

Kelly A. Loria

University of Nevada, Reno | NSF Graduate Research Fellow

Email: kellyloria@gmail.com | <https://kellyloria.github.io>

Education

University of Nevada, Reno (*Planned graduation in Summer 2025*)

Ph. D. Candidate in the Ecology, Evolution and Conservation Biology Program,
Department of Natural Resources and Environmental Science

Advised by Dr. Joanna R. Blaszczak

GPA: 3.94

University of Colorado, Boulder

B. A. Ecology and Evolutionary Biology, College of Arts and Sciences (2017),
Magna cum laude

Advised by Dr. Pieter Johnson

GPA 3.56, Dean's List (2015-2017)

Diablo Valley Community College

Associate degree in environmental science (2013-2014)

Work Experience

Graduate Researcher at the University of Nevada Reno Ph.D. Candidate

August 2020 – present (expected end July 2025).

Reno, NV

Thesis: *Characterizing aquatic ecosystem function through monitoring and modeling mechanistic drivers of productivity and nutrients among different hydroclimatic conditions.*

Limnology program manager for Niwot Ridge Long Term Ecological (LTER) Program

August 2015 – July 2020.

Boulder, CO

Undergraduate Researcher Johnson Laboratory, University of Colorado, Boulder

August 2014 – July 2015.

Boulder, CO

Thesis: *Freshwater zooplankton communities as indicators of habitat quality: Testing Responses to multiple disturbances.*

Publications

Scamardo J, Munger W, **Loria K**, Nauman B, Wang J, Leopold S, Heggli A, Huntly N, Baker M, and Meadow A (2024). Restoring Endangered Streams: The Science, Practice, and Law of Instream Process-Based Restoration Amid Climate Change. *Journal of Rangeland Ecology & Management*.

Blaszczak J, **Loria K**, Krause J, Lowman H, Chandra S (2024). Making the smart watershed-to-lake connection: using high-frequency sensors and process-based aquatic ecosystem models to predict nearshore greening in Lake Tahoe. *Water Quality Report to Nevada Division of State Lands*.

- Christianson K, **Loria K**, Blanken, D, Caine N, and Johnson P (2021). On thin ice: Linking elevation and long-term losses of lake ice cover. *Limnology and Oceanography Letters*.
- Loria K**, McKnight D, Ragar D, and Johnson P (2020a) The life aquatic in high relief: shifts in the physical and biological characteristics of alpine lakes along an elevation gradient in the Rocky Mountains, USA. *Aquatic Sciences*, 82(1), 11.
- Loria K**, Christianson K, and Johnson P (2020b). Phenology of alpine zooplankton populations and the importance of lake ice-out. *Journal of Plankton Research*, 42(6), 727-741.
- Loria K** (2017) Freshwater zooplankton communities as indicators of habitat quality: Testing Responses to multiple disturbances. Undergraduate Honors Theses.

In review or preparation:

- Loria K**, Lowman H, Krause J, Katona L, Naranjo R, Scordo F, Harpold A, Chandra S, and Blaszcak J (2025). The influence of mountain streamflow on nearshore ecosystem metabolism in a large, oligotrophic lake across drought and wet years. In prep for *Limnology and Oceanography*. In review with L&O.
- Loria K**, Lowman H, Krause J, Scordo F, Harpold A, Chandra S, and Blaszcak J (2025). Biogeochemical linkages between nitrogen availability and productivity across variable discharge regimes in mountain streams. In preparation for *Hydrology*.
- Lowman H, **Loria K**, Katona L, Krause J, Chandra S, MacIntyre S, Melack J, Naranjo R, and Blaszcak J (2025). Daily dissolved oxygen dynamics mediated by light and streamflow in littoral regions of an oligotrophic mountain lake. In preparation for *Limnology and Oceanography Letters*

Presentations

(* indicates oral presentation)

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- ***Loria K**, Lowman H, Krause J, Katona L, Naranjo R, Scordo F, Harpold A, Chandra S, and Blaszcak J (June, 2024). Upstream efficiency and downstream productivity: Linking mountain stream processes with near-shore productivity in the Lake Tahoe Basin (California-Nevada, USA). Society for Freshwater Science. 2024 Summer meeting. *Oral presentation*.
- ***Loria K**, Lowman H, Sudeep C, and Blaszcak, J (June, 2023) Mountain streams' role in governing physical drivers of nearshore metabolism: a case study of contrasting flow regimes in the Lake Tahoe Basin. Association for the Sciences of Limnology and Oceanography. Summer 2023 Meeting.
- Loria K**, Sudeep C., and Blaszcak, J (May, 2022) Seasonal variation in nitrate uptake and ecosystem productivity rates in mountain streams with contrasting flow regimes in the Lake Tahoe Basin. In the Joint Aquatic Sciences Meeting (JASM). Summer 2022 Meeting. *Poster presentation*.
- Loria K**, and Blaszcak, J (2021, December). Linkages Between Ecosystem Productivity and Nitrogen Uptake in Mountain Streams with Contrasting Flow Regimes in the Lake Tahoe Basin. In AGU Fall Meeting Abstracts (Vol. 2021, pp. H15I-1144). *Poster Presentation*.
- Loria K**, and Blaszcak, J (2021, May). Modeling mountain stream metabolism: methods for linking upland rates of biotic nutrient processing with nearshore productivity in the Tahoe Basin. Society for Freshwater Science. 2021 Virtual meeting. *Poster presentation*.
- ***Loria K**, McKnight D, Ragar D, and Johnson P (2018) Comparative survey of the abiotic and biotic characteristics of lakes across an elevation gradient in the Rocky Mountains, USA. *Association for the Sciences of Limnology and Oceanography*. 2018 Summer Meeting. *Oral Presentation*.

***Loria K** (2017) The effects of elevation on the plankton communities of alpine lakes. *Tenth Annual Guild of Rocky Mountain Ecologists and Evolutionary Biologists*. 2017 Summer Meeting. *Poster Presentation*.

***Loria K** (2015) Biotic Implications of Climate Change on Alpine Lakes. *Research experience for undergraduate oral presentation at the University of Colorado Boulder Mountain Research Station*

Teaching

Teaching Assistantship: NRES 295 Wildlands Hydrology

University of Nevada, Reno; January-May 2021 and 2024

- Coordinated lectures, taught guest lectures, hosted labs, and held weekly office hours to help with scientific writing and graded assignments.

Teaching Assistantship: NRES 210 Environmental Pollution

University of Nevada, Reno; January-May 2024

- Coordinated lectures, taught guest lectures, helped with course material, and graded assignments during weekly office hours.

Teaching Assistantship: ENV 101 Introduction to Environmental Science

University of Nevada, Reno; January-May 2021

- Coordinated lectures, class resources, and graded assignments held weekly office hours to help with material.

Teaching Assistantship: NRES 422/622 Soil Physics

University of Nevada, Reno; August-December 2020

- Prepared laboratory kits and exercises for students, coordinated lectures, class resources, and graded assignments.

Teaching Assistantship: NRES 322 Soil science

University of Nevada, Reno; August-December 2020

- Coordinated lectures, class resources, and graded assignments held weekly office hours to help with material.

Summer science programming: NevadaFIT

University of Nevada, Reno; August 2022 and 2023

- Two-day limnology field course with incoming natural science undergraduate students

Science mentor: University of Nevada, Reno: 2021-present

- REU student Rija Masroor on a project looking at surface water patterns in dissolved organic material.
- McNair scholar and NURA recipient Paola Miramontes-Gonzalez investigates longitudinal patterns in urban stream chemistry and stable water isotopes.
- NV EPSCoR summer research fellow Rob Miller works measuring nearshore N-fixation rates in Lake Tahoe.

Science mentor: University of Colorado, Boulder: 2017-2020

- Field and lab experience to two NSF funded Research Experiences for Undergraduates at the University of Colorado Mountain Research Station
- Field and lab experience to five Undergraduate Research Opportunities Program students (three of whom used their projects to complete undergraduate honors thesis)

Grants and Awards

- **2024** MtnClim Student Travel Scholarship (\$350)

- **2024** Graduate Student Association Travel Grant to Philadelphia PA SFS Meeting (\$500)
- **2023** Graduate Student Association Travel Grant to Palma Spain for ASLO Meeting (\$750)
- **2021** Graduate Student Association Travel Grant to New Orleans for American Geophysical Union Fall Meeting (\$500)
- **2021** AGU Student Travel grant for Fall Meeting (\$1000)
- **2021** Graduate Student Association Spring Research Award for Survey of Caldor Fire on stream water quality (\$1,500).
- **2021-2022** The Southwest Climate Adaptation Science Center Natural Resources Workforce Development Fellowship (\$8,000)
- **2021** National Science Foundation Graduate Research Fellow
- **2020** Honorable Mention in the National Science Foundation Graduate Research Fellowship Program competition.
- **2020** University of Nevada Reno Graduate Dean's Merit Scholar for students who show the potential to make substantive contributions to their discipline (\$10,000).
- **2020** Whittell Forest Graduate Research Fellowship for University of Nevada Reno graduate research (\$1,500).
- **2016** Undergraduate Research Opportunities Program (UROP) to fund a research project in which we sampled lakes North and South of the Green Lakes Valley (\$3,000).
- **2016** Marian and Gordon Alexander Memorial Fellowship Award for 2016 to support research related to the living study of mountains (\$5,000).
- **2015** National Science Foundation for Research Experience for Undergraduates (REU) in Ecology and Evolutionary Biology to participate in a project that sampled alpine lakes in Rocky Mountain National Park (\$5,000).
- University of Colorado, Boulder: Dean's List (2015-2017).

Service

Outreach/Volunteer:

- **2023-2024:** Lake Tahoe Litter Summit, discussed scientific findings with community stakeholders, nonprofits, business leaders, and scientific organizations to share information and collaborate on ways to protect Lake Tahoe from litter accumulation.
- **2023:** Invited talk at the Taylor Creek Visitor Center on Lake Tahoe Watersheds: "*Snow, mountain streams, and water quality in the Tahoe Basin.*"
- **2021-Present:** State of the Lake talks at Glenbrook, NV, to discuss scientific findings with residents. Typically, three each summer.
- **2022:** Big Brothers Big Sisters Science Day Event running the interactive watershed station.
- **2022:** NevadaFit aquatic ecology camp leader teaching incoming UNR students' freshwater ecology courses.
- **2021:** Headwaters Science Institute Lunch with a Scientist Lecture Series: "Mountain Ecosystems and Nitrogen"
- **2020:** Museum of Boulder exhibit "Our Living Landscape: Exploring Boulder's Watershed." Curated information on limnology monitoring efforts within the City of Boulder's Watershed.

- **2017-2020:** Wild Bear Summer limnology science lessons. Teaching base principles of aquatic ecology of mountain systems to K-12 students for three days each summer in a local outdoor setting.
- **2017-2020:** University of Colorado, Boulder Science Discovery Mountain Research Experience. In partnership with Nature Kids/Jóvenes de la Naturaleza, teaching summer courses to high school students on alpine aquatic ecology.
- **2016-2018** Annual Boulder Creek Clean Up through the University of Colorado, Boulder Environmental Studies Club
- **2022** Reno Bike Project holiday bike repair giveaway mechanic
- **2016-2018** Boulder Food Rescue Volunteer

Professional:

- Reviewer for *Freshwater Science* and *Ecological Applications*
- University of Nevada, Ecology Evolution and Conservation Biology Justice, Equity, Diversity, and Inclusion club treasurer (2022-present)
- University of Nevada, Reno Party Planning Committee (2022-present)
- University of Nevada, Reno Peer Review Committee lead reviewer (2021-present)
- University of Nevada, Reno Written comprehensive exam review committee (2022-2023)
- 2021-2022: Tribal Consultation and UA Research/Engagement with Native Communities through the University of Arizona
- NOLS Wilderness First Aide Certification 2016, 2018, and 2022
- 2021 SCUBA certification, high elevation dive certification
- 2020 NSF Risk Management Workshop for Field Scientists
- Drinkhlet University of Nevada, Reno graduate student quantitative reading group (2020-2023)
- QDT-University of Colorado, Boulder EBIO's graduate student "Quantitative data club" (2016-2020)

Relevant Coursework

Ecological Forecasting, Causal Reasoning, Limnology, Tropical Marine Ecology, Animal Behavior, Quantitative Thinking, Biometry, Bayesian Hierarchical Modeling, Evolutionary Biology, Fish Biology, Conservation Ecology, Field Methods in Ecosystem Science, Ecogeomorphology in Rivers, Stream Ecology.

Other Skills

- Programming: R, Stan, MATLAB, HTML, and Python
- Github: github.com/kellyloria
- Development of data analysis and visualization tools, graphic, web design, and scientific illustration

References

* **Dr. Joanna R. Blaszcak:** Natural Resources and Environmental Science Department, University of Nevada Reno
(972) 672-6403
jblaszcak@unr.edu

* **Current academic advisor**

Dr. Adrian Harpold: Natural Resources and Environmental Science Department,
University of Nevada Reno
775-784-6759
aharpold@unr.edu

Dr. Sudeep Chandra: Biology Department and Global Water Center, University of
Nevada, Reno
775-354-4849
sudeep@unr.edu