

William Rudisill

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Berkeley, CA

EDUCATION

- **Ph.D Geophysics**
Boise State University
Summer 2022. Advisor, Dr. Alejandro Flores
Dissertation Title: From River Channel to Cloud Top: Evaluation and Applications of Regional Climate Models in Mountain Watersheds
- **M.S. Hydrologic Science**
Boise State University
Summer 2018
- **B.S. Geologic Sciences**
University of North Carolina at Chapel Hill
Spring 2015

PROFESSIONAL COURSES

- NCAR WRF-Hydro User Workshop, Fall 2016
- NCAR WRF Tutorial, Spring 2017
- Google Earth Engine User Summit, Summer 2017
- CUAHSI Snow Field Measurement Course, Winter 2020

Publications

- ‡ Rudisill, W., Feldman, D., Rhoades, A., Xu., Z., 2023 "Are atmospheric models too-cold in mountains? The state of science and insights from the SAIL field campaign" Submitted to the Bulletin of the American Meteorological Society **In Review**
- Rudisill, W., A. Flores, and R. Carroll, 2023: Evaluating three decades of precipitation in the Upper Colorado River Basin from a high-resolution regional climate model. Geoscientific Model Development Discussions, <https://doi.org/10.5194/gmd-2023-69>.
 - Rudisill, W. J., A. N. Flores, H. P. Marshall, E. Siirila-Woodburn, D. R. Feldman, A. M. Rhoades, Z. Xu, and A. Morales, 2023: Cold-Season Precipitation Sensitivity to Microphysical Parameterizations: Hydrologic Evaluations Leveraging Snow Lidar Datasets. J. Hydrometeorol., -1, <https://doi.org/10.1175/JHM-D-22-0217.1>.
 - Feldman, D. R., and Coauthors, 2023: The Surface Atmosphere Integrated Field Laboratory (SAIL) campaign. Bull. Am. Meteorol. Soc., -1, <https://doi.org/10.1175/bams-d-22-0049.1>.
 - Rudisill, W., Kaiser, K. E., & Flores, A. N. Evaluating Long Term OneWay AtmosphereHydrology Simulations and the Impacts of TwoWay Coupling in Four Mountain Watersheds. Hydrological Processes, e14578 (2022)
 - Rudisill, W., Flores, A., and McNamara, J. "The Impact of Initial Snow Conditions on the Numerical Weather Simulation of a Northern Rockies Atmospheric River." Journal of Hydrometeorology 22.1 (2021): 155-167.

PROFESSIONAL ENGAGEMENT

- **Reviewer:** Journal of Hydrometeorology, Earth Interactions, Journal of Applied Climatology, JGR: Atmospheres
- **Memberships:** American Meteorological Society, American Geophysical Union

TEACHING & COMMUNITY ENGAGEMENT

- **Teaching Assistant, Fall 2021.** Graduate level Remote Sensing, Hydrologic Modeling
- **Founding Member and Faculty Liaison, Geoscience Graduate Student Organization, Fall 2020.** Tasked with promoting community and diversity equity and inclusion (DEI) in the BSU Geoscience department
- **Student Advisor, BSU DEI Initiative (2021-2022)** Part of NSF Funded project to examine diversity/equity/inclusion policies w.r.t faculty evaluations. P.I Dr. Jen Pierce.

Published Datasets

- Houser, P., W. Rudisill, J. Johnston, K. Elder, and H. Marshall, 2022: SnowEx Meteorological Station Measurements from Grand Mesa, CO, Version 1. NASA National Snow and Ice Data Center.
- Rudisill W ; Vincent A ; Nash C ; Flores A (2022): Dynamically Downscaled (WRF) 1km, Hourly Meteorological Conditions 1987-2020. East/Taylor Watersheds. Science Area 1: Standard Award: Model-Data Fusion to Examine Multiscale Dynamical Controls on Snow Cover and Critical Zone Moisture Inputs, ESS-DIVE repository. Dataset. doi:10.15485/1845448 accessed via <https://data.ess-dive.lbl.gov/datasets/doi:10.15485/1845448> on 2022-04-24

Open Source Codes

- Rudisill, Will. 2021. Bsu-wrudisill/WRF-HYDRO.CALIB: v0.1-beta.0. <https://doi.org/10.5281/zenodo.4509799>.

Conference Presentations

- Rudisill, W. J., Flores, A. N., Feldman, D., Xu, Z., Siirila-Woodburn, E. R., Rhoades, A., (2022) Examining the Hydrologic Implications of Ice-Phase Microphysical Parameterization Choice Using Convection Permitting Regional Climate Simulations over Colorado's East River Watershed. American Meteorological Society 20th Conference on Mountain Meteorology: June 27 - July 1, 2022, Presented (Oral Presentation)
- Rudisill, W. J., Flores, A. N., Carroll, R. W. (2021). Applying Hydrologic and Snow Data Inference Methods to Evaluate Dynamically Downscaled Precipitation Fields. American Geophysical Union Fall Meeting, Presented (Oral Presentation)
- Feldman, D., Xu, Z., Siirila-Woodburn, E. R., Rhoades, A., Rudisill, W. J., Flores, A. N. (2021). Using SAIL Campaign Measurements and Integrated Process Modeling to Better Understand the Headwater Hydrology of the Upper Colorado River Basin. American Geophysical Union Fall Meeting
- Rudisill, W. J., Flores, A. N. (2020). Evaluating Stream Discharge Simulations with the Fully Coupled WRF WRF-Hydro Model Framework in a Mountainous Snow-Dominated Watershed. American Meteorological Society Meeting: Online, January 2021, Presented (E-Poster)
- Rudisill, W. J., Flores, A. N. (2020). A Process-Aware Comparison of Mountain Precipitation Estimates in The East River Watershed." American Meteorological Society 19th Conference on Mountain Meteorology: Online, 13-17 July 2020, Presented (E-Poster)
- Rudisill, W. J., Nash, C., Flores, A. N., Feldman, D., Carroll, R. W. (2019). A Comparison of Dynamically Down-scaled and Interpolated Daily Meteorological Datasets in the East River, CO. American Geophysical Union Fall Meeting. Presented (Poster)
- Rudisill, W. J., Flores, A. N. (2018). Snow-Atmosphere Interactions During Atmospheric Rivers: A Central Idaho Case Study, American Geophysical Union Fall Meeting. Presented (Oral Presentation)
- FitzGerald, K. A., Masarik, M. T., Rudisill, W. J., Gelb, L., Flores, A. N. (2017). Scaling up: What coupled land-atmosphere models can tell us about critical zone processes. American Geophysical Union Fall Meeting

Funding applications (accepted)

- LBNL Early Career Development Grant, 2023 (\$30k)
- Department of Energy SGSCR (2021) Solicitation I

Funding Applications (rejected)

- Fulbright (2017)
- NASA NSPIRES (2020)
- Department of Energy SGSCR (2020) Solicitation II

Other Employment and Research Activities

- ATA Aerospace, Research Technician, Fall 2022. Processed data collected during NASA SnowEx project
- Undergraduate researcher, hydrologic remote sensing (2012-2013). Acknowledged in this paper
- Whitewater Kayak Guide/Instructor
 - Cascade Raft and Kayak (2015). Horseshoe Bend, ID
 - US National Whitewater Center (2011-2014). Charlotte, NC