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**MEGHAN COLLINS, MS.**  
EDUCATION PROGRAM MANAGER, DESERT RESEARCH INSTITUTE  
◦ [MEGHAN.COLLINS@DRI.EDU](mailto:MEGHAN.COLLINS@DRI.EDU) ◦

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Impact:

- *Develop synergies* with faculty across the institute to add value through creative science communication and education approaches.
- *Elevate DRI science* with integrated research-engagement programs for versatile community engagement.
- *Strengthen* the culture of science communication and mentorship to raise the total quality of external engagement across our institute.

Professional interest areas: science communication; community/citizen science; research-driven development of communication tools; education & workforce development; and inclusion, diversity, equity, & accessibility (IDEA).

## Education

**2012. Masters of Science, Environmental Studies.** Victoria University of Wellington, New Zealand.

Thesis: How is science used in policy to address spatial conflict in the marine area for New Zealand aquaculture?

Co-advisors: Michael McGinnis, PhD; Michael Gavin, PhD.

**2007. Bachelor of Arts and Science.** Double major (interdisciplinary): Environmental Science and International Development. McGill University; Montréal, Québec, Canada.

Thesis: Adaptation, a resilience framework and relational thinking: A case study in Cordova, Alaska, USA.

Advisor: Elena Bennett, PhD.

## Publications and Reports

Harrold, Z., M. Arienzo, **M. Collins**, J. Davidson, X. Bai, S. Sukumaran, and J. Umek. 2022. A peristaltic pump and filter-based method for aqueous microplastic sampling and analysis. *ACS ES&T Water: In Publication*.

**Collins, M.**, D. Trimble, D. Samuel, and N. Kimutis. 2022. Report on the 2021 DRI Inclusion and Belonging Survey. Internal DRI Report.

Arienzo M., **M. Collins**, and K. Jennings. 2021. Enhancing Engagement of Citizen Scientists to Monitor Precipitation Phase. *Front. Earth Sci.* 9:617594. doi: 10.3389/feart.2021.617594

Jennings, K., M. Arienzo, and **M. Collins**. 2020. Tahoe Rain or Snow Citizen Science Precipitation Phase Data, Winter 2020, Mendeley Data, V1, doi: 10.17632/gfkkvwm7w8.1

**Collins, M.**, M. Arienzo, and E. Wilcox. 2020. Long-term impacts of COVID-19 on DRI Employees. DRI Faculty Senate Report.

**M. Collins**, R. Schumer, and B. Peterson. DRI Cybersecurity Internship: Final Report 2019. Final grant report prepared for the Nevada Governor's Office of Science, Innovation and Technology.

**M. Collins**. 2019. Evaluation Report: Robotics Teacher Trainings 2018-2019. Evaluation report prepared for Nevada Robotics.

Lambrecht, K. B. Hatchett, L. Walsh, **M. Collins**, Z. Tolby. 2018. Improving Visual Communication of Weather Forecasts with Rhetoric. *Bulletin of the American Meteorological Society*. BAMS-D-18-0186

**Collins, M.** 2018. An evaluation of the Tribal College Faculty-Faculty Research Partnerships. Desert Research Institute Published Report.

McGinnis, M. and **M. Collins**. 2013. A race for space: Science, values, and aquaculture planning in New Zealand. *Coastal Management*, 41: 5, 401-419.

**M. Collins**. 2011. The role of marine science and scientists. Section 3.2 in M. McGinnis, 2011. *Oceans Governance: The New Zealand Dimension*. Emerging Issues Report. Wellington, New Zealand.

## **Academic Experience**

### **Desert Research Institute**

**October 2021 - Present. Strategic Plan Implementation Lead. Reno, NV.**

- Develop and manage activities for Strategic Plan implementation.

**June 2016 - Present. Education Program Manager (Assistant Research Scientist, STEM Education). Reno, NV.**

- Develop the engagement strategy for four novel community/citizen science programs that to date have directly engaged 5,486 people between 2016 - 2021.
- Launched the Science Distilled science café series in collaboration with the Terry Lee Wells Discovery Museum and hosted 29 unique Science Distilled events featuring 37 different DRI faculty.
- Created internship positions for 67 students at DRI and supported dozens of faculty in mentor roles.

**June 2015 - June 2016. Environmental Education Lead. Reno, NV.**

- Launched a multitude of broader impacts projects, including educational initiatives under the Native Waters on Arid Lands program, the Force of Water K-12 educator support program, and EcoNauts immersive learning program.

**Great Basin College. 2017 - 2018. Adjunct Faculty. Elko, NV (part-time, online).**

- Led Integrated Seminar course (online) in environmental and social aspects of natural hazards (INT 369). Curriculum preparation, lecture, and assess a diverse student body following GBC learning objectives.

**Nevada State College. Summer semester 2017 - 2019. Adjunct Faculty. Henderson, NV (part-time, online).**

- Led Research Internship course (online) for professional development and coordinated research internships for Nevada State College students at the Desert Research Institute.
- Curriculum preparation, lecture, and assess a diverse student body following NSC learning objectives.

**Truckee Meadows Community College. 2014 - 2016. Adjunct Faculty. Reno, NV.**

- Led ENV 100, NRES 100, and GEOG 200 courses, in online and face-to-face classrooms.
- Curriculum preparation, lecture, and assess a diverse student body following TMCC learning objectives.

**EDANZ Editing. 2011 - 2013. Scientific Manuscript Editor (part-time consultant, remote). Fukuoka, Japan.**

- Language polishing for scientific manuscripts authored by scientists in Japan and China to prepare the manuscript for submission to international scientific journals.

**OpenPolytechnic University. 2012 - 2013. Online Adjunct Faculty. Wellington, New Zealand.**

- Taught environmental science online at the post-secondary level. Courses taught: Sustainable Development in NZ, Environmental Management.

**Victoria University of Wellington. 2010 - 2011. Teaching Assistant. Wellington, New Zealand.**

- Created content for course entitled Sustainable Development in New Zealand.
- Facilitated labs and assignment planning, essay marking and feedback, presentation marking and feedback.
- Head teaching assistant: July 2011 - November 2011.

**Institute of Policy Studies. 2010 - 2011. Research Assistant. Victoria University of Wellington, New Zealand.**

- Contributed to research on the Emerging Issues Programme Oceans Governance Project.
- Constructed historical timeline of aquaculture development in New Zealand to analyze for the drivers of agenda development in aquaculture policy.

**New Zealand Centre for Sustainable Cities. 2010 - 2011. Research Assistant. Wellington, New Zealand.**

- Contributed to research on the Benchmarking for the Model Communities Programme.
- Developed conceptual framework for study on the social and physical environment determinants of walking and cycling.

**Department of Resource Economics. 2009 - 2010. Research Assistant. University of Nevada, Reno.**

- Contributed to research on the SageSteppe Project.
- Photoshop and Survey Technician to support contingent valuation survey in the Sagebrush Steppe ecosystem.

**Great Basin Landscape Ecology Lab.** 2008. Ecological Science Technician. University of Nevada, Reno.

- Field research on vegetative and tree communities, lithologies, and geomorphology, with emphasis on botany.

**Bamfield Marine Sciences Centre.** 2008. Ecological Science Technician. British Columbia, Canada.

- Contributed to field research and literature reviews for the Sanak Island Biocomplexity Project.
- Maintained intertidal field experiments for theoretical ecology research. Field methods included biodiversity indicators of intertidal species, removal experiments, and succession experiments for algal and invertebrate species.

## **Professional Experience**

**Collingwood at Chautauqua, LLC.** Owner and manager. 2019 - present. Chautauqua Institution, Chautauqua, NY.

- Manage bookings, accounts, marketing, guest relations, turnovers, and maintenance. Proudly woman-run and family-owned since 1989.

**Great Basin Community Food Cooperative.** 2014 - 2015. Human Resources and Outreach Coordinator. Reno, NV.

- Advised business on Human Resources, hiring, skills development and training, and skills development strategies.
- Coordinated outreach, staff and member education, event planning, intern supervision.
- Led Low-Income Access team, social media, graphic design.

**Adaptations English Education.** 2013 - 2014. Editor and English Instructor (self-employed, part-time). Sao Paulo, Brazil and Reno, NV.

- English language editing for academics, English language training for business professionals and academics.

**PlusOne English Consulting.** 2013. English Language Instructor. Sao Paulo, Brazil.

- Prepared curriculum to innovate in English language instruction for business in the greater Sao Paulo area.

**New Zealand Ministry for the Environment.** 2011 - 2013. Policy Analyst. Wellington, New Zealand.

- Project team: Environmental Risk and Innovation.
  - Established a framework for monitoring the effectiveness of the Hazardous Substances and New Organisms Act 1996.
  - Led team strategic planning and regulatory analysis on Ministry-wide Regulatory Planning and Scanning.
- Project team (intern): Marine Environmental Governance.
  - Helped develop Exclusive Economic Zone and Extended Continental Shelf Bill 2011.
  - Conducted Strategic Policy Planning for marine sector, including gap analysis of regulation and marine information-sharing.
  - Undertook planning for stakeholder engagement and media monitoring.

**Great Basin Community Food Cooperative.** 2009 - 2010. Volunteer Coordinator. Reno, NV.

- Oversaw outreach team of volunteers. Launched innovative volunteer program to cumulatively have managed over 1,000 volunteer hours.
- Led marketing campaigns through social media. Graphic design, brochure and newsletter creation and layout.

**Sierra Nevada Journeys.** School Outreach Coordinator. 2008 - 2009. Reno, NV.

- Coordinated after school and in school STEM activities, event planning.
- Conducted community needs assessment survey.

**Deckhand, purse seine commercial fishing vessel.** Cordova, Alaska.

- July - September 2005, 2006. M/V Prince William (pink salmon).
- September 2007. M/V Raven's Child (Coho salmon).

## **Silviculture Technician.**

- Summer season 2007. Wildwoods Reforestation, Inc. High Level, Alberta, Canada.
- Summer season 2004, 2005, 2006. ELF Reforestation, Ltd. Telkwa, British Columbia, Canada.
- Reforestation of northern temperate and boreal forest ecosystems. Experience working in remote places under difficult work and weather conditions.

## **Teaching Experience (Adjunct Faculty)**

Natural Hazards (Special Topics INT 369) – Great Basin College, Elko NV, online (Fall 2017, Spring 2018, Fall 2018)

Internship Elective Course Coordinator BIOL 399/NRES 469– Nevada State College, Las Vegas NV (Summer 2017, Summer 2018, Summer 2019)

Biology 100 Laboratory – Truckee Meadows Community College, Reno NV (Spring 2016)

Environmental Science 100 – Truckee Meadows Community College, Reno NV (Spring 2014, Fall 2015, Spring 2015)

Natural Resources and Environmental Science 100 – Truckee Meadows Community College, Reno NV (Fall 2014)

World Regional Geography 200 – Truckee Meadows Community College, Reno NV (Spring 2014)

Environmental Management 100 – OpenPolytechnic University, Wellington NZ (Summer 2012)

Sustainable Development Issues in New Zealand 101 - OpenPolytechnic University, Wellington NZ (Spring 2012)

*Teaching Assistantship:*

Sustainable Development in New Zealand, Victoria University of Wellington, NZ (Spring 2010, Spring 2011)

## **Awards and Honors**

**DRI Service Medal.** Spring 2019. Awarded for broader impacts across the Institution and throughout our communities. Presented by the President of DRI.

**Girl Scouts of the Truckee Meadows Triumph Nominee.** 2017. STEM education Category. This award recognizes women in leadership in our region.

**Service Excellence Award.** Spring 2015. Presented by Truckee Meadows Community College for outstanding service to the college.

**Part-Time Faculty of the Month.** March 2015. Truckee Meadows Community College award for teaching contribution.

**Award for Best Student Paper.** February 2012. Asia-Pacific Science and Technology Studies Conference, Wellington, NZ.

## **Professional Society Memberships**

- American Evaluation Association. 2021 - Present.
- American Geophysical Union. 2017 - 2021.
- Ecological Society of America. 2015 - 2016.

## **Grants Awarded (PI or Co-PI roles)**

2021. **Collins, M.** and A. Murray. Living Snow in the Sierra Nevada. Nevada NASA EPSCoR Research Infrastructure Development. \$34,515.

2021. Lambrecht, K., L. Walsh, B. Hatchett, **M. Collins**, and Z. Tolby. Employing rhetoric to improve probabilistic forecast communication. \$250,972.

2021. VanderMolen, K., G. McCurdy, T. Wall, **M. Collins**, and Y. Son. Development, Implementation and Evaluation of Stakeholder-Driven Wildfire Smoke Monitoring and Messaging in Rural Nevada. Submitted to the Environmental Protection Agency. \$549,474.

2021 Jennings, K., **M. Collins**, B. Hatchett, and M. Arienzo. Monitoring the Rain-Snow Transition in the Western US with Citizen Science Observations. Sponsor: NASA Citizen Science for Earth Systems Program. \$525,532.

2021. Lareau, N. and **M. Collins**. "Ashfall Stories" – Identifying the Physical Drivers and Radar Signatures of Fire-Generated Tornadoic Vortices. National Science Foundation. Total: s DRI Subaward: **\$139,410**.

2020. **Collins, M.**, M. McCarthy, K. Bocinsky, and A. Lutz. Teaching Native Waters. Sponsor: National Institute for Food and Agriculture. \$99,998.

2019. Holmes, E. and **M. Collins**. NASA-Stories: Internships for Rural Nevada Undergraduates. Funded by the Nevada Space Grant Office, Hands-on-Training track. **\$24,905**.

2020. Madison, L., **M. Collins**, AJ Long. 2020. Phenomena from the Field. Sponsor: Nevada Governor's Office for Science, Innovation, and Technology. \$37,289.

2020. Menezes, M., M. Misra, A. Lutz, **M. Collins**, J. Moon, and E. Kim. Self-Adaptive Lubricants for Extreme Space Mechanism Adaptations. Sponsor: NASA CAN. Total: \$1.2M; DRI Subaward total: **\$292,929**.

2019. Arienzo, M. and **M. Collins**. Are dryers a source of microplastics to Lake Tahoe? REI Foundation. \$9,883.

2019. **Collins, M.** NASA-Stories: Internships for Great Basin College students. Funded by the Nevada Space Grant Office, Hands-on-Training track. **\$40,142**.

2019. Arienzo, M., K. Jennings, and **M. Collins**. Tahoe Rain or Snow? Leveraging citizen science data to improve satellite measurements of precipitation phase. Funded by Nevada NASA Space Grant Research Infrastructure Development. **\$39,630**.

2019. **Collins, M.** Ski Resort kit giveaways. Charitable gift from the Tahoe Fund. **\$47,850**.

2017. **Collins, M.** Tahoe-Truckee Community Foundation. "Stories in the Snow". **\$6,635**.

2017. McDonough, F. and **M. Collins**. "Stories in the Snow": Can citizen science methods be used to advance snow science research? Nevada Space Grant Consortium, Research Infrastructure Development. **\$15,000**.

2017. **Collins, M.** and L. Madison. DRI SciComm: Science Communication skill-building for UNR and UNLV graduate students. Nevada NASA Space Grant Consortium, Hands-on-Training. **\$9,033**.

2017. Hatchett, B. and **M. Collins**. Developing and communicating rain shadow science in Nevada. Nevada Space Grant Consortium, Research Infrastructure Development. **\$30,000**.

2015. **Collins, M.**, M. Peterson, and C. Rosen. Force of Water and Terminal Watersheds: educator training and support program (ID: 15721). Nevada Division of Environmental Protection. **\$51,903**.

2015. **Collins, M.** and B. Fitzgerald. Nevada Space Grant. EcoNauts and Habitat Earth: DRI Earth Science for CLCNN NASA Programming today and into the future. Nevada NASA EPSCoR program. **\$16,068**.

2014. Cook, J. and **M. Collins**. Grant to support Camp Grow Food Access Program. Great Basin Community Food Cooperative. **\$6000**.

2012. **Collins, M.** Strategic Research Grant. Victoria University of Wellington How is science used in policy to address spatial conflict in the marine area for New Zealand aquaculture? **\$4000**.

### **Internal Grants Awarded (DRI)**

2019. Arienzo, M., Z. Harrold, and **M. Collins**. Microplastics in the Lake Tahoe Basin. DRI Foundation, Innovation Research Program. **\$39,944**.

2017. **Collins, M.** and M. Peterson. Green Box: Ecology, water and the stewards of our watersheds. Lander Endowment Fund. \$31,139.00

2016. **Collins, M.**, A. Gulling, J. Arnone, and R. Jasoni. Real Science in Real Time: Learner-driven Science Inquiry for the Great Basin. Lander Research Funds.

### **Conference Activity**

2021. Ortega, L., **M. Collins**, Z. Harrold, E. Frey, and M. Arienzo. Citizen science sampling for microplastics in Lake Tahoe, California: Preliminary results. AGU Fall Meeting 2021: New Orleans, Louisiana.

2021. Arienzo, M., **M. Collins**, and K. Jennings. **Tahoe Rain or Snow: Monitoring precipitation phase through citizen science**. Nevada NASA EPSCoR Annual Meeting 2021: Online.
2020. **Collins, M.**, M. Arienzo, and K. Jennings. **Tahoe Rain or Snow: Enhancing engagement of citizen scientists to monitor precipitation phase**. AGU Fall Meeting: Online.
2020. Jennings, K., Arienzo, M. M., **Collins, M. J.**, 2020: **Comparing Satellite Estimates of Precipitation Phase to Citizen Science Observations**, AGU Fall Meeting: Online
2020. Arienzo, M. M., **Collins, M. J.**, Davidson, J. M., Frey, E., Movius, M., 2020: **Are clothes dryers a source of microplastics to the atmosphere?** American Geophysical Union Fall Meeting: Online.
2019. **Collins, M.**, M. Arienzo, Z. Harrold, Z. Bradford, and E. Frey. **Case Study on Developing a Citizen Science Protocol for Microplastics in Lake Tahoe**. American Geophysical Union Fall Meeting. December 9-13, 2019; San Francisco, CA.
2019. Harrold, Z., M. Arienzo, **M. Collins**, X. Bai, J. Davidson. **Introduction to High Volume Sampling: A novel method for sampling microplastics in diverse aqueous systems**. American Geophysical Union Fall Meeting. December 9-13, 2019; San Francisco, CA.
2019. **Collins, M. Native Waters on Arid Lands. Partnerships for Education and Actionable Science**. Presentation to the Native American Fish and Wildlife Society Meeting. October 15-17, 2019. Yakima Nation.
2019. **Collins, M.**, F. McDonough, J. Juchter, M. Arienzo, and J. Dean. **Stories in the Snow: Crowd-sourced snow crystal images to identify Tahoe winter cloud structures**. Annual Western Snow Conference; April 16-18, 2019; Reno, NV.
2017. **Collins, M.** B. Grebliunas, R. Jasoni, and J. Phillips. **STEM research as a means to a different end. How can research partnerships at TCUs serve as a channel for career readiness and community capacity building?** Conference Presentation to the American Indian Society for Engineering and Science. Denver, CO.
2017. White, J., **M. Collins**, P. Conrad. Human perceptions of Red-tailed Hawks in an urban ecosystem. Poster Presentation. Wildlife Society, Western Section. February 10, 2017. Reno, NV.
2016. **Collins, M.** and J. White. Disentangling pedagogical methods and instructor traits in higher education geography courses. Poster Presentation at the Association of American Geographers. March 2016. Reno, NV.
2016. Collins, M. **Broadening Access? K-12 teacher perceptions of virtual learning and how we consider access when resources are scarce**. Oral Presentation. Ecological Society of America, Oral Session on Cyber-learning and Ecology. Fort Lauderdale, FL.
2015. **DRI and Diversity along the STEM Pipeline**. Nevada System of Higher Education Diversity Summit. Las Vegas, Nevada.
2015. **High-Impact STEM education: What we can learn from the DRI GreenPower program**. Poster presentation. Ecological Society of America Conference. Baltimore, MD.
2012. **Politicization of science, misinformation, and mistrust. How might science contribute to mitigating environmental conflict?** Oral Presentation. Asia-Pacific Science and Technology Studies Conference, Wellington, NZ.
2011. **New Zealand aquaculture, environmental controversy, and science**. Oral Presentation. International Congress for Conservation Biology. Auckland, NZ.

### **Invited Talks**

2021. **Collins, M.** Guest Lecture: Research Methods and Citizen Science. Education Research Methods. UNR College of Education. September 22, 2021.
2021. **Collins, M.** Guest Lecture: Citizen Science approaches to research. Geography Research Methods. UNR Geography Department. October 4, 2021.
2020. **Collins, M.** Guest Lecture: Research Methods and Citizen Science. Education Research Methods. UNC College of Education. September 16, 2020.
2020. **Collins, M.** Career Aspirations and Community Leadership. UNR Youth Leadership Summit. UNR. January 25, 2020.
2019. **Collins, M.** Science Communication Fundamentals. UNR Graduate Hydrologic Sciences Program. October 10, 2019.

2018. **Collins, M.**, H. Segale, and E. Frey. Lessons learned from Citizen Science Tahoe. UC Davis Citizen Science Lab Group Collabinar. December 5, 2018.

## **Campus and Departmental Talks**

2019. **Collins, M.** Key considerations for developing a citizen science program. Fly Ranch GeoScience Weekend. May 30, 2019. Gerlach, Nevada Desert Research Institute.

2018. **Collins, M.** Science Communication Fundamentals. Interactive workshop facilitated for the DRI Early Career Development Program.

2016. **Collins, M.** Out of the Box Educational Programs – The Centros Etievan model. Presentation to DRI Faculty, Reno, NV and Las Vegas, NV.

2015. **Collins, M.** GreenPower and Broader Impacts. Presentation to DRI Faculty. Reno, NV.

2011. **Collins, M.** Questions of social learning and resilience in Cordova, Alaska, USA. Seminar Series Presentation to the School of Geography, Environment and Earth Sciences, Victoria University of Wellington, New Zealand.

## **Workshops and Trainings Led**

2021. **Collins, M.** and A. Lutz. Bridge to Graduate School: Professional Development Modules. Facilitated with interns taking part in the NASA CAN-funded tribology research. June-August 2021. Virtual.

2021. **Collins, M.** Science Communication Session: Using narrative tools for more compelling proposals and scientific presentations. Science Communication Training for DRI Faculty. July 12, 2021. Virtual.

2021. **Collins, M.**, L. Footracer, and A. Lutz. Teaching Native Waters: What makes water drinkable? April 18-May 28, 2021. Virtual.

- Facilitated a six-week professional development program on water quality.
- Created a community of practice for skill-building between scientists and educators serving Indigenous students.

2021. **Collins, M.**, L. Funseth, and K. Fitzgerald. Science Communication Session: 1000 Words (Taking Great Photos and Video for Science). Science Communication Training for DRI Faculty. April 12, 2021. Virtual.

2021. **Collins, M.**, A. Warneke, and M. Peterson. Teaching Native Waters: Making Climate Connections. January 18, 2021-February 26, 2021. Virtual.

- Facilitated a six-week professional development program on the climate system.
- Created a community of practice for skill-building between scientists and educators serving Indigenous students.

2020. **Collins, M.** and L. Funseth. Science Communication Session: Design More Effective Figures: Visual Communication Strategies. Science Communication Training for DRI Faculty. November 20, 2020. Virtual.

2020. **Collins, M.** Science Communication Session: Demystifying Virtual Conferences. Science Communication Training for DRI Faculty. October 29, 2020. Virtual.

2020. **Collins, M.** and K. Bocinsky. Teaching Native Waters: Pueblo Farming Project and Know Your Soil. October 5 - November 20, 2020. Virtual.

- Facilitated a six-week professional development program on the climate system.
- Created a community of practice for skill-building between scientists and educators serving Indigenous students.

2020. Long, AJ and **M. Collins**. Phenomena from the Field: Teacher Professional Development. Facilitated a five-part professional development series with DRI scientists for educators. June 15-19, 2020. Virtual.

2020. Remis, A., E. Holmes, and **M. Collins**. Training for Stories in the Snow Citizen Scientists. Hands-on education for volunteers submitting snow crystal images to DRI Stories in the Snow program. Twelve training events were conducted between January and March 2020. Mt Rose Ski Resort, Diamond Peak Ski Resort, Northstar Ski Resort, Homewood Ski Resort, Alpine Meadows Ski Resort, and Palisades Ski Resort.

2020. **Collins, M.** and C. King. Teacher Training: Stories in the Snow Citizen Science. Nevada Division of Environmental Protection Project WET Training. January 25, 2020. Carson City, NV.

2020. Mason, D., C. Richardson, and **M. Collins**. DRI Cybersecurity Bootcamp. January 13-17, 2020. Las Vegas, NV.

- Co-facilitated a 40-hour training for graduate students and upper-level undergraduate students in the computer sciences.
- Taught the fundamentals of cybersecurity and workforce connections.

2019. McCarthy, M., K. Bocinsky, and **M. Collins**. Making Climate Data Useful, and Place-Based Education with Native Waters on Arid Lands. Immersive two-day workshop for educators serving Native students, adapting existing curriculum to connect to their home communities. September 10-11, 2019.

2019. **Collins, M.** Professional development for future researchers: DRI-NSC Internship Program. Facilitated six one-hour professional development modules focused on preparing first-generation college students for careers in STEM and research. June-August 2019.

2018. Peterson, B., **M. Collins**, and R. Coots. DRI-SANS Cybersecurity Internship Modules. Immersive, work-based learning curriculum to train participants in the fundamentals of cybersecurity. September - December 2018. Reno, NV.

2018. McCarthy, M., K. Bocinsky, and **M. Collins**. Downscaled Climate Data: Presentations for Tribes. Workshop for Navajo and Hopi educators, farmers, ranchers, and environmental professionals. September 11-13, 2018. Kykotsmovi, AZ, Shiprock, NM, and Tuba City, AZ.

2018. **Collins, M.** Stories in the Snow Roundtable for Educators. Nevada National Science Teachers Association Conference. September 9, 2018. Reno, NV.

2018. McCarthy, M., K. Bocinsky, and **M. Collins**. Navajo Technical University Climate Change Workshop. Collaboration between Native Waters on Arid Lands and Navajo Technical University. September 4-7 2018. Crownpoint, AZ.

2018. Cramer, R., **M. Collins**, and M. Wright. Force of Water Teacher Training. Facilitated three immersive 1.5-day curriculum workshops on the pedagogy behind the Force of Water 5E lessons. January-September 2018. Elko, NV, Zephyr Cove, NV, and Las Vegas, NV.

2018. **Collins, M.** and M. Peterson. Water Quality Basics. Half-day workshop for students of the Walker River Paiute Tribe on the fundamentals of water quality. July 2018. Shurz, NV.

2018. **Collins, M.** Professional development for future researchers: DRI-NSC Internship Program. Developed and facilitated six one-hour professional development modules focused on preparing first-generation college students for careers in STEM and research. June-August 2018.

2018. **Collins, M.** DRI SciComm: Immersive Science Communication Workshops for UNR Graduate Students. March-May 2018. Reno, NV.

2018. McCarthy, M., K. Bocinsky, and **M. Collins**. Downscaled Climate Data: Presentations for Hopi Nation farmers, ranchers, and educators. Native Waters on Arid Lands workshops. March 2018. Kykotsmovi, AZ.

2018. **Collins, M.** DRI SciComm: Immersive Science Communication Workshops for UNLV Graduate Students. January 2018. Las Vegas, NV.

2017. **Collins, M.** DRI SciComm: Immersive Science Communication Workshops for UNR Graduate Students. March-May 2017. Reno, NV.

2016. **Collins, M.**, B. Fitzgerald, and P. McFarlane. EcoNauts and Habitat Earth: Immersive problem-solving using Earth science. Immersive curriculum deployed at the Reno-Sparks Challenger Center with middle school students.

## **Community Presentations**

2021. **Collins, M.** and E. Holmes. Snowflake photography for the whole family. Tahoe Fund and DRI Collaboration. Virtual.

2020. **Collins, M.** and Z. Harrold. Microplastics in Lake Tahoe. South Lake Tahoe Rotary Club February 7 2020 South Lake Tahoe, California.

2019. **Collins, M.** Growing situational awareness through citizen science. Presentation to the California Avalanche Workshop, Sierra Avalanche Center. November 11, 2019.

2019. **Collins, M.** Youth Day with Pyramid Lake Paiute High School students. Native Waters on Arid Lands Tribal Summit. Reno, Nevada.

2019. **Collins, M.** Microplastics in Lake Tahoe: 2019 Results and Importance of Citizen Scientists. League to Save Lake Tahoe Citizen Science Summit. October 18 2019. South Lake Tahoe, California.

2019. **Collins, M.** Extracting DNA from Bananas. Girls' Day of STEM with the Girl Scouts of Las Vegas. March 30, 2019. Las Vegas, Nevada.

2019. **Collins, M.** The Science of DRI. UNLV L-SAMP Workshop. March, 28 2019. Las Vegas, Nevada.

2019. **Collins, M.** Citizen Science with Stories in the Snow. Youth Sciences Institute, UC Davis TERC. March 27, 2019. Incline Village, Nevada

2019. **Collins, M.** Extracting DNA from Bananas. Girls' Day of STEM with Girl Scouts of the Truckee Meadows. January 26, 2019. Reno, Nevada.

2019. **Collins, M.** Citizen Science with Stories in the Snow. North Tahoe High School. January 21, 2019. Tahoe City, California.

2019. **Collins, M.** Crowdsourcing scientific data through artful means. 1 Million Cups Entrepreneurial Seminar Series. January 16, 2019. Reno, Nevada.

2019. **Collins, M.** Citizen Science with Stories in the Snow. Mountainview Montessori. January 14, 2019. Reno, Nevada.

2019. **Collins, M.** Citizen Science with Stories in the Snow. North Tahoe High School. January 11, 2019. Tahoe City, California.

2019. **Collins, M.** Citizen Science with Stories in the Snow. Glenshire Elementary School. January 8, 2019. Truckee, California.

2018. **Collins, M.** Citizen Science with Stories in the Snow. Bordewich Bray Middle School. December 20, 2018. Carson City, Nevada.

2018. **Collins, M.** Citizen Science with Stories in the Snow. Gardnerville Middle School. December 18, 2018. Gardnerville, Nevada.

2018. **Collins, M.** Citizen Science with Stories in the Snow. Sage Ridge School. December 17, 2018. Reno, Nevada.

2018. **Collins, M.** Professional development and undergraduate research experiences. Atmospheric Science Students Club. University of Nevada, Reno. December 3, 2018.

2018. **Collins, M.** Citizen Science with Stories in the Snow. Winter Wildlands Snow Festival. November 29, 2018. Reno, Nevada.

2018. **Collins, M.** Youth Day 2018 with Pyramid Lake Paiute High School students. Native Waters on Arid Lands Tribal Summit. October 15, 2018. Reno, Nevada.

2018. **Collins, M.** The science behind Stories in the Snow citizen science. Truckee Meadows Parks Foundation Public Talks. February 5, 2018. Reno, NV.

2018. **Collins, M.** Participating in Stories in the Snow. Reno Newcomers and Neighbors Club. February 1, 2018. Reno, NV.

2017. **Collins, M.** Highlights of DRI Science. Agricultural Educators professional development tour. July 25, 2017. Reno, Nevada.

2017. **Collins, M.** Citizen Science with Stories in the Snow. Zephyr Cove Elementary School. February 28, 2017. Zephyr Cove, Nevada.

2017. **Collins, M.** Citizen Science with Stories in the Snow. Mendive Middle School. February 22, 2017.

2017. **Collins, M.** Citizen Science with Stories in the Snow. Youth Sciences Institute, UC Davis TERC. February 2, 2017. Incline Village, Nevada.

2017. **Collins, M.** Citizen Science with Stories in the Snow. Tahoe Expeditionary Academy. January 27, 2017. Truckee, California.

2017. **Collins, M.** Citizen Science with Stories in the Snow. Donner Trail Elementary School. January 5, 2017. Truckee, California.

2016. **Collins, M.** Careers in Environmental Science. Science Saturdays at the Automobile Museum. May 14, 2016. Reno, Nevada.

2015. **Collins, M.** Highlights of DRI Science. Pyramid Lake Paiute Middle School. December 3, 2015. Reno, Nevada.

2015. **Collins, M.** The Science of DRI. TMCC STEM Society Tour and Presentation. November 12, 2015. Reno, Nevada.

2015. **Collins, M.** Science and Multiple Ways of Knowing. Pyramid Lake Paiute Tribe Summer Camp. June 17, 2015. Nixon, Nevada.

## **Professional Service and Community Leadership**

2021. **Advisory Board Member.** Terry Lee Wells Discovery Museum. Advised the Exhibition Developer in the creation of the Energy/Energía Exhibit. April-October 2021.

2021. **Reviewer**, national call for proposals. NASA Minority University Research and Education Project (MUREP) Ocean Biology and Biogeochemistry (OCEAN). May 24-28, 2021.

2021. **Chair**, Committee on DRI Land Acknowledgement.

- Led the committee that created the Land Acknowledgement statement for DRI.
- Engaged leaders from Indigenous communities in our region in a series of listening sessions.
- Penned the statement recognizing the role we have as scientists in equitable and mutually beneficial partnerships for science and our place in history and on the land.

2020. **Reviewer**, statewide scholarship proposals. Nevada EPSCoR Undergraduate Research Opportunity (UROP). May 2020.

2020-Present. **Chair**, DRI IDEA Committee (Inclusion, Diversity, Equity, and Accessibility).

- Established a framework for effective committee service: developed theory of change, comprehensive set of objectives to further DRI's IDEA Objectives, Committee Charter, and Committee structure.
- Developed the data collection and analysis approach DRI's first Inclusion and Belonging Survey.
- Facilitated eight interactive workshops for employees organization-wide.

2020. **Chair**. DRI hiring committee for Assistant Research Professor, STEM Education.

2018. **Convener**. Tribal College Capacity-Building Session. Native Waters on Arid Lands Summit. October 2018. Reno, NV.

2018. **Reviewer**. Nevada NASA EPSCoR Hands-On-Training and Curriculum Development proposals.

2018. **Reviewer**. National scholarship competition. American Indian Science and Engineering Society (AISES). September 2018.

2017-2019. **DRI Faculty Senator**: Representative in shared governance.

- Served on the Ad Hoc Travel Policy Committee to revise the DRI Admin Manual Travel Policy (2019).
- Served on Scientific Integrity and Research Ethics Committee, contributing to the Community Engagement section (2018).

2016-2018. **Facilitator**, UNR GradFit. Reno, NV.

- Facilitated interactive panel discussions with future graduate students as part of this UNR program.
- Connected future graduate students with DRI faculty.
- Engaged future graduate students in professional development activities.

2016. **Co-convener**: Oral Session. Ecology and cyberlearning: Inherent paradox or rich with potential? Ecological Society of America. August 2016. Fort Lauderdale, FL.

2016. **Reviewer**, Virtual Science Fair. American Indian Science and Engineering Society (AISES). September 2016.

2016. **Hiring Committee Member**. DRI Postdoctoral Fellow, Social Science.

2015-2017. **Lead of selection process** for the DRI J.O. Davis Scholarship.

- Facilitated the selection process of the J.O. Davis scholarship annually for three years, including convening review panels, receiving applications, and moderating the awardee presentations.

2015-2016. **DRI Faculty Senate Minutes**. Provided clear and transparent note-taking in support shared governance at DRI.

2015-2016. **Facilitator**. Washoe County School District Career Expo. Build and facilitated hands-on STEM activities for workforce development. Reno, NV.

2015-2016. **Site lead**. Nevada Division of Environmental Protection. Snapshot Day. Facilitated water quality sampling site lead. Engaged numerous middle school classrooms in water quality sampling of the Truckee and Carson Rivers.

2015. **Facilitator.** Truckee Meadows Community College High School Leadership Class.

- Facilitated a multi-week service-learning experience for Leadership Students to learn, master, and conduct STEM activities in elementary school classrooms.
- Provided opportunities for high school students to engage in tiered mentoring and teaching, while gaining leadership and career skills.

2015. **Facilitator.** Career Education Forum. Carson City High School. Contributed to a large expo of STEM professionals to help educators make career connections in their classroom.

2015. **Exhibition contributor.** Terry Lee Wells Discovery Museum.

- Created content for the Spark!Lab Exhibit based on DRI engineering and scientist inventions.
- Spotlighted local inventors in a space frequented by thousands of visitors per year.

2015-present. **Volunteer.** Reno Gleaning Project. Volunteers working to address food insecurity in our community.

2014-2015. **Founder.** Truckee Meadows Network of Part-Time Faculty.

- Fostered stronger community and workplace culture among adjunct faculty at TMCC.
- Conducted a survey of 134 Adjunct Faculty members for the Part-Time Issues Committee.

2015. **Reviewer.** TMCC Foundation Scholarship Review Board. Truckee Meadows Community College.

2013-2014. **Blog contributor and curriculum coordinator.** Centros Etievan. Sao Paulo, Brazil.

- Contributed to programming that supports adolescents in Brazil to increase self-confidence and willpower.
- Wrote blog articles on cross-cultural education providing insights to educators and parents.

2010-2012. **Co-Founder.** Juvenate Dance and Arts Organization. Wellington, New Zealand.

- Co-founded a not-for-profit dance organization seeking to use the disciplines of dance, art, music, public speaking and public presentation to provide positive and authentic experiences to young people in New Zealand.
- Organized dance events and competitions.
- Trained new dancers in foundational urban dance styles.

2009. **Founding Board Member.** Urban Roots Garden Classrooms. Reno, Nevada.

- Contributed to establishing [Urban Roots](#) 501c3.
- Developed organizational strategy using farm-to-school education for sustainability through food production knowledge.

2002. **Volunteer.** Biological Science Technician. Playa Hermosa, Costa Rica. Asociación de Voluntariados de Áreas Silvestres Protegidas with the tortuga lora (Ridley's turtle).

## **Professional Development**

2020. Management Skills for New Managers. 16 hours. American Management Association.

2020. Asking Matters: Fundraising from Philanthropic Sources. 8 hours. Asking Matters LLC. Reno, Nevada.

2019. Project Management Skills: The Basics for Success. 40 hours. American Management Association.

2019. Assertiveness for Women in Business. 24 hours. American Management Association.

2018. NSF S-STEM Proposal Development Workshop. University of Nevada, Las Vegas. 8 hours. Las Vegas, NV.

2018. Translational Ecology and Knowledge Co-Production Workshop. Southwest CASC. 16 hours. Tucson, AZ.

2018. UNR Grant Writing Workshop. University of Nevada, Reno. 2 hours. University of Nevada, Reno.

2018. Grant Management. Grant Writing USA. 16 hours. March 2018.

2017. Skills for success: Early Career Faculty Retreat. Nevada EPSCoR Office. 24 hours. Incline Village, Nevada.

2016. Grant Writing I. 16 hours. Grant Writing USA.

2016. Wilderness First Aid. Desert Research Institute. 4 hours. Reno, Nevada

2015. Native American Curriculum Writing Workshop. Nevada Department of Education. July 16-17, 2015. University of Nevada, Reno.

2015. Delivering Effective Online Courses. 20 hours. Truckee Meadows Community College.

2014. Part-time Faculty Professional Development Teaching Certificate. 50 hours. Truckee Meadows Community College. Sponsored by National Science Foundation.

### **Media coverage**

2022. New internship pairs college students with DRI researchers. [Las Vegas Review-Journal](#).

2021. What is falling from the sky right now? How you can help researchers. [Fox Weather](#).

2021. UNR scientists want to better predict fire tornadoes – and you can help. [My News 4](#).

2021. How ash falling from wildfires can help future predictions of extreme fire weather. [ABC 10](#).

2020. Lake Tahoe's pristine legacy threatened by microplastics. [ScienceNotes](#).

2020. Snow science by citizens. [Tahoe Quarterly](#).

2020. Study investigates link between clothes dryers, microplastic pollution in Lake Tahoe. [Tahoe Daily Tribune](#).

2020. How marijuana impacts air quality in indoor grow facilities. [Kolo 8](#).

2020. DRI Cybersecurity Internship program. [Las Vegas Review Journal](#).

2020. New Las Vegas cybersecurity bootcamp teaches students how to hack. [Fox 5](#).

2020. Desert Research Institute, NASA bring cybersecurity education to UNLV students. [Channel 8 NewsNow](#) and [web extra](#).

2020. Help DRI track snow, rain. [Tahoe Weekly](#).

2020. Microplastics are turning up everywhere. [Physics World](#).

2019. Stories in the Snow at DRI. [Moonshine Ink](#).

2019. Yes, there is microplastic in snow. [Quartz](#).

2019. Stories in the Snow: Snowflake Secrets. [Tahoe In Depth](#).

2019. Microplastics are found in Lake Tahoe's waters for the first time ever. [LA Times](#).

2019. Tribal Summit Highlights agriculture, food sovereignty. [This is Reno](#).

2018. Building Tribal Climate Resilience Across Generations. [California Climate Adaptation Forum](#).

2017. Stories in the Snow: Citizen Science at DRI. [News Channel 4 Reno](#).

2017. Native Waters on Arid Lands - Youth Day. [News Channel 4 Reno](#).

2017. Science Distilled Lecture Series. Batteries Included. [News Channel 4 Reno](#).

2017. Science Distilled Lecture Series. The Birds and the Bees. [News Channel 4 Reno](#).

2017. Science Distilled Lecture Series. Sculpting the Earth. [News Channel 4 Reno](#).

2016. DRI names Meghan Collins as STEM Research Scientist. [Nevada Business](#).

2014. Home Grown for the Holidays. [Reno News and Review](#).

2014. Fun Food Facts. [Reno News and Review](#).

2011. Wellington Indoor Sports Opening, [Radio New Zealand Asian Report](#).