**COB STAINES** **+1 575 425 0523**
*Environmental Researcher // Educator // Data Scientist* cob.staines@gmail.com

## PERSONAL STRENGTHS

+ Env. data management
+ Creative problem-solving in cross-functional teams
+ Effective communication

## CAREER OBJECTIVES

+ Improve access to environmental data, solutions, & experiences
+ Nurture reciprocal relationships within our socio-ecosystems through relationship-building and collaborative problem-solving
+ Support local leadership in environmental justice & equity

## INSTITUTIONAL EDUCATION

Geography, M.S. // *November 2021*
Centre for Hydrology, U. of Saskatchewan
+ Remote sensing and modeling of vegetation & snow

Physics, B.S. // *June 2014*
College of Creative Studies, U. of California, Santa Barbara
+ Emphasis in media signal processing & graph theory

## LEARNED SKILLS

+ Database design & management w/ PostgreSQL, PostGIS, Neo4j, SQLite
+ Wrangle, analyze & visualize data w/ Python, R, Matlab, QGIS, ArcGIS, GEE
+ Statistics, logic, efficiency, debugging
+ Scientific communication & writing
+ Spanish (*Advanced written & spoken*)

## GENERAL WORK EXPERIENCE

Data Science // 9+ years
+ Quantitative physics & geography background with coursework in statistics, modeling, data mgmt.
+ Masters thesis developing new statistical tools to analyze snow/vegetation relationships from lidar
+ Data mgmt. planning, collection, quality assurance, integration, analysis, interpretation & reporting

Environmental Research // 6+ years
+ Diverse research experience spanning marine, coastal, wetland, montane & urban ecosystems
+ Specific expertise with taxonomic data, biodiversity indicators, and graph/network data structures
+ Study design, data collection, modeling, analysis, technical writing, presentations, public outreach

Instruction & Leadership // 10+ years
+ Community driven leader using active listening, nonviolent communication & agile project mgmt.
+ Dynamic instructional roles communicating technical information in creative and accessible ways

## SPECIFIC WORK EXPERIENCE

Instructor // *2024*
*Ecology Project International*, Missoula, Montana, USA
+ Lead field courses centering collaborative ecological research observations & sample collection

Instructor // *2022 - Present (seasonal)*
*Wild Rockies Field Institute*, Missoula, Montana, USA
+ Design and instruct upper-division field courses and semesters in ecological systems (resilience, thresholds, disturbance, restoration), land-human relations, climate change, energy & observation
+ Empower critical thinking of land & water relations through local connection, personal experience

Forest Hydrology Researcher // *2018 - 2021*
*Coldwater Lab*, University of Saskatchewan, Canmore, Alberta, Canada
+ Led research project to investigate feedbacks between forest canopy structure and local snowfall
+ Developed novel tools, including bayesian voxel resampling for analysis & visualization of lidar data
+ Collection and analysis of field samples, publishing data, reporting methods, results & algorithms

Wetland Research Assistant // *Summer — 2020*
*Rocky Mountain Ecohydrology Lab*, University of Saskatchewan, Canmore, Alberta, Canada
+ Collected & processed field obs. from peatlands to monitor ecosystem carbon fluxes and hydrology

Data Specialist // *2015 - 2016*
*SCB Marine Biodiversity Observation Network (MBON)*, Marine Science Institute, UCSB, California, USA
+ Developed workflows for integration, analysis and publishing of biogeographical datasets
+ Self-led project management, scientific reporting, training & mentorship in cross-functional setting

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*(Specific Work Experience continued)*

Resident Director & Resident Assistant // Aug. - June — 2011 - 2012 & 2013 - 2014
*Tropicana Student Living*, University of California, Santa Barbara, USA
+ Community building, team management, customer service & public relations, budgeting
+ Awarded "Residence Life Team of the Year 2014" & "Resident Assistant of the Year 2012"

Data Coordinator *(Independent Contractor)* // *Summer — 2012*
*CAL FIRE (California Department of Forestry and Fire Protection)*, Sacramento, California, USA
+ Coordinated between CAL FIRE, Sagent Marketing, and Desert Research Institute to provide online public access to real-time modeled regional fire danger ratings

## RECENT PUBLICATIONS & PRESENTATIONS

**Staines, J.**; Pomeroy, J. (*2023*). Influence of forest canopy structure and wind flow on patterns of sub-canopy snow accumulation in montane needleleaf forests. *Hydrologic Processes.* https://doi.org/10.1002/hyp.15005.

Alvarado-Arias, N.; **Staines, J.** (2023). Mapping the intangible value of urban rivers for regeneration: a case study in Cuenca, Ecuador. Poster at: *International Conference on Sustainable Development, 2023.*

**Staines, J.** (2021). Spatial relationships between trees and snow in a cold regions montane forest. *MSc. Thesis, Dept. of Geography & Planning, University of Saskatchewan.* *https://harvest.usask.ca/handle/10388/13674*

**Staines, J.**; Pomeroy, J. W. (2020). Toward a physically based canopy metric for estimating snow accumulation in forests. Oral presentation at: *American Geophysical Union, 2020 Fall Meeting*.

## RECENT & RELEVANT VOLUNTEER WORK

Data Structures & Database Design tutor // 2024 - Present
Universidad San Francisco de Quito, Ecuador

Forest Hydrology Lecturer // *2023 - Present*
*NAHUAL,* Quito, Ecuador

Project Coordinator, Community Glacier & Ecosystem Monitoring // *2023 - Present*
*Cumbres Blancas Ecuador*

Ecosystem Services Modeler & Researcher // *2022 - Present*
*Rescate del Río San Pedro*, Quito, Ecuador

Mentor // *2022*
*Virtual Mentoring Program for Indigenous Scholars*, Navajo Technical University, Navajo Nation

Math & Science Tutor // *2021 - 2022*
*Îyârhe Nakoda Youth Program*, Stoney Nakoda First Nation

Treasurer // *2021 - 2022*
*Canmore Community Garden Society*, Canmore, Alberta, Canada

Environmental Education Assistant // *2019*
*Kananaskis Country — Alberta Parks*, Alberta, CA

Snow Science Field Education Specialist // *2019*
*Biogeosciences institute – University of Calgary, Kananaskis Country,* Alberta, Canada