, Chang H (2009a) Spatial analysis of water use in Oregon, USA, 1985–2005. *Water Resour Manag* 23:755–774

Curt Knott

Turner DP, Conklin DR, Vache KB, Schwartz C, Nolin AW, Chang H, Watson E, Bolte JP. 2016. [Assessing mechanisms of climate change impact on the upland forest water balance of the Willamette River Basin, Oregon](#). *Ecohydrology*.

Additional Resource:

Jung I. W., & Chang H. J. (2011). Assessment of future runoff trends under multiple climate change scenarios in the Willamette River Basin, Oregon, USA. *Hydrological Processes*, 25, 258–277.

Maddie Peterson

Olen B, Wu JJ, Langpap C. 2015. [Irrigation Decisions for Major West Coast Crops: Water Scarcity and Climate Determinants](#). *American Journal of Agricultural Economics*. 98(1):21.

Additional Resource:

Sunding, D., D. Zilberman, R. Howitt, A. Dinar, and N. MacDougall. 2002. Measuring the Costs of Reallocating Water from Agriculture: A Multi-model Approach. *Natural Resource Modeling* 15 (2): 201–25.

Connor Pomeroy

Sproles EA, Roth TR, Nolin AW. 2017. [Future snow? A spatial-probabilistic assessment of the extraordinarily low snowpacks of 2014 and 2015 in the Oregon Cascades](#) *The Cryosphere*. 11:10.

Additional Resource

Abatzoglou, J. T., Rupp, D. E., and Mote, P. W.: Seasonal climate variability and change in the Pacific Northwest of the United States, *J. Climate*, 27, 2125–2142, 2014.

Walter Schoen

Gleason KE, Nolin AW. 2016. [Charred forests accelerate snow albedo decay: parameterizing the post-fire radiative forcing on snow for three years following fire](#). *Hydrological Processes*. 30(21):3855–3870.

Additional Resource:

Dennison PE, Brewer SC, Arnold JD, Moritz MA. 2014. Large wildfire trends in the western United States, 1984–2011. *Geophysical Research Letters* 41: 2928–2933. DOI:10.1002/2014gl059576

David Solvedt

Alternate Topic:

McGuire and McDonnell, 2008, Stable Isotopes in Watershed Tracer Studies

Klaus et al., 2015, Temporal dynamics of catchment transit times from stable isotope data: *Water Resources Research*

Hood, E., Gooseff, M., Johnson, S., 2006, Changes in character of stream water dissolved organic carbon during flushing in three small watersheds: DOI 10.1029/2005JG000082

Additional Resource:

Yano, Y., K. Lajtha, P. Sollins, and B. A. Caldwell (2004), Chemical and seasonal controls on the dynamics of dissolved organic matter in a coniferous old-growth stand in the Pacific Northwest, USA, *Biogeochemistry*, 71, 197–223.

Makani Stormont

Sproles E.A, Nolin A.W, Rittger K., Painter T.H. 2013. [Climate change impacts on maritime mountain snowpack in the Oregon Cascades](#). Hydrology and Earth System Sciences. 17:2581-2597.

Additional Resource

Nolin, A. W. and Daly, C.: Mapping "At Risk" Snow in the Pacific Northwest, *J. Hydrometeorol.*, 7, 1164–1171, 2006.

Kyle Warren

Chang H, Jung I-W, Strecker A, Wise D, Lafrenz M, Shandas V, Moradkhani H, Yeakley A, Pan Y, Bean R et al.. 2013. [Water supply, demand, and quality indicators for assessing the spatial distribution of water resource vulnerability in the Columbia River Basin](#). Atmosphere-Ocean. 51(4):1-18.

Additional Resource

Baker, M. J., Richards, P. L., Sousounis, P. J., & Brenner, A. J. (2004). Alternative futures for the Willamette river basin, Oregon. *Ecological Applications*, 14, 313–324.

Scott Warren

Farley, K.A., Tague, C., and Grant, G., 2011, Vulnerability of water supply from the Oregon Cascades to changing climate: Linking science to users and policy: *Global Environmental Climate Change*, v. 21, p. 110-122.

Additional Resource

Mote, P.W., et al., 2003. Preparing for climatic change: the water, salmon, and forests of the Pacific Northwest. *Climatic Change* 61, 45–88.