

# John Christopher Hammond

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## EDUCATION

**2014. M.S., Water Resources Science, Oregon State University.** Trends in streamflow above and below dams across the Columbia River Basin from 1950 to 2012: assessing sub-basin sensitivity 3.73/4.0 GPA.

**2012. B.S., Environmental Science & Policy, University of Maryland, College Park.** Concentration: Global Environmental Change. Citation: College Park Scholars – Environmental Studies Cum Laude. 3.83/4.0 GPA.

**Relevant Coursework:** Snow and Forest Hydrology, Fluvial Geomorphology, Hillslope Hydrology, GIS, Remote Sensing, Tracers in Hydrology, Microclimatology, Watershed Modeling, Fluid Mechanics, Stream Ecology, Climatology, Landscape Ecology, Statistics, Biogeography, Geology, Organic Chemistry, Physics, Differential Equations, Calculus, Soil Physics, Soil Science, Environmental and Research Ethics, Proposal Writing.

## RESEARCH EXPERIENCE

- **2015-present. PhD Research, CSU Dept. of Geosciences.** Analyzing the effects of snow persistence on streamflow generation and soil moisture in mountain regions of the western U.S.
- **2012-2014. M.S. Research, OSU Dept. of Geography.** Identified spatial and temporal patterns in streamflow, land use, and climate in select sub-basins of the Columbia River Basin. Conducted statistical analyses and consulted with dam managers in both British Columbia and the US.
- **2012. Lab Assistant, UMD Dept. of Environmental Science and Technology, Wetland Hydrology Lab.** Assisted on projects in the field, greenhouse, and lab studying the effects of sea level rise.
- **2011. Independent Research. Glacial lake outburst flood (GLOF) mitigation in Sagarmatha National Park, Solo-Khumbu, Nepal.** Conducted field interviews of Khumbu villagers and held meetings with members of The World Wildlife Fund, The Mountain Institute, and The International Centre for Integrated Mountain Development to identify and explain GLOF mitigation strategies.
- **2011. Lab Assistant, UMD Dept. of Geography.** Used ENVI remote sensing software to analyze the spatial and temporal distribution of wildfire prevalence and its relation to air pollution hazard days.
- **2009. Lab Assistant, UMD Dept. of Atmospheric and Oceanic Sciences.** Practiced modeling sea level winds in both coastal and open ocean environments.

## WORK EXPERIENCE

- **2014-2015. USGS Surface Water Contractor.** Conducted statistical analyses of riverine flooding across the greater Baltimore area, developed flood inundation maps, designed a green infrastructure suitability tool, and installed field sites to monitor coastal inundation and storm surge.
- **2014. Instructor, Department of Geography, OSU. Physical Geography.** Lectured for two hours a day, four days per week for one month, guided laboratory experiments, and graded assignments.
- **2012-2014. Graduate Teaching Assistant, Dept. of Geosciences, OSU. Physical Geology, Climatology, Remote Sensing, Physical Geography (head TA), Geology of National Parks.** Guided laboratory experiments and graded assignments for between 30 and 120 students per class.
- **2009-2010. Interpretive Park Ranger, National Park Service. North Cascades National Park, Washington.** Provided educational programs on topics of glacial environments and the importance of wilderness areas, guided ecology hikes, and assisted visitors.

## PUBLICATIONS

- **Columbia River Basin reservoir operations counteract upstream declines in summer streamflow, 1950-2012.** John Hammond, Julia Jones, Sean Fleming. (In review, Science Advances).
- **Climate variability in the hydrologic response to snow persistence.** John Hammond, Freddy Saavedra, Stephanie Kampf. (In Review, Water Resources Research).

## AWARDS AND HONORS

- **2017. David A. Falletti scholarship.**
- **2016-2017. Graduate student representative.** Natural Resource Ecology Lab and Ecosystem Science and Sustainability Department.
- **2016. Colorado Water Institute graduate student research grant.**
- **2016. Colorado Mountain Club Foundation Fellowship**
- **2016. Lary Kent Burns Memorial Scholarship**
- **2015. Colorado State University Programs for Research and Scholarly Excellence Fellowship**
- **2013-2014. OSU Water Research Symposium.** 2014 Award for best oral presentation.
- **2013-2014. Secretary of Hydrophiles.** Award winning chapter of the American Water Resources Association.
- **2007-present. Eagle Scout.** Assistant Scout Master, Boy Scouts of America.

## PRESENTATIONS

- **Interactions Between Hydroclimate and Soil Properties Control the Risk For Altered Hydrologic Partitioning From Changing Snowmelt.** Adrian Harpold, Patrick Longley, John Hammond, Sydney Weiss, Stephanie Kampf, and Alan Flint. American Geophysical Union Fall Meeting, San Francisco, CA, 12/2016.
- **Hydrologic response to snow persistence varies by climate.** John Hammond, Freddy Saavedra, and Stephanie Kampf. American Geophysical Union Fall Meeting, San Francisco, CA, 12/2016.
- **Hydrologic response along the intermittent-persistent snow transition of the Western U.S.** John Hammond, Freddy Saavedra, and Stephanie Kampf. Western Snow Conference, Seattle, WA, 4/2016.
- **Effects of snow persistence on streamflow generation in mountain regions of the western U.S.** John Hammond, Freddy Saavedra, Stephanie Kampf. American Geophysical Union Fall Meeting, San Francisco, CA, 12/2015.
- **Effects of snow persistence on streamflow generation in mountain regions of the western U.S.** John Hammond, Stephanie Kampf. Colorado State University Graduate Showcase, Fort Collins, CO, 11/2015.
- **Trends in streamflow above and below dams in the Columbia River Basin from 1950 to 2012.** John Hammond, Julia Jones. American Association of Geographers Annual Meeting, Chicago, IL, 4/2015.
- **Trends in streamflow above and below dams in the Columbia River Basin from 1950 to 2012: assessing sub-basin sensitivity.** John Hammond, Julia Jones. Annual Water Resources Symposium, Corvallis, OR, 4/2014.

## ANALYTICAL SKILLS

Skilled in R programming, ArcGIS, ENVI, JMP, HYDRUS 1-D, SAS, HECHMS, HECRAS, GEORAS, USGS Flood Tool, QGIS, GRASS, Global Mapper, Microsoft Office (Excel, PowerPoint, Word).