

# Chris Hancock (he/him) | Curriculum Vitae

PhD Candidate, Northern Arizona University

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## Research Interests

I am a paleoclimatologist studying past climate variability to better understand how modern climate change could impact the natural environment. My research combines information from paleoclimate proxies with climate model simulations to reconstruct the response of regional hydroclimate variability to global climate change in the geologic past. To do this, I develop and manage large multi-proxy datasets and utilize analytical techniques such as proxy compositing, geospatial statistics, and data assimilation. These results provide insight into modern climate dynamics and the impacts of current climate change on the global hydrological cycle.

## Education

**Northern Arizona University** — PhD Earth Science & Environmental Sustainability 2020 — Present

Dissertation: *Reconstructing Holocene Hydroclimate Through a Data Assimilation Approach*

Advisor: Dr. Nick McKay

**University of Denver** — MA Geography 2018 — 2020

Thesis: *Spatial and Temporal Controls on Streamflow Variability in the San Juan Mountains, CO*

Advisor: Dr. J. Michael Daniels

**George Washington University** — BS Geological Sciences 2010 — 2014

Minors in Geography and Geographical Information Science

Advisor: Dr. Richard Tollo

## Professional Experience

**Research Assistant** — Northern Arizona University Aug. 2020 — Present

PaleoDynamics Lab (Advisor: Dr. Nick McKay), Flagstaff, AZ

**Raw Water Operations Intern** — Denver Water May 2019 — Aug. 2019

Water Resources Strategy Section, Denver, CO

**Support Technician II** — Michael Baker International Jan. 2015 — July 2019

National Flood Insurance Program Contract (FEMA), Alexandria, VA

**University Research Aide** — George Washington University Mar. 2014 — Aug. 2014

Geology Department (Advisor: Dr. Richard Tollo), Washington, DC

**University Research Aide** — U.S. Geological Survey June 2013 — Aug. 2013

Appalachian Blue Ridge Project, Reston, VA

## Teaching Experience (Instructor of Record)

**Northern Arizona University**

Climate Change

ENV 115

Summer 2022

# Teaching (Assistant) Experience

## Northern Arizona University

Geological Disasters Lab	GLG 112L	Spring 2022
Senior Seminar in Environmental Sciences	ENV 490C	Spring 2022
Geomorphology Lab	ENV 259L	Fall 2021
Environmental Sustainability	ENV 181	Fall 2021

## University of Denver

Environmental Systems Lab	GEOG 1201-3	Fall 2019; Winter/Spring/Summer 2020
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## George Washington University

Historical Geology Lab	GLG 1002	Spring 2014
Environmental Geology Lab	GLG 1005	Fall 2013

# Publications

- Hancock, C.**, McKay, N. P., Erb, M. P., Kaufman, D. K., Routson, C., Ivanovic, R. F., Gregoire, L. J., and Valdes, P.: Global synthesis of regional Holocene hydroclimate variability using proxy and model data, *Paleoceanography and Paleoclimatology*, submitted.
- Erb, M. P., McKay, N. P., Steiger, N., Dee, S., **Hancock, C.**, Ivanovic, R. F., Gregoire, L. J., and Valdes, P.: Reconstructing Holocene temperatures in time and space using paleoclimate data assimilation, *Clim. Past*, 18, 2599–2629, <https://doi.org/10.5194/cp-18-2599-2022>, 2022.

# Presentations

- Hancock, C., McKay, N., Erb, M.P., Gregoire, L.J., Ivanovic, R.F., Valdes, P.J., “Global synthesis of regional Holocene hydroclimate variability using proxy and model data” American Geophysical Union (AGU) fall meeting, Chicago IL, December 2022. (oral)
- Hancock, C., “Analyzing and compositing proxy data” Data Assimilation Workshop, Flagstaff, AZ, August 2022. (oral)
- Hancock, C., McKay, N., Erb, M.P., Gregoire, L.J., Ivanovic, R.F., Valdes, P.J., “Holocene Hydroclimate: Multi Millennial-Scale Trends in Proxies and Models” American Geophysical Union (AGU) fall meeting, New Orleans LA, December 2021. (poster)
- Hancock, C. “Hydroclimate of the San Juan Mountains, Colorado” Association of American Geographers (AAG) annual meeting, Seattle WA, April 2021. (oral)
- Hancock, C. “Hydroclimate of the San Juan Mountains, Colorado” Association of American Geographers (AAG) annual meeting, Washington DC, April 2019. (poster)

# Service

D&I Committee Member — School of Earth and Sustainability, Northern Arizona University	2022 — 2023
Graduate Student Representative — Department of Geography, University of Denver	2019 — 2020

## Outreach

Be in the Know: Water and Future Development in Arizona Event (Payson, AZ) — Arizona  
Association for Economic Development

11/16/2022

## Funding, Grants, & Awards

2022	Tom and Rose Bedwell Earth Physics Research Award	\$1,000
	Rod Parnell Fund for Water Resources Research Support	\$500
2021	Pioneer Natural Resources Research Award	\$1,800
	Tom and Rose Bedwell Earth Physics Research Award	\$1,600
	EarthCube Early Career Travel Grant	\$1,500
2019	Laurance C. Herold Fund	\$850

## Technical Skills

Python, R, ArcGIS, Adobe Illustrator, Microsoft Office