David Huber
2421 W Kootenai St
Boise, Idaho 83705 United States
Mobile: 2087607196
Email: davidphuber5@gmail.com

Availability:
Job Type: Permanent, Telework
Work Schedule: Full-time

Desired Locations:
ALL, Alaska, United States; ALL, Colorado, United States; ALL, Idaho, United States; ALL, Oregon, United States; ALL, Washington, United States; Boise, Idaho, United States; Bend, Oregon, United States; Yakima County, Washington, United States; Pacific, Washington, United States; Flagstaff, Arizona, United States

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Work Experience:
Principal Research Scholar
Geosciences Department, Boise State University
1910 University Dr. MS 1535
Boise, ID

1/2025 - Present
Salary: $99,500.00 USD Per Year
Hours per week: 75
Duties, Accomplishments and Related Skills:
SUMMARY:
I am Lead PI on the NSF "Fire-Induced Carbonate Accumulation (FICA)" project: this $80,000 project examines the mechanisms of fire-induced carbonate formation in a sub-catchment of the Reynolds Creek Experimental Watershed and their effects on watershed carbon budgets. This project involved a controlled fire and was conducted in cooperation with the BLM, and has spurred additional collaborations as part of a NWRC Fire Workgroup, which studies the broader effects of prescribed fire on the Johnston Draw sub-catchment. The workgroup includes development of geospatial data products, shared workflows, and potential for collaborations and synthesis products related to the 2023 Johnston Draw prescribed fire. It fosters community connections and aims to address data gaps and research needs for western rangeland managers. I am Co-PI on the NSF "Downstream water quality impacts of post-fire debris flows" project: this $50,000 project examines the provenance of sediment, carbon, and nutrients in post-fire debris flows that enter the south fork of the Payette River in central Idaho, and their geochemical and environmental impacts on downstream water quality and aquatic ecosystems. This project involves the greater Wapiti wildfire area and works closely with the Rocky Mountain Research Station in Boise, and in cooperation with the Boise National Forest and the Cold Regions Research and Engineering Laboratory (CRREL). This project also assesses topo-edaphic factors influencing the likelihood and severity of post-fire debris flows.

DUTIES:
These projects involve substantial financial, personnel, and property management responsibilities. I provide leadership and co-advise and mentor

multiple graduate and undergraduate students and their projects, and promote teamwork within our research group to solve complex problems. I also interact and collaborate with private, state, and federal stakeholders across various projects, effectively communicating both technical and non-technical information as needed.

SKILLS:
As a researcher on several interdisciplinary teams, my personal expertise include a diverse suite of tools and methods such as measures of carbon and water; soil profile probes for soil moisture, temperature, salinity, CO2 and associated loggers and telemetry systems; soil CO2 sensors and micrometeorological stations; and geospatial tools such as RTK and UAS imagery. In addition, I pair these techniques with soil hydraulic measures and modeling, biogeochemistry, stable isotope analyses, and land surface aging techniques to interpret the paired biotic and abiotic response to changes in environment.

ACCOMPLISHMENTS:
-Publication accepted with revisions
-Numerous publications in prep
-Designed, built, and tested custom low-cost and open source soil CO2 probes for high frequency measures of soil respiration and land carbon fluxes
-Filed provisional patent application for enhanced soil CO2 probe and loggers system
-First every estimates and spatial distribution of post-fire watershed storage of fire-induced soil carbonates
-First every use of fire-induced carbonates to assess watershed post-fire hydrologic connectivity
-Advised and mentored numerous high school, undergraduate, and graduate students
-Presented research findings at multiple regional, national, and international conferences
Supervisor: Dorsey Wanless (208-426-3631)
Okay to contact this Supervisor: Yes

ARS Affiliate
Northwest Watershed Research Center - Boise - USDA-ARS
251 E. Front St.
Suite #400
Boise, ID

7/2021 - Present
Hours per week: 15
Duties, Accomplishments and Related Skills:
SUMMARY:
As an Investigator on the NSF CZnet Dryland project, I examine ecohydrological controls on carbon and nutrient cycling, with an emphasis on land-atmosphere gas exchange. These investigations include changes in land-use, geologic and geomorphic landscapes, climate, and disturbance regimes in mixed shrub-grassland ecosystems. I also conduct independent and interdisciplinary research projects across multiple research sites, including the Northwest Watershed Research Center near Boise, Idaho, the Northwest Irrigation and Soils Research Laboratory in Kimberly, Idaho, and the Jornada Experimental Range near Las Cruces, New Mexico.

DUTIES:
These projects involve substantial financial, personnel, and property management responsibilities. I provide leadership and co-advise and mentor

multiple graduate and undergraduate students and their projects, and promote teamwork within our research group to solve complex problems. I also interact and collaborate with private, state, and federal stakeholders across various projects, effectively communicating both technical and non-technical information as needed.

SKILLS:
As a researcher on several interdisciplinary teams, my personal expertise include a diverse suite of tools and methods such as eddy covariance flux measures of carbon and water; soil profile probes for soil moisture, temperature, salinity, CO2 and O2 and associated loggers and telemetry systems; soil CO2 chambers and micrometeorological stations; geospatial tools such as RTK; geophysical tools including electromagnetic resistivity (EM), electrical resistivity tomography (ERT), and ground penetrating radar (GPR); remote sensing drone platforms including structure-for-motion and multi-spectral imaging. In addition, I pair these techniques with soil hydraulic measures and modeling, biogeochemistry, stable and radiogenic isotope analyses, and land surface aging techniques to interpret the paired biotic and abiotic response to changes in environment.

ACCOMPLISHMENTS:
-Numerous publications (see publications section)
-Advised and mentored numerous high school, undergraduate, and graduate students
-Presented research findings at multiple regional, national, and international conferences
Supervisor: Dr. Gerald Flerchinger (2088602020)
Okay to contact this Supervisor: Yes

Research Assistant Professor
University of Texas at El Paso
500 W University
El Paso, TX

7/2021 - 12/2024
Salary: $72,100.00 USD Per Year
Hours per week: 65
Duties, Accomplishments and Related Skills:
Note, this appointment is through the University of Texas at El Paso but I reside in Boise, Idaho and work in Boise State University's Geosciences Department as an Affiliate Faculty member, as well as a Northwest Watershed Research Center (NWRC) USDA-ARS Affiliate.

SUMMARY:
I am Lead-PI on the USDA-NRCS Soil Carbon SMART (Soil Monitoring, Assessment, Research, and Training (SMART) project. This $2,000,000 project builds regional capacity with producers throughout 13 western US states and territories, providing guidance to stakeholders on the Conservation Evaluation and Monitoring Activity (CEMA) 221 program and its integration with USDA soil conservation methods.

DUTIES:
Directing the Carbon SMART project, in partnership with the NRCS, provide guidance on a series of environmental, policy, and programmatic issues. I provide guidance on CEMA 221 integration with EQIP, Climate Smart, and CSP conservation programs.

My website development for western region CEMA 221, provides implementation information to various stakeholders, including landowners,

conservation district managers, technical service providers (TSPs), qualified individuals (QIs), and state-level NRCS managers and field officers.

My project team and I provide specific state-level NRCS assistance (e.g., Conservation Managers and field office personnel) on CEMA 221 specifications and standards, and lend technical advice for contracting the CEMA.

I provide virtual and in-person training and support on all aspects of CEMA 221 program implementation, including eligibility requirements, local resource availability, site selection, soil sampling methods and equipment, sample processing and analysis, and reporting of soil properties to landowners and NRCS.

SKILLS:
-Program management for the entire US western region CEMA 221 implementation, including project management program certificate.
-Extensive knowledge of CEMA 221 policies and procedures for state-level implementation and integration with soil conservation programs (e.g., EQIP).
-Expert in soil carbon and soil sample collection, analysis, and reporting

ACCOMPLISHMENTS:
-Established network with various state-level NRCS staff
-Established network with CEMA 221 partner institutions across CONUS
-Clarification, documentation, and technical assistance on CEMA 221 implementation
-Documentation on CEMA 221 soil carbon stock monitoring and potential benefits to producers
-Established western region CEMA 221 website
-Training of qualified individuals in Oregon for CEMA 221 implementation
-Producer engagement and feedback on CEMA 221 program benefits/needs
-Staff training on soil collection, processing, and reporting
Supervisor: Dr. Lixin Jin ((915) 747-5559)
Okay to contact this Supervisor: Yes

CERC Postdoctoral Fellow
CSIRO
Locked Bag 2
Glen Osmond
Urrbrae, SA

5/2019 - 7/2021
Salary: $93,000.00 AUD Per Year
Hours per week: 45
Duties, Accomplishments and Related Skills:
Investigating the capacity of Australian soils to sequester carbon under variable climatic regimes using greenhouse and laboratory experiments, and using isotopic, molecular, and chromatographic techniques. In addition, soil physical properties and their influence on soil carbon stabilization were considered. Research skills associated with this project include: experimental design and project management; instrument design, installation, and operation; publication in peer-reviewed journals; and presentation of results at professional meetings.

Supervisor: Dr. Mark Farrell (61 8 8303 8664)
Okay to contact this Supervisor: Yes

Postdoctoral Research Associate
USDA-ARS (This is a federal job)
251 E. Front St.
Suite #400
Boise, ID

12/2017 - 5/2019
Salary: $77,082.00 USD Per Year
Hours per week: 40
Series: 0470 Soil Science
Pay Plan: GS - General Schedule (Ch. 51, 5 U.S.C.).
Grade: 12
Duties, Accomplishments and Related Skills:
This project studied the effects of antecedent soil and environmental conditions on land-atmosphere gas exchange in a snow dominated ecosystem to better predict watershed scale greenhouse gas emissions and carbon balance. Project skills and experience include: project management; development of Bayesian models to account for antecedent conditions using R-coding language; publish in peer-reviewed journals; present research results at professional meetings; public outreach and science education; installation and maintenance of lab and field instrumentation in remote locations.
Supervisor: Dr. Mark Seyfried (12084220715)
Okay to contact this Supervisor: Yes

Youth Intern
USGS (This is a federal job)
970 S Lusk Street
970
Boise, ID

7/2014 - 9/2014
Hours per week: 20
Series: 0499 Biological Science Student Trainee
Pay Plan: GS - General Schedule (Ch. 51, 5 U.S.C.).
Grade: 4
Duties, Accomplishments and Related Skills:
This position was related to my dissertation research. Specifically, I investigated soil water, carbon, and nutrient status effects and associated impacts on edaphic properties, plant phenology, and plant community composition. I conducted experimental manipulations of precipitation seasonality (i.e., climate variability), native vs. invasive plant communities, and soil thickness (i.e. the effective soil storage capacity or control volume). Skills associated with this project include: experimental design and management; instrument design, installation, and maintenance in the field and laboratory; publish research in peer-reviewed journals; present results at professional meetings; interdisciplinary teamwork and collaboration.
Supervisor: Matthew Germino (12084263353)

Okay to contact this Supervisor: Yes

Youth Intern
USGS (This is a federal job)
970 S Lusk Street
Boise, ID

5/2013 - 7/2013
Hours per week: 20
Series: 0499 Biological Science Student Trainee
Pay Plan: GS - General Schedule (Ch. 51, 5 U.S.C.).
Grade: 4
Duties, Accomplishments and Related Skills:
This position was related to my dissertation research. Specifically, I investigated change in soil water, carbon, and nutrient status, as well as plant productivity, with experimental manipulations of precipitation seasonality, native vs. invasive plant communities, and soil thickness (i.e. the effective soil storage capacity or control volume). Skills associated with this project include: experimental design and management; instrument design, installation, and maintenance in the field and laboratory; publish research in peer-reviewed journals; present results at professional meetings; interdisciplinary teamwork and collaboration.
Supervisor: Matthew Germino (12084263353)
Okay to contact this Supervisor: Yes

Research Specialist and Lab Manager
Arizona State University
427 East Tyler Mall
Tempe, AZ

10/2005 - 12/2010
Salary: $39,500.00 USD Per Year
Hours per week: 65
Duties, Accomplishments and Related Skills:
Management of multiple research projects using interdisciplinary strategies to examine modern and historical anthropogenic activities on soil water, carbon, and nutrient cycling. The largest project involved assessing the effects of urban atmospheric deposition on soils and ecosystem function. This included the effects of polyaromatic hydrocarbons, a family of combustion derived compounds that are toxic and pose an environmental and human health risk. Skills and experience associated with this position include: lab and field operations management and safety; staff, undergraduate and graduate student employment and supervision; instrumentation design, operation, maintenance, and troubleshooting; assist with publication of research results; financial reconciliation for projects; coordination between private, state, federal, and tribal stakeholders; interdisciplinary collaboration between soil, aquatic, atmospheric and social sciences.
Supervisor: Dr. Sharon Hall (14809655650)
Okay to contact this Supervisor: Yes

Technician

University of Alaska-Anchorage
3151 Alumni Drive
Anchorage, AK

5/2005 - 8/2005
Salary: $1,800.00 USD Per Month
Hours per week: 75
Duties, Accomplishments and Related Skills:
This project examined climate-induced permafrost thaw and subsequent loss of soil carbon from greenhouse gases and dissolved organic carbon along the northern foothills of the Alaskan Brookes Mountain Range. Skills and experience associated with this position included: lab and field measures of plant productivity and net ecosystem carbon exchange; instrument installation and troubleshooting; independent work in an isolated and harsh environment.
Supervisor: Dr. Jeff Welker ((907) 786-6110)
Okay to contact this Supervisor: Yes

Assistant Field Crew Leader
Colorado State University
400 University Ave
Fort Collins, CO

5/2001 - 10/2001
Hours per week: 40
Duties, Accomplishments and Related Skills:
Duties included sample and data collection and supervision of season field crews for the Short Grass Steppe - Long Term Ecological Research (SGS-LTER) site. Sample and data collection included monitoring of grassland net primary production, vegetation mapping, plant and invertebrate community composition, grazing and fire effects on aforementioned characteristics, and soil carbon and nutrient cycling. Management duties included tasking and human resources allocation, scheduling, and data management including QC/QA.
Supervisor: Nicole Kaplan ((970) 492-7117)
Okay to contact this Supervisor: Yes

Education:
Idaho State University Pocatello, ID United States
Doctorate degree 12 / 2017
GPA: 3.91 of a maximum 4.0
Credits Earned: Semester Hours
Major: Biology **Minor:** Science Education **Honors:** Summa Cum Laude
Relevant Coursework, Licenses and Certifications:
RESEARCH TOPIC: Experimental investigation of changing climate and vegetation on organic and inorganic carbon storage in dryland soils. COURSEWORK: R Program/Statistical Analysis Biogeochemistry I Biogeochemistry II Microbial Physiology Microbial Physiology Laboratory Plant Physiology and Climate Change Ecosystem Function and Global Change Spatial Analysis Scientific Writing SHORT COURSES: Bayesian Workshop for Ecologists – Texas State University Soils and Climate Change Workshop – University of Western Australia Terrestrial Ecology

Clumped Isotopes Workshop – SoilTrEC, Czech Republic Stable Isotope and Ecology Short Course (IsoCamp) – University of Utah Radiocarbon Short Course – University of California-Irvine
Colorado State University Fort Collins, CO United States
Master's degree 8 / 2011
GPA: 3.81 of a maximum 4.0
Credits Earned: Semester Hours
Major: Soil Science **Honors:** Magna Cum Laude
Relevant Coursework, Licenses and Certifications:
RESEARCH TOPIC: Characterization, modeling and remediation of saline agricultural soils. COURSEWORK: Hydrus Hydraulic Modeling Clay Mineralogy Advanced Soil Physics Soil Chemistry Soil Chemical Analysis Advanced Soil Microbiology Soil Physics Soil Physics Lab Pedology Soil Microbiology Soil Microbiology Lab Design and Statistical Analysis I Irrigation Principles and Management (AU)
Colorado State University Fort Collins, CO United States
Bachelor's degree 12 / 2002
GPA: 2.91 of a maximum 4.0
Credits Earned: Semester Hours
Major: Biology
Relevant Coursework, Licenses and Certifications:
RESEARCH TOPIC: Distribution and fecundity of the threatened plant species Mimulus gemmiperus in the Colorado Rocky Mountain region. COURSEWORK: Stream Biology and Ecology Forest Ecology General Ecology General Ecology Lab

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Job Related Training:
Wordpress website design and accessibility compliance training, Boise State University, 2024

SmartSheet project management software training, 2024

Project Management Program Certificate, Boise State University, 2024

EMergent Ecosystem Responses to ChanGE (EMERGE) Biology Integration Institute, 2023

Unsealed Sources - Ionizing Radiation Training, August, 2019

Remote First Aid Certification – St. Johns Hospital, August, 2019

Four wheel drive vehicle operation and maintenance – July, 2019

Remote Data Acquisition Workshop – University of New Mexico, June 2018

Bayesian Workshop for Ecologists – Texas State University, June 2016

Soils and Climate Change Workshop – University of Western Australia, January 2015

Isotope Biogeochemistry & Ecology Workshop – University of Utah, June 2012

Radiocarbon Short Course – University of California-Irvine, July 2011

Affiliations:
Geological Society of America - General Member
American Geophysical Union - General Member

Professional Publications:
Huber, D.P., A. Byrne, C. Woodruff, P. Clark, J. Enterkine, J. Anderson, O.A. Walsh, A. Boehm, M.D. Murdock, J. Sanderman, and K.A. Lohse. Mechanisms and fate of fire-induced carbonates in a cold desert ecosystem. In prep.

Huber, D.P., K.A. Lohse, K. Aho, and M. Germino. Variation in maximum soil depth affects soil carbon and nitrogen in near-surface: a framework for predicting landscape variability and resilience. In revision for resubmission.

Ghahremani, Z., D.P. Huber, J.L. Pierce, and M. Johnson. The spatial distribution of soil inorganic carbon in the contiguous united states. In review. Geophysical Research Letters.

Anderson, J.F., D.P. Huber, and O.A. Walsh. A sensor probe with active and passive humidity management for in-situ soil CO2 monitoring. Sensors 24, 6034. https://doi.org/10.3390/s24186034

Stanbery, C., Ghahremani, Z., Huber, D.P., et al. 2023. Controls on the presence and storage of soil inorganic carbon in a semi-arid watershed. CATENA 225, 106980. https://doi.org/10.1016/j.catena.2023.106980

Lohse, K.A., Pierson, D., Patton, N.R., Sanderman, J., Huber, D.P., et al. 2022. Multiscale responses and recovery of soils to wildfire in a sagebrush steppe ecosystem. Sci Rep 12, 22438. https://doi.org/10.1038/s41598-022-26849-w

Lohse, K.A., D. Pierson, N. Patton, J. Sanderman, B. Finney, J. Thomas, D.P. Huber, et al. 2022. Dataset: Surface Soil Property and Processes Following the 2015 Soda Fire at the Reynolds Creek Critical Zone Observatory in SW Idaho. Retrieved from https://doi.org/10.18122/reynoldscreek.28.boisestate

Huber, D.P., K.A. Lohse, K. Aho, and M. Germino. Dataset: Variation in maximum soil depth affects soil carbon and nitrogen in near-surface: a framework for predicting landscape variability and resilience. Retrieved from https://doi.org/10.18122/reynoldscreek.27.boisestate.

Huber, D.P., G.L Butters, and L.A. Garcia. 2021. Unreconciled effects of salinity on draining and wetting functions in unsaturated soils. Vadose Zone Journal. 20: e20169. https://doi.org/10.1002/vzj2.20169.

Huber, D.P., G.L Butters, and L.A. Garcia. 2021. Dataset: Unreconciled effects of salinity on draining and wetting functions in unsaturated soils. Retrieved from https://doi.org/10.18122/geo_data.6.boisestate.

Huber, D.P., K. Aho, G. Flerchinger, K.A. Lohse, and M.S. Seyfried. 2020. Dataset: Methods to Model Antecedent Effects on Soil Respiration in a

Cold Desert Ecosystem: Associated Soil and Environmental Data from the Reynolds Creek Critical Zone Observatory. Retrieved from 10.18122/reynoldscreek/21/boisestate.

O'Brien, F.J.M., M. Almaraz, M.A. Foster, A. Hill, D.P. Huber, et al. 2019. Soil electrical conductivity and pH drive soil bacterial community composition and diversity along a lateritic slope in the Avon River Critical Zone Observatory, Western Australia. Frontiers in Microbiology, 10:1486.

Huber, D.P., K.A. Lohse, A. Commendador, S. Joy*, K. Aho, B. Finney, and M. Germino. 2019. Vegetation and precipitation shifts interact to alter organic and inorganic carbon storage in cold desert soils. Ecosphere, DOI:10.1002/ecs2.2655.

Hall, S.J., D.P. Huber, and R.F. Hughes. 2018. Invasion of Hawaiian rainforests by an introduced amphibian predator and N2-fixing tree increases soil N2O emissions. Ecosphere, 9(9): e02416. 10.1002/ecs2.2416.

Hall, S.J., D.P. Huber, and R.F. Hughes. 2018. Data from: Invasion of Hawaiian rainforests by an introduced amphibian predator and N2-fixing tree increases soil N2O emissions. Dryad Digital Repository. https://doi.org/10.5061/dryad.482m400.

Murdock, M.D., D.P. Huber, M.S. Seyfried, N.R. Patton*, and K.A. Lohse. 2018. Dataset: Soil Hydraulic Parameter Estimates Along an Elevation Gradient in Dryland Soils. https://doi.org/10.18122/reynoldscreek/10/boisestate.

Huber, D.P., K.A. Lohse, A. Commendador, S. Joy*, B. Finney, K. Aho, and M. Germino. 2018. Dataset: Change in carbon storage for cold desert ecosystems controlled by precipitation seasonality and invasive vegetation. https://doi.org/10.18122/B2QT3J.

Beal*, L., D.P. Huber, S.E. Godsey, K.A. Lohse, and S.K. Nawotniak. 2016. Soil age and geomorphology: influence on hydraulic properties in cold desert ecosystems. Geoderma 271:32-41.

Marusenko, Y., D.P. Huber, P. Ortiz*, and S.J. Hall. 2013. Fungi mediate nitrous oxide production but not ammonia oxidation in aridland soils of the southwestern US. Soil Biology and Biochemistry 63: 24-36.

Sponseller, R., S.J. Hall, D.P. Huber, N.B. Grimm, J. Kaye, C. Clark, and S. Collins. 2012. Variation in monsoon precipitation drives spatial and temporal patterns of Larrea tridentata growth in the Sonoran Desert. Functional Ecology 26:750-758.

Hall, S.J., R. Sponseller, N.B. Grimm, D. Huber, J. Kaye, C. Clark, and S. Collins. 2011. Ecosystem response to nutrient enrichment in the Sonoran Desert across an urban airshed. Ecological Applications 21:640–660.

References:

Kathleen Lohse (*)
Employer Idaho State University
Title Professor of Biology
Phone 16502075919
Email klohse@isu.edu

Jen Pierce (*)
Employer Boise State University
Title Professor, Geomorphology
Phone 2089214476
Email jenpierce@boisestate.edu

Lixin Jin (*)
Employer University of Texas at El Paso
Title Associate Professor
Phone 19157475559
Email ljin2@utep.edu

Mark Seyfried (*)
Employer USDA-ARS
Title Soil Scientist
Phone 12084220715
Email mark.seyfried@ars.usda.gov

(*) Indicates professional reference

Additional Information:
GRANTS AND AWARDS:
Co-PI, NSF-EAR RAPID project, "Downstream water quality impacts of post-wildfire debris flows Introduction," 2024-2025, $49,961 – Awarded
Lead PI, NSF-EAR RAPID project, “Mechanisms of fire-induced carbonate formation in a cold desert ecosystem,” 2023-2024, $80,663 – Awarded
Lead PI, USDA-NRCS (NHQ-22-NOFO0001213), Soil Carbon Monitoring Training and Outreach Agreements project, 2023-2027, $2,000,000 – Awarded
Critical Zone Collaborative Network (CZnet) - Drylands, postdoc and contribution to proposal writing, 2020-2024, $5,546,656 – Awarded

Co-PI, DOE proposal, "High and Dry: Building Research Capacity in Dryland Mountain Research and Representation in Earth System Models," 2025-2028, $800,000 – Pending
Co-PI, NSF/EA, "Acquisition of Eddy Covariance and Electrical Resistivity Instrumentation for Mobile Earth System Observation," 2025-2027, $417,600 – Pending
Co-PI, NSF/EAR-IF, "Development of a soil greenhouse gas sensing and logging system," 2025-2027, $598,957 – Pending
Co-PI, NW-CASC, "A critical zone approach to characterizing efficacy of interventions to manage juniper encroachment into sagebrush ecosystems," 2025-2028, $350,000 – Invited for full proposal

Co-PI, DOE-EPSCoR, "Climate and watershed controls on cold season nutrient export from mountain watersheds," 2025-2029, $999,849 – Unsuccessful
Signals in the Soil (SitS) NSF proposal (No. 1935688), postdoc and proposal writing, 2019, $800,000 – Unsuccessful

TEACHING EXPERIENCE:
Principles of Soils (GEOS 551)
Department of Geosciences, Boise State University, fall 2022

Watershed Hydrology (GEOL4499/5599)
Department of Geosciences, Idaho State University, Spring 2016

Introduction to Hydrus 1-D: Modeling Soil Water Transport (BIOL6692)
Department of Biological Sciences, Idaho State University, Spring 2015

Ecosystem and Global Change Biology (BIOL4499/5599)
Department of Biological Sciences, Idaho State University, Spring 2014 & 2015

Soil and Critical Zone Processes (BIOL4499/5599)
Department of Biological Sciences, Idaho State University , Fall 2012 & 2015

SERVICE ACTIVITIES:
Workgroup Chair: Northwest Watershed Research Center (NWRC) Fire Workgroup is a consortium studying the effects of prescribed fire on the Johnston Draw sub-catchment.

Workgroup Member: Rangeland Carbon Working Group and Tech Transfer project is working with support from the Natural Resources Conservation Service, the Institute for Natural Resources, and partners at the Agricultural Research Service, US Geological Survey, and others to fill knowledge gaps in our understanding of carbon cycling in the sagebrush ecosystem and understand management effects on carbon storage as a strategy for climate change mitigation and adaptation.

Invited Speaker and Program Participant: EMERGE (EMergent Ecosystem Response to ChanGE) is an NSF-funded Institute aimed at discovering how natural ecosystems respond to change across space and time. As an EMERGE Summer Institute Participant, I work with a transdisciplinary team synthesizing the effects of climate change on artic micro-geomorphic formations and subsequent shifts in carbon and nitrogen biogeochemistry. As a result of this synergistic project, I will be giving an invited seminar at the University of Pittsburgh’s Department of Geology and Environmental Science titled, “Mechanisms and fate of fire-induced carbonates in a cold desert ecosystem.”

Session Host and Coordinator: Geological Society of America (GSA). Session title, "Critical Zone Science: Intersection of processes linked to geomorphology, ecology and climate."

Graduate student committee member for four students, Geosciences Department, Boise State University, 2022-Present

Reviewer: Soil Sci Soc Am J, Geoderma, Sci Total Environ, Plant and Soil, and Soil Res, 2015-Present

ISU Department of Biological Sciences Graduate Programs Committee Member, 2015-2016

ISU Biology Graduate Student Association Travel Grant Committee (Chair), 2015-2016

ISU Biological Sciences Promotion and Tenure Committee, 2012 & 2015

Idaho Department of Fish and Game, volunteer, 2015

ISU Biology Graduate Student Association Officer (President), 2014-2015

ISU Biology Graduate Student Association Invited Speaker Committee (Chair), 2012-2015

ISU Biological Sciences Faculty Search Committee, 2012

SOFTWARE SKILLS:
-SmartSheet project management software
-Hydrus 1-D, unsaturated soil hydraulic model
-R and R Studio programming and statistical software
-EddyPro eddy covariance data processes software
-LICOR software for hardware configuration and management
-Campbell Scientific configuration software
-Basic familiarity with geospatial and remote sensing software suites
-All Microsoft and Adobe suite products
