



CLIMATE CHANGE INSTITUTE

FY2023 Annual Report

Research Activity for the period
July 1, 2022 - June 30, 2023

I. CLIMATE CHANGE INSTITUTE – MISSION & GOALS

In 2023 the Climate Change Institute celebrated its 50th anniversary making it one of the world's oldest multi-disciplinary climate research units. When CCI started (as the Institute for Quaternary Studies) climate was assumed to operate slowly, over hundreds of years, and therefore to have relatively little immediate effect on humans and ecosystems. Through the pioneering efforts of CCI researchers we now know that climate can change abruptly, in 2-5 years; that the cause for modern climate change is primarily driven by human activity; and that it has dramatically affected human and ecosystem health. Today climate change is a major security issue for our country and the world and a defining element for the 21st century. It impacts human and ecosystem health, the economy, causes geopolitical stress, and increases the frequency and magnitude of storms, floods, droughts, wildfires and other extreme events. CCI is recognized as an international leader in climate science and is a Signature Research area in the University of Maine. It has a legacy of transformational contributions to the understanding of the physical, chemical, biological and social aspects of climate change and the application of these findings at local to international scales. CCI continues to maintain its high level of interdisciplinary climate science program leadership, research funding, return on indirect, scientific and popular press publications, state, national/international leadership, and its role as the focal point for the University of Maine's climate change research excellence. Examples for the current reporting year follow. CCI researchers are involved in 189 currently active research grants and contracts for a total of \$73,274,702. CCI return on investment for FY2023 remains high at 29.12 factored using the Research Information Management Tool and based on activity by all CCI affiliated researchers. CCI provides a climate change framework for several academic units at the university (e.g., Cooperative Extension, Schools of Earth and Climate Sciences, Marine Sciences, Biology and Ecology, Business, Department of Anthropology) and for the University of Maine Law School and other UMS institutions (e.g., University of Southern Maine, University of Maine at Fort Kent). CCI interacts with: State of Maine agencies (e.g., Department of Environmental Protection, Department of Conservation, Forestry and Agriculture, Department of Transportation, Maine Geological Survey, Maine Inland Fisheries and Wildlife, Maine Center for Disease Control, Department of Licensing and Regulatory Services) including a prominent role in Gov. Mills' Maine Climate Council; federal agencies (e.g., National Science Foundation, Environmental Protection Agency, Department of the Interior, National Park Service, US Department of Agriculture, US Forest Service, Natural Resource Conservation Service, US Department of Commerce, National Oceanic and Atmospheric Administration]; Maine-based non-governmental organizations (e.g., Blue Hill Heritage Trust, Friends of Acadia, Maine Lakes Society, Maine Audubon); and both national (e.g., Harvard, Princeton, Dartmouth, Columbia, University of Washington, University of Colorado) and international research organizations (eg., Scientific Committee for Antarctic Research, University of the Arctic, United Nations, Victoria University (New Zealand), Universidade Federal do Rio Grande do Sul (Brazil), Magallanes University (Chile), Australian National University, Nottingham University (UK) and Ca'Foscari University of Venice (Italy)). CCI has a long tradition of outreach through numerous media venues, public talks, popular articles, and web-based software with the most prominent example being Climate Reanalyzer (2000-3000 hits/day up to ~20,000/ hits/day thus far). CCI, with a pause during the COVID-19 pandemic, continues to maintain its legacy of field expeditions throughout Maine and the world and offers the more than 55 graduate students associated with CCI the opportunity to experience on the ground research and career changing experiences. CCI's eleven research laboratories continue to produce high quality data and hands on opportunities for students – many leading to transformational scientific discoveries.

II. CCI DIVERSITY, EQUITY AND INCLUSION EFFORTS

During FY2023, the CCI Diversity, Equity, and Inclusion Committee (DEIC) continued to work on the 5 areas for future improvement identified in the FY2022 CCI Survey: 1) support/infrastructure for DEI initiatives within CCI; 2) micro-aggression training; 3) transparency in professional development and promotion, specifically concerning affiliated or cooperating faculty and staff; 4) transparency on the Title IX processes within the University; and 5) opportunities for connection across disciplines within CCI and departments associated with CCI. The DEIC hosted multiple microaggression and implicit bias awareness trainings (attended by 21 CCI members; in-person and zoom) and an interdisciplinary event to share research elevator pitches and brainstorm interdisciplinary solutions (attended by 14 CCI members). The DEIC also drafted recommendations for interactive codes of conduct for on-campus and field work, and continued to compile actionable items for future implementation.

III. KEY PERFORMANCE INDICATORS

Research Funding – Tables below use the Research Information Management Tool using the FY2022 CCI filter.

CCI Award & Submission History – FY2023 – FY2021 Totals include grants/submissions by all CCI Affiliated Researchers

FY 2023	FY 2022	FY2021
CCI Award History Total # Awards: 56 Total All Projects: \$20,359,402 ROI: 29.12	CCI Award History Total # Awards: 46 Total All Projects: \$11,833,176 ROI: 20.22	CCI Award History Total # Awards: 41 Total All Projects: \$16,088,154 ROI: 26.93
CCI Grant Submission History Total # Submissions: 84 Total All Submissions: \$60,515,631	CCI Grant Submission History Total # Submissions: 68 Total All Submissions: \$52,171,767	CCI Grant Submission History Total # Submissions: 56 Total All Submissions: \$29,744,699
CCI Award History (Active in Range*) *includes all currently active grant awards Total # Awards: 189 Total All Projects: \$73,274,702	CCI Award History (Active in Range*) *includes all currently active grant awards Total # Awards: 187 Total All Projects: \$65,671,990	CCI Award History (Active in Range*) *includes all currently active grant awards Total # Awards: 165 Total All Projects: \$58,152,700

Staff, Undergraduate Student Employees & Graduate Students Listing (Appendix A).

CCI Staff	# of employees	Total Salary
Professional Staff (Salary & FB)	9	\$598,255.66
Classified Staff (Salary & FB)	1	\$70,039.84
Undergraduate Student Employees	26	\$49,384.19
Graduate Student Employees	33	\$647,880.64

Other Student Support – Fellowships, Internships (Appendix B).

CCI Faculty Listing – Joint, Associate, External and Research (Appendix C).

Research and Scholarship Summary - Publications, Presentations, Research Expeditions, Workshops & Conferences, Tours

Research & Scholarship Summary	FY2023	FY2022	FY2021	FY2020
Peer Reviewed Publications	119	103	153	283
Total Peer & Regular Publications	179	273	221	256
Presentations	135	124	119	132
Research Expeditions	37	26	14	24
Workshop & Conferences	87	39	53	70
Tours	10	5	2	16

Special Events:

- Saros and other CCI faculty led graduate/undergraduate students in an NSF funded Arctic Systems Science field effort in southwest Greenland.
- Campbell leads the Juneau Icefield Research Program for undergraduate and graduate students in Alaska.
- CCI 50th Anniversary Celebration / CCI Alumni Video / VPR CCI 50th Anniversary Video — CCI award winning booklet

Major Outreach Efforts:

- Fernandez and Birkel in addition to other CCI faculty play a major role in the Maine Climate Council and follow-on activities.
- Birkel's *Climate Reanalyzer* software now has ~6000 hits per day and ~80,000 during particularly outstanding days such as the July heat waves from researchers, public, media.
- Mayewski in collaboration with ORD spearheads the *Climate Challenge Consortium* survey designed to assess UMS climate change capacity and capability.
- Veazey (Maine Portland Gateway), Mayewski and Norchi (Law School) are organizing a new UM initiative – Interdisciplinary Complex-Problem Solving (IP-SP) – intended to intensify UM/UMS interdisciplinary approaches to major challenges faced by society. A course - introduction to interdisciplinary complex-problem solving for graduate students is planned to start Fall 2023.

Invention Disclosures:

- Through private funds Birkel is enhancing *Climate Reanalyzer* and *10Green* software to increase public awareness and provide researchers access to physical and chemical climate data.

Gifts/Donations:

- Dan ('63 UMaine) & Betty Churchill – Annual Gift; Joan Netland & Family Gift; Bob & Judy Sturgis Gift, Russell Grinnell Gift, Bingham Trust Fund, Jacobson Exploration Fund, Muharram & Barbara Gokcen Fund and several other donors.

Other Revenue from non-UM sources:

- Ice Age Trail Map Sales
- ICPMS and Keck Lab, Cosmogenic Lab, Sawyer Water Research Lab, Paleoecology Lab, Stable Isotope Lab

IV. STRATEGIC VISION & VALUES

A. Fostering Learner Success

1. Undergraduate Experiential Learning Initiatives – while CCI is a graduate program CCI faculty still offer opportunities for undergraduates in collaboration with the School of Earth and Climate Sciences
 - Juneau Icefield Research Program – S. Campbell.
 - Sea to Sky Experience (ERS 410) – K. Kreutz.
 - ECS Capstone experience SW Greenland – Mayewski.
2. Graduate Studies Impact Examples (Appendix D – CCI Mini-Papers/Harold W. Borns Symposium)
 - UMaine Climate Change Institute celebrates 50th anniversary.
 - 30th Annual Harold W. Borns, Jr. Symposium (see Appendix D)
 - Climate Change Institute Ice-Age Breaker.
 - Erwin interviewed by KTNA about Alaskan glaciers.
 - Alessandro Mereghetti awarded an NSF Arctic DDRIG grant award to study how megaherbivore diversity affects Arctic vegetation.
 - CCI-led delegation of students, faculty attend UN COP climate summit in Egypt.
 - 2022 South Greenland Expedition – Arctic Research & Field Training – Saros et al.
 - Graduate Certificate in Interdisciplinary Climate Studies (in person) and Certificate in Climate Science & Adaptation (remote initiated Spring 2023 by K. Glover).
 - 2023 CCI led Climate Change Summer Workshop.
3. Workforce Development Activities Examples
 - UMaine installs four more Level 2 vehicle charging stations for public use – Dixon.
 - Sun Journal re 2022 weather highlights - Birkel.
 - BDN re mud season – Birkel.
 - News Center Maine features Birkel research about manufactured homes.
 - Maine Public notes UMaine contributions to climate reporting – Fernandez.

- Reuters report on winter ticks threatening moose populations – Birkel.
- SPIA and CCI co-host panel on Maine’s model for mitigating climate change and enhancing national security.
- BDN interviews Birkel about Bangor’s alarming warming this December.
- BDN notes CCI, UMaine role in climate change adaptation partnership.
- Researchers investigate how climate change affects spruce forests on Maine’s coast – D. Hayes.

B. Discovering & Innovating

1. Research & Scholarship Summary

- a. Publications, presentations, editorship, exhibits (Section III)
- b. Major projects and outcomes
CCI continues its legacy of major scientific contributions to the physical, biological, chemical, and social aspects of climate and environmental science through a broad array of projects in Maine and worldwide. See examples in previous text, **Appendix E** and <https://climatechange.umaine.edu/> based on news items submitted by CCI researchers and posted on our website.

2. Student Research, Scholarship, or Creative Activities Examples

- 2022-23 CUGR and MSGC Academic Year Graduate Fellowship Recipients Announced – H. Brooks.
- Global glacier area change in the 21st century: Every increase in temperature matters – Rounce et al., *Science*, 379, 78-83, 2023 - W. Kochtitzky.
- CCI graduate students receive Phi Kappa Phi research grants – E. Erwin & E. Leclerc.
- Kit Hamley awarded AAUW American Dissertation Fellowship.
- Graduate Researchers Awarded at UMSS23 – E. Leclerc.
- 2023 Harold W. Borns Jr. Symposium award winners:
The Churchill Award for Outstanding Exploration Award – A. Tirrell.
The Robert and Judith Sturgis Family Foundation Exploration Award – E. Leclerc.
Student Outstanding Service Award – M. Woods.
Best Student Presentation Award - First Place – A. Mereghetti; Second Place – I. Kindstedt; Third Place, B. McLaughlin.
Best Student Poster Award - First Place (Tied) – A. Berry & M. Pugh.

3. Faculty & Staff Achievements (Awards, Recognition, Appointments) Examples

- Saros named 2023 Fulbright Distinguished Arctic Scholar and leads extensive review of Arctic freshwater response to climate change.
- Birkel honored by Piscataquis County Soil and Water Conservation District.
- Hall 2023 Faculty Research Funds Award recipients announced.
- Gill wins 2023 Maine Literary Award and Schmidt Award for Excellence in Science Communication.
- Lee and UMaine Printing Services receives 1st Place Platinum Award for CCI Brochure.
- Campbell receives NSF grants for polar research, education program and 2023 Faculty Impact Mentor Award.
- PBS – The End of the Romans – Secrets of the Dead – Documentary – Korotkikh, Mayewski, McCormick.
- Gill gets inaugural Excellence in Science Communication award from National Academies of Sciences, Engineering, and Medicine.
- Levesque quoted on CBC’s Quirks and Quarks.
- Isenhour featured on 1010 WINS In Depth episode about thrifting.
- Kurbatov gets NSF award to advance hyperspectral ice core imaging and analysis.
- R. Schattman testifies at Congressional hearing and participates Faculty Success Program.
- UMaine awarded NSF MRI grant to update instrumentation for climate, environment, ecosystem and engineering research – Kreutz, Kurbatov, Mayewski, Allen.
- Science publishes Sandweiss, Maasch perspective on how El Niño influences fauna presence, human predation.
- Kreutz University of the Arctic Chair of Arctic Ice, Climate and Environmental History and 2022 American Federation of Mineralogical Societies Honorary award.
- Mayewski delivers 2022 Judge Frank M. Coffin Lecture on Law and Public Service to the UMaine School of Law.
- Potocki and Mayewski co-author “Weather on Mt. Everest during 2019 summer monsoon” one of top downloaded articles published in *Weather*”.

- Jain - Maine College of Engineering and Computing presents its top annual awards.
- Gill featured on ‘Sustain What?’ podcast.
- Birkel - ‘Headed off the charts’: world’s ocean surface temperature hits record high – The Guardian and many others media re Climate Reanalyzer.
- Mayewski, Beals co-author op-ed for *The Hill* about the urgency of addressing climate change.
- Hughes remembrance- Popular Science cites UMaine research about West Antarctic Ice Sheet.

Growing & Expanding Partnerships

1. Collaborations: External and with System Campuses
 - CCI is UMaine’s primary contact for the University Center for Atmospheric Research (UCAR) and for the University of the Arctic and supports the associated fees.
 - Campbell directs the glaciology field program – Juneau Icefield Research Project.
 - CCI leads the Climate Challenge Consortium and Interdisciplinary Problem-Solving Partnership (IP-SP) designed to align and enhance UMS research and education
2. Research Commercialization & Economic Development
 - CCI in collaboration with Cooperative Extension provides climate change science advice to the public, farmers, planners, governments, and NGOs.

V. INFRASTRUCTURE/FACILITIES/EQUIPMENT PROJECT COMPLETED OR PLANNED FOR COMING

- Bryand Room 300 converted into the Borns Polar Facility to house the Virtual Polar Center and NSF NRT activities.

VI. SUMMARY OF ANTICIPATED CHALLENGES –

- Sawyer Research Building houses most of CCI’s analytical laboratories and the HVAC system is failing resulting in significant losses of analytical time, staff and student operational time, equipment failures. Net loss is many tens of thousands of dollars per year since this is a problem that has plagued CCI Sawyer for several years. This situation will continue until a new HVAC system is installed.

VII. SUMMARY OF NEW INITIATIVES, OPPORTUNITIES, MAJOR ACCOMPLISHMENTS AND HIGHLIGHTS

- CCI’s Climate Futures Initiative continues to evolve through software innovations and applications worldwide eg., Maine, Mali, Antarctica, Greenland).
- CCI joined A. Abeedi and team in an AI approach to predicting future weather/climate patterns.
- CCI is working with O. Apul and team to bring the PFAS+ facility to UM including ideally microplastics capability since PFAS and microplastics have strong coupling.
- CCI leads the Climate Challenge Consortium and the Interdisciplinary Problem-Solving Partnership (IP-SP) designed to align and enhance UMS research and education.

VIII. CARNEGIE R1 CLASSIFICATION

1. R&D Expenditures in Science & Engineering and in non-Science & Engineering (**see III: Key Performance Indicators above**)
2. R&D Staff with Doctoral Degrees (**Appendix F**)
3. Doctoral degrees awarded in STEM, Humanities, Social Sciences, and other fields (**Appendix F**)

APPENDIX C – FY2023 CCI Faculty Listing

FY2023 CCI Faculty Listing		
Name	Administrative Title	Affiliation
Robert Ackert	External Associate	CCI
Guleed Ali	Ford Foundation Postdoctoral Fellow	CCI
Katherine Allen	Coop. Assistant Professor	CCI/SECS
Lauren Azevedo-Schmidt	Post-Doctoral Research Associate	CCI
Daniel Belknap	Professor Emeritus	CCI/SECS
Nancy Bertler	Adjunct Assistant Research Professor	CCI/Victoria University of Wellington
Sean Birkel	Research Assistant Professor	CCI/Cooperative Extension
Pascal Bohleber	External Associate	CCI/University of Venice
Gordon Bromley	External Associate	CCI/NUI Galway
Seth Campbell	Research Assistant Professor	CCI/SECS
Sudarshan Chawathe	Coop. Associate Professor	CCI/SCIS
Kiley Daley	Associate	CCI
Ronald Davis	Professor Emeritus	CCI/SBE
George Denton	Professor	CCI/SECS
Phillip Dickens	Associate Professor	CCI/SCIS
Daniel Dixon	Research Assistant Professor	CCI/Office of Sustainability
Alice Doughty	External Associate	
Rick Eason	Associate	CCI/Electrical & Computer Engineering
Sarah Ebel	External Associate	CCI/Idaho State University
James Fastook	Coop. Professor	CCI/SCIS
Ivan Fernandez	Distinguished Maine Professor	CCI/SFR
Jennifer First	External Associate	CCI/University of Tennessee
Jacquelyn Gill	Associate Professor	CCI/SBE
Katherine Glover	Associate	CCI
Bjorn Grigholm	External Associate	CCI
Brenda Hall	Professor	CCI/SECS
Sarah Hall	Adjunct Research Professor	CCI/College of the Atlantic
Daniel Hayes	Associate Professor	CCI/SFR
Gabriel Hrynick	External Associate	CCI/University of New Brunswick, Fredericton, CA
Cindy Isenhour	Associate Professor	CCI/Anthropology Dept.
George Jacobson	Professor Emeritus	CCI/SBE
Shaleen Jain	Coop. Professor	CCI/CEE
Raymond Jennings	External Associate	CCI
David Keefer	External Associate	CCI
Alice Kelley	Research Associate Professor	CCI/SECS
Joseph Kelley	Professor Emeritus	CCI/SECS
Bess Koffman	External Associate	CCI/Colby College
Peter Koons	Professor Emeritus	CCI/SECS
Karl Kreutz	Professor	CCI/SECS
Andrei Kurbatov	Associate Professor	CCI/SECS
Justin Lapp	Associate	CCI/Dept. of Mechanical Eng.
Danielle Levesque	Coop. Assistant Professor	CCI/SBE
Bradfield Lyon	Research Professor	CCI/ECS
Kirk Maasch	Professor	CCI/SBE
Caitlin McDonough MacKenzie	External Associate	CCI
Paul Mayewski	Director/Distinguished Maine Professor	CCI/SECS
Brian McGill	Coop. Assistant Professor	CCI/SBE
Lou McNally	Research Assistant Professor	CCI/UMaine Machias/UMaine Augusta
Nicholas Micinski	Associate	CCI/SPIA & Political Science
Kimberley Miner	External Associate	CCI/JPL Caltech
Alexander More	Assistant Research Professor	CCI/Harvard University/ Long Island University
Peter Neil	Research Associate	CCI/World Ocean Observatory
Bonnie Newsom	Assistant Professor	CCI/Anthropology Dept.
Charles Norchi	Coop. Professor	CCI/Maine School of Law
Robert Northington	External Associate	CCI/Husson University

Stephen Norton	Professor Emeritus	CCI/SECS
Andrea Nurse	Research Associate	CCI
Brian Olsen	Associate Professor	CCI/SECS
Gordon Oswald	Research Professor	CCI
Andrew Pershing	Adjunct Professor	CCI/Gulf of Maine Research Institute
Aaron Putnam	Assistant Professor	CCI/SECS
Mariusz Potocki	Postdoctoral Research Associate	CCI
David Reidmiller	External Associate	CCI/GMRI Climate Center
Laura Rickard	Assistant Professor	CCI/Dept. of Communication & Journalism
Paul Roscoe	Professor Emeritus	CCI/Anthropology Dept.
Katharine Ruskin	Associate	CCI/EES
Daniel Sandweiss	Professor	CCI/Anthropology Dept.
David Sanger	Professor Emeritus	CCI/Anthropology Dept.
Jasmine Saros	Professor/Associate Director	CCI/SBE
Joerg Schaefer	Adjunct Professor	CCI/Columbia University
Rachel Schattman	Associate	CCI/SFA
Molly Schauffler	Assistant Research Professor	CCI/SECS
Jessica Scheick	External Associate	CCI/UNH
Kristin Schild	Assistant Research Professor	CCI/SECS
Anton Seimon	Adjunct Assistant Professor	CCI/Appalachian State University
Jefferson Simoes	Visiting Professor	CCI/Universidade Federal do Rio Grande do Sul
Sharon Sneed	External Associate	CCI
Kristin Sobolik	Adjunct Professor	CCI/University of Missouri-St. Louis
Marcella Sorg	Research Professor	CCI/MCSPC
J. Curt Stager	External Associate	CCI/Paul Smith's College
Jeff Thaler	Associate Faculty	CCI/Maine School of Law
Andrew Thomas	Coop. Professor	CCI/SMS
Jiaze Wang	Associate	CCI/SECS
Dominic Winski	Assistant Research Professor	CCI
Manuel Woersdoerfer	Associate	CCI/SCIS
Gregory Zaro	Associate Professor	CCI/Anthropology Dept.
YongJiang Zhang	Associate	CCI/SBE

APPENDIX D – CCI Borns Symposium Mini-Papers

CCI Borns Symposium MiniPapers are located on the CCI Google Drive site at the following location:

https://drive.google.com/file/d/1VPtyiYcKuVCLf4b76p8tcLXTNst5z9Mt/view?usp=drive_link

APPENDIX E – Examples of additional CCI Major Projects and Outcomes

- CCI plays a major role in UMaine Arctic
- CCI is involved in the new PFAS+ initiative
- CCI continues to maintain strong collaborations (eg., Portland Gateway, Law School) that foster UMS interactions through C³ and IP-SP
- CCI's Climate Futures initiative offers a unique approach to reducing climate prediction uncertainty
- CCI continues to expand its national (including MSIs) and international connectivity
- CCI is extending its research support base through earmarks and additional federal agencies (eg., DoD)

APPENDIX F – Carnegie R1 Classification – R&D staff with doctoral degrees & doctoral degrees awarded in STEM, Humanities, Social Sciences and other fields.

Doctoral & Master Degrees Awarded (2023 – 2017)			
Name	Degree Awarded	Date Degree Awarded	Advisor
Charles Rodda	PhD, Earth & Climate Sciences	2020	Paul Mayewski
Elena Korotkikh	PhD, Earth & Climate Sciences	2018	Paul Mayewski
Jeff Auger	PhD, Earth & Climate Sciences	2019	Paul Mayewski
Heather Clifford	PhD, Earth & Climate Sciences	2022	Paul Mayewski
Heather Clifford	MSc, Earth & Climate Sciences	2019	Paul Mayewski
Mariusz Potocki	PhD, Earth & Climate Sciences	2022	Paul Mayewski
Anne Marie Lausier	PhD, Civil and Environmental Engineering	2019	Shaleen Jain
Mussie Beyene	PhD, Civil and Environmental Engineering	2019	Shaleen Jain
Mary Bourque	Master of Engineering (Water & Environment Concentration), Civil and Environmental Eng.	2020	Shaleen Jain
Nuha Abdullah	PhD, Civil and Environmental Engineering	2020	Shaleen Jain
Ali Aljoda	PhD, Civil and Environmental Engineering	2021	Shaleen Jain
Rachel Coleman	PhD, Ecology and Environmental Science	2022	Shaleen Jain
Prashanta Bajracharya	PhD, Civil and Environmental Engineering	2022	Shaleen Jain
Amy Kireta	PhD, Ecology & Environmental Sciences	2017	Jasmine Saros
Susan Elias	PhD, Ecology & Environmental Sciences	2019	Kirk Maasch
Sarah Ebel	PhD, Anthropol & Environmental Policy	2019	Christine Beittl
Kathryn Warner	PhD, Ecology & Environmental Sciences	2019	Jasmine Saros
Nicole Ramberg-Phil	PhD, Ecology & Environmental Sciences	2020	Hamish Greg
Rachel Fowler	PhD, Ecology & Environmental Sciences	2019	Jasmine Saros
Benjamin Burpee	PhD, Ecology & Environmental Sciences	2020	Jasmine Saros
Edna Pedraza Garzon	PhD, Ecology & Environmental Sciences	2020	Jasmine Saros
Joseph Mohan	PhD, Ecology & Environmental Sciences	2022	Jasmine Saros
Carl Tugend	MS, Ecology & Environmental Sciences	2017	Jasmine Saros
Jared Homola	PhD, Ecology & Environmental Sciences	2018	Michael Kinnison
Simona Lukasik	MS, Ecology & Environmental Sciences	2020	Jasmine Saros
Matthew Farragher	MS, Ecology & Environmental Sciences	2021	Jasmine Saros
Lydia Kiffner	MS, Civil and Environmental Engineering	2017	Steve Norton
Kaci Fitzgibbon	MS, Earth & Climate Sciences	2017	Steve Norton
Gregory McDonald	MS, Civil and Environmental Engineering	2018	Steve Norton
Nicholas Messina	MS, Civil and Environmental Engineering	2019	Steve Norton
Jeremy Deeds	PhD, Ecology and Environmental Science	2022	Steve Norton
Ingalise Kindstedt	MS, Quaternary & Climate Sciences	2021	Karl Kreutz
Erin McConnell	MS, Quaternary & Climate Sciences	2019	Karl Kreutz
William Kochtitzky	MS, Earth & Climate Sciences	2019	Karl Kreutz
Kimberley Miner	PhD, Earth & Climate Sciences	2018	Karl Kreutz
Aaron Chesler	PhD, Earth & Climate Sciences	2022	Karl Kreutz
Courtney King	PhD, Earth & Climate Sciences	2017	Brenda Hall & George Denton
Tessa Walther	MS, Earth & Climate Sciences	2020	Brenda Hall
Meghan Spoth	MS, Earth & Climate Sciences	2020	Brenda Hall
Jill Pelto	MS, Earth & Climate Sciences	2018	Brenda Hall
Hunter Tubbs	MS, Earth & Climate Sciences	2021	Bradfield Lyon
Anna Olsen	MA, Anthropology and Environmental Policy	2022	Gregory Zaro
Mario Williams	MS, Ecology & Environmental Sciences	2019	Jacquelyn Gill

Benjamin Seliger	PhD, Ecology & Environmental Sciences	2019	Jacquelyn Gill
Dulcinea Groff	PhD, Ecology & Environmental Sciences	2018	Jacquelyn Gill
Andrea Tirrell	MS, Ecology & Environmental Sciences	2023	Jacquelyn Gill
Michael Torre	PhD, Ecology & Environmental Sciences	2019	Yong Chen
Lynn Kaluzienski	PhD, Earth & Climate Sciences	2022	Ellyn Enderlin & Peter Koons
Jessica Scheick	PhD, Ecology & Environmental Sciences	2019	Ellyn Enderlin
Julia Simonson	PhD, Earth & Climate Sciences	2020	Sean Birkel
Carly Frank	MS, Quaternary & Climate Studies	2022	Sean Birkel
Kisei Tanaka	PhD, Ecology & Environmental Sciences	2018	Yong Chen
Mariah Radue	MS, Quaternary & Climate Studies	2018	Aaron Putnam
Alexander Audet	MS, Earth & Climate Sciences	2021	Aaron Putnam
Allie Balter	MS, Earth & Climate Sciences	2018	Gordon Bromley
Laura Mattas	MS, Earth & Climate Sciences	2019	Aaron Putnam
Meaghan Conway	PhD, Ecology & Environmental Sciences	2019	Brian Olsen
Mariama Dryak	MS, Earth & Climate Sciences	2019	Ellyn Enderlin
Jamie Haverkamp	PhD, Anthropology & Env. Policy	2019	Cynthia Isenhour
Laura Hartman	MS, Quaternary & Climate Studies	2019	Andrei Kurbatov
Meredith Helmick	MS, Earth & Climate Sciences	2023	Andrei Kurbatov
Ann Hill	MS, Earth & Climate Sciences	2019	Kristin Schild
Anna McGinn	MS, Quaternary & Climate Studies	2019	James Settele, Cynthia Isenhour
Abigail Mann	MS, Quaternary & Climate Studies	2021	Bonnie Newsom
Erin McConnell	MS, Quaternary & Climate Studies	2019	Karl Kreutz
Jillian Pelto	MS, Earth & Climate Studies	2018	Brenda Hall
Kate Pontbriand	MS, Quaternary & Climate Studies	2019	Daniel Sandweiss
Emily Blackwood	MS, Quaternary & Climate Studies	2019	Daniel Sandweiss
Frankie St. Amand	MS, Quaternary & Climate Studies	2019	Daniel Sandweiss
Elizabeth Leclerc	MS, Quaternary & Climate Studies	2022	Daniel Sandweiss
Frankie St. Amand	iPhD	2022	Daniel Sandweiss

R&D Staff with Doctoral Degrees		
Name	Degree Awarded	Date Degree Awarded
Elena Korotkikh	PhD, Earth & Climate Sciences, University of Maine	2018
Katherine Glover	PhD, Geography, University of California, Los Angeles	2016
Mariusz Potocki	PhD, Earth & Climate Sciences, University of Maine	2022
Lauren Azevedo-Schmidt	PhD, Ecology, University of Wyoming	2022
Kiley Daley	PhD, Environmental Studies & Public Health, Dalhousie University	2020