

THE CSU
CLIMATE INITIATIVE
ANNUAL REPORT 2024



**The First Year:
Foundations for Interdisciplinary
Climate Action at Colorado
State University**

TABLE OF *Contents*

- A Message From the Director 2
- CSU Climate Initiative Mission & Vision 3
- CSU Climate Initiative Leadership & Network 5
- Education Program of Work 9
- Research Program of Work 10
- Outreach & Engagement 11
- Building CCI Capacity 12
- Supporting the CSU Climate Initiative 13



A *Message* FROM THE DIRECTOR



A carbon-neutral and climate-resilient future demands significant societal transformations, and land-grant universities like Colorado State University have a crucial role to play. In response to the growing demand for climate action from faculty and students, the CSU Climate Initiative (CCI) was launched in 2023 to tackle the grand challenge of building a climate-resilient future for Colorado and beyond. The Initiative aims to create new educational programs to ensure undergraduate students are climate change literate and prepared to become the next generation of climate leaders. We coordinate efforts across CSU's research and innovation communities to advance transdisciplinary research on climate change, and we are enhancing our engagement with communities, the private sector, and policymakers.

Since our inception in July 2023 within the CSU Office of the President, we have undertaken activities across CSU's mission areas. We introduced a new 12-credit certificate in Climate Change and Society that will be available to students starting in Fall 2024. This program focuses on understanding climate change through a systems-thinking perspective and empowers students to address climate challenges with a solutions-oriented mindset. Our certificate, along with forthcoming minor and major programs, is designed to be accessible to students with diverse interests and to maximize student choice.

For faculty, the CCI supports the formation of new research teams, provides training to integrate climate change content into any course, and aids in the development of new climate-focused courses. We also are launching a Climate Hub at the CSU Spur campus to provide training in entrepreneurship, offer climatological services and analysis, conduct policy analysis, and explore other ways to interface with communities, students and teachers, industry leaders, and government.

As we continue to develop programs that address all facets of climate change from various disciplinary perspectives, I extend my gratitude to the supportive community at CSU. Special thanks go to President Amy Parsons and the President's Office, the Office of the Provost and Executive Vice President, and the Office of the Vice President for Research for prioritizing the CCI as a strategic focus for CSU and the Colorado community.

We hope you find this report inspiring and encourage you to partner with us in making CSU a leader in climate action, education, research, and community engagement, contributing to a climate-resilient future.

Sincerely,

Courtney Schultz, Ph.D.
Director of the CSU Climate Initiative

CSU CLIMATE INITIATIVE *Mission & Vision*

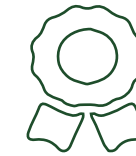
Mission

The CSU Climate Initiative coordinates CSU's extensive expertise and assets to address the grand challenge of building a climate-resilient future in Colorado and beyond through knowledge generation, innovation, urban and rural community-based partnerships, and the education of a new generation of climate leaders.

Vision

Our vision is a society in which collaboration across sectors, disciplines, and identities leads to a sustainable, climate-resilient, equitable, and just future for all in Colorado and beyond. By leveraging CSU's strengths and activities, we aim to drive meaningful change on a global scale.

GOALS



Serve as one of the nation's leading land-grant universities educating students to tackle climate challenges



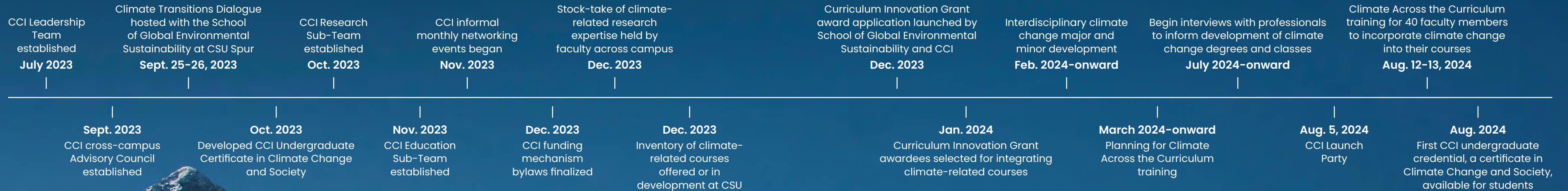
Educate thousands of students to be climate leaders



Become the state and region's go-to university for climate services and analysis



Grow the university's world-class research on climate science, climate adaptation and resilience, and carbon management

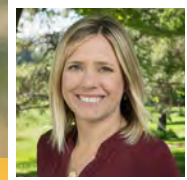


CSU CLIMATE INITIATIVE

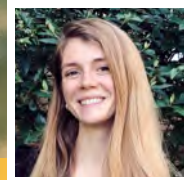
Leadership & Network

The CSU Climate Initiative is managed by the CCI Leadership Team with directional guidance from a cross-campus Advisory Council. The CCI's programmatic work collects feedback from an Education Sub-Team and Research Sub-Team, made up of individuals representing many colleges and institutions across Colorado State University.

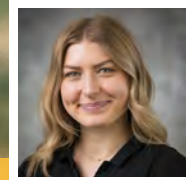
Leadership Team



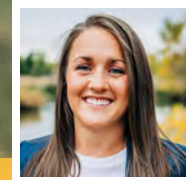
Courtney Schultz
Director
Warner College of Natural Resources



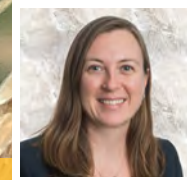
Eliisa Carter
Program Manager (outgoing)
Warner College of Natural Resources



Sydney Scholes
Program Manager (incoming)
Institute for Entrepreneurship



Sarah Badding
Education Lead
Nancy Richardson Design Center



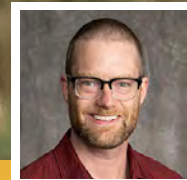
Jill Zarestky
Research Lead
College of Health & Human Sciences



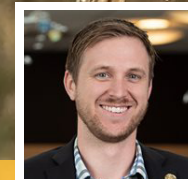
Peter Backlund
School of Global Environmental Sustainability



Lauren Gifford
Soil Carbon Solutions Center



Pat Keys
Walter Scott, Jr. College of Engineering



Scott Shrake
Assistant Vice President for Strategy

REPRESENTED COLLEGES, INITIATIVES & ORGANIZATIONS

Advisory Council

- | | | | |
|--------------------------------------|--|---|--|
| Ag Innovation Center | College of Natural Sciences | Energy Institute | Sustainability Research Laboratory |
| AgNext | College of Veterinary Medicine & Biomedical Sciences | Office of the President | Vice President for Student Affairs |
| College of Agricultural Sciences | Colorado Climate Center | Office of the Vice President for Research | Walter Scott, Jr. College of Engineering |
| College of Business | Colorado Water Center | One Health Institute | Warner College of Natural Resources |
| College of Health and Human Sciences | Cooperative Institute for Research in the Atmosphere | Soil Carbon Solutions Center | |
| College of Liberal Arts | CSU Online | Straayer Center for Public Service | |

Research Sub-Team

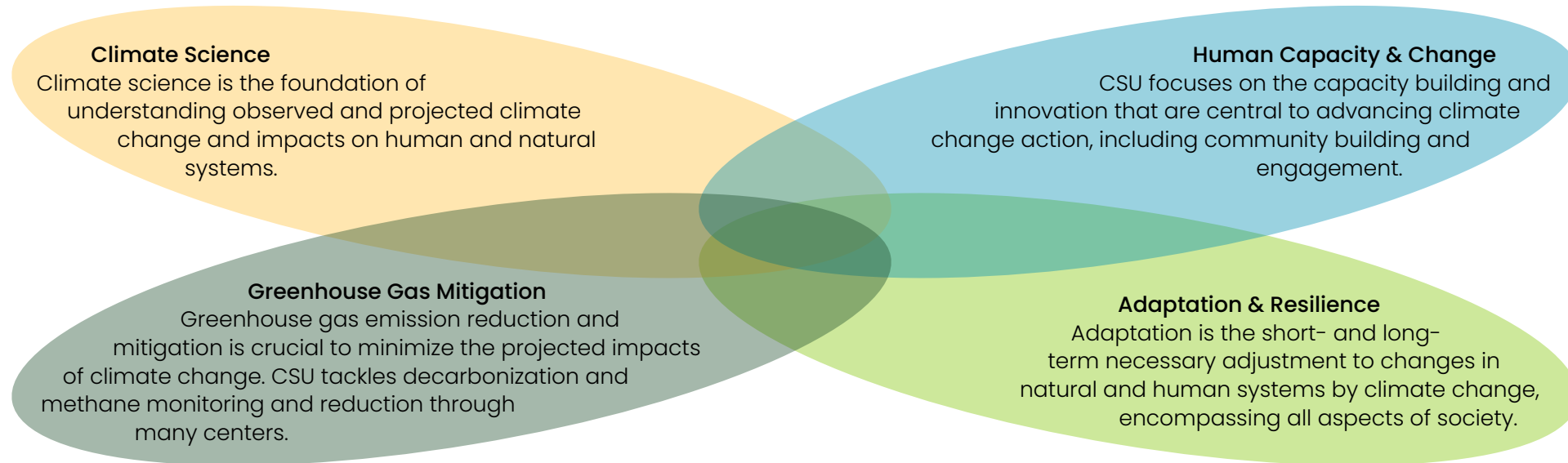
- | | |
|--|---|
| Ag Innovation Center | One Health Institute |
| AgNext | School of Global Environmental Sustainability |
| College of Agricultural Sciences | Straayer Center for Public Service |
| College of Veterinary Medicine & Biomedical Sciences | Walter Scott, Jr. College of Engineering |
| Colorado Water Center | Warner College of Natural Resources |
| Energy Institute | |
| Office of the Vice President for Research | |

Education Sub-Team

- | | |
|--|--|
| College of Business | Nancy Richardson Design Center |
| College of Health and Human Sciences | Soil Carbon Solutions Center |
| College of Liberal Arts | Sustainability Research Laboratory |
| College of Veterinary Medicine & Biomedical Sciences | Walter Scott, Jr. College of Engineering |
| Colorado Climate Center | Warner College of Natural Resources |
| Colorado Water Center | |
| CSU Online | |

CLIMATE EXPERTISE NETWORK AT CSU

Our network of climate-focused institutions and work is expansive, collaborative, and interconnected. At CSU we approach climate from all angles: greenhouse gas mitigation, climate science, human capacity and social change, and adaptation and resilience.



CSU climate-oriented organizations

- AgNext**
works with members of the entire livestock value chain to produce new solutions that help move the industry toward a sustainable future.
- Center for Collaborative Conservation**
builds the skills of students and professionals so they can amplify their conservation impact.
- Center for Environmental Justice**
makes environmental justice central to how CSU faculty, students, and our broader communities view sustainability and democracy.
- Center for Environmental Management of Military Lands**
supports military readiness and resource conservation, including climate change adaptation, environmental planning and compliance, and geographic information systems.
- Center for Public Deliberation**
enhances local democracy through improved public communication and community problem-solving.
- Center for Risk-Based Community Resilience Planning**
optimizes community disaster resilience planning and post-disaster recovery strategies, intelligently using physics-based models of interdependent physical systems combined with socioeconomic systems.

- Center for the New Energy Economy**
convenes policymakers at the state level, providing technical assistance and fostering dialogue that connects energy policy leaders, experts, and communities.
- Climate Adaptation Partnership**
serves to coordinate and accelerate interdisciplinary research at CSU and to facilitate science-informed, just, and holistic social and ecological adaptation policies in the face of a changing climate.
- Colorado Climate Center**
collects and observes data with the purpose of monitoring the climate, placing individual events into historical perspective, disseminating climate information to the user community, and providing climate expertise as part of the decision-making process.
- Colorado Forest Restoration Institute**
leads collaborations between researchers, managers, and stakeholders to apply locally relevant, actionable knowledge to inform forest management strategies.
- Colorado Water Center**
leads interdisciplinary research, education, and engagement to address today's most pressing water issues in Colorado and beyond and connect diverse water stakeholders to resources and expertise.
- Cooperative Institute for Research in the Atmosphere**
fosters collaboration between National Oceanic and Atmospheric Administration and Colorado State University, in addition to the Department of Defense, NASA, and the National Park Service, to conduct interdisciplinary research in the atmospheric sciences.
- CSU Spur**
a public educational, research, and community destination in Denver focused on food, water, and health that offers educational opportunities for all ages.
- Institute for Entrepreneurship**
serves as a hub for innovation, taking a zero-barriers approach to entrepreneurship by offering free programming open to all CSU affiliates and Colorado community members.
- Institute for the Built Environment**
guides project teams, owners, and building users to engage in collaborative processes that focus on place-based sustainability, climate transitions, and equity.
- Methane Emissions Technology Evaluation Center**
a research facility for emissions leak detection and quantification technology development, field demonstration, and training.
- Office of Engagement & Extension**
engages and supports communities across Colorado by providing research-based information, resources, and programming related to agriculture, economic development, food systems, and natural resources.
- Soil Carbon Solutions Center**
leverages world-class expertise to build the tools and approaches needed to accelerate the deployment of credible soil-based climate solutions, measure their impacts, and bring them to scale.
- Straayer Center for Public Service Leadership**
provides thought leadership on public matters through University and community partners with a focus on experiential learning, community engagement, and curricular innovation.
- The Energy Institute**
delivers real-world energy and carbon solutions that address society's most pressing global challenges.

Education PROGRAM OF WORK

Goals

- Develop courses and credentials, including certificates and degree programs, to train students as climate leaders.
- Provide faculty training, offer curriculum innovation grants, and collaborate with departments to integrate climate change content into their courses and develop additional credentials.

Accomplished in Fiscal Year 2024

- Established **undergraduate certificate in Climate Change and Society** to be launched in Fall 2024.

The 12-credit undergraduate certificate in Climate Change and Society is available to anyone, with no admissions requirements. Courses cover a range of topics including the science of climate change, human ecology and climate justice, and earth system interactions, with a potential to focus on corporate sustainability, climate risk reduction, and energy solutions.

- Inventoried **150+ climate-related courses across campus**, worked to integrate climate change into core curriculum and other undergraduate courses, and built new courses on climate and earth systems.
- Funded six teams of faculty to update or develop climate-related courses through **Curriculum Innovation Grants** in partnership with the School of Global Environmental Sustainability.

The CCI awarded six grants to faculty teams at CSU centered on building climate-focused courses related to public health, geosciences, philosophy, graphic novels and sustainability stories, climate finance, and environmental humanities.

Plans for Fiscal Year 2025

- Develop a **Climate Change and Society minor** that will include multiple pathways related to climate change, e.g., policy and advocacy, environmental justice, and earth systems science.
- Develop a **major in Climate Change Studies**.
- Host **Climate Across the Curriculum**, a training for faculty to learn to embed climate change content into their courses, reaching thousands of new students annually.

Climate Across the Curriculum is a two-day workshop and training for faculty on campus to integrate climate research and education into curricula within many disciplines.



Research PROGRAM OF WORK

Goals

- Elevate the visibility of CSU researchers and foster interdisciplinary research and engagement.
- Support major grant-making pursuits and grant success through partnerships, including collaboration with environmental justice experts and community practitioners.

Accomplished in Fiscal Year 2024

- Developed a roster of **more than 200 climate change experts** on campus, covering climate science, natural resources, engineering, agriculture, public health, humanities, and more.
- Hosted **monthly informal networking sessions** for researchers to connect with community members internal and external to CSU.

The CCI hosted monthly informal networking sessions open to faculty, staff, students, and community members. Each session focused on a theme or research topic related to climate change, such as methane reduction, air quality and equity, reforestation, and forest management.

Plans for Fiscal Year 2025

- Host monthly talks and an inaugural annual **CSU Climate Showcase** to highlight the wide array of climate change research at CSU and connect with state, regional, and national partners.
- Offer **seed funding for transdisciplinary teams** tackling challenges at the forefront of climate change research and innovation.

Outreach AND Engagement

Goals

- Establish a Spur Climate Hub to provide climate-focused expertise and capacity and build partnerships with the public and private sectors.
- Foster long-standing partnerships with government, industry, philanthropic and other non-government organizations, and community-based practitioners to support and advance climate action.

Accomplished in Fiscal Year 2024

- Established budget, mission, and leadership for the **Spur Climate Hub** to provide climate services and analysis to Colorado communities.

The Spur Climate Hub is in the CSU Spur campus, a public educational, research, and all-ages community destination in Denver focused on food, water, and health. The Climate Hub will host a state engagement climatologist, provide climate and analytical services and policy analyses for community members, and offer education programs, entrepreneurship training, and innovation acceleration.

- Co-organized the **Climate Transitions Dialogue** with the School of Global Environmental Sustainability in September 2023.

A collaboration between the School of Global Environmental Sustainability and the CSU Climate Initiative, the September 2023 Climate Transitions Dialogue consisted of two full days of facilitating new collaborations between climate change researchers, government officials, businesspeople, and concerned citizens to reduce the negative impacts of climate change on people, communities, and ecosystems in Colorado.

- **Grew partnerships** with local governments, industry players, community organizations, and other actors central to accelerating climate action in Colorado, including the City of Fort Collins, Larimer County, Center for Climate & Energy Solutions, and more.

Plans for Fiscal Year 2025

- Inform our credential building by conducting **interviews with professionals** in climate-related industries to identify needs and skills desired in climate-focused students.
- **Expand connections** among CSU researchers, extension agents, and communities by hosting networking events and research showcases for the CSU and broader Colorado communities.

BUILDING CCI Capacity

Goals

- Build institutional capacity to enhance climate change education, research, and engagement across CSU.
- Strengthen internal networks and secure external partners and funding to support a vibrant CSU Climate Initiative.

Accomplished in Fiscal Year 2024

- Developed a governance structure through the **CCI Advisory Council** with representation from approximately 20 on-campus colleges, organizations, offices, institutions, and centers to ensure long-term success.
- Established **cross-college education and research teams** to provide direction and support in advancing the CCI's work.
- Created a **Climate Action Fund** in the Office of the Provost and Executive Vice President and fundraised to support Climate Across the Curriculum and other climate-related programs.

Plans for Fiscal Year 2025

- **Increase fundraising** to support our education goals and research-community-building efforts.
- Establish an **external advisory board** for the CCI to continue growing partnerships outside of CSU.



Supporting THE CSU CLIMATE INITIATIVE

WAYS TO FUND OUR EDUCATION WORK

Our aim is to increase 100% of CSU students' literacy across key dimensions of climate change causes, impacts, and innovative solutions.

- **Faculty Development**
Provide support for Climate Across the Curriculum training, which teaches faculty members how to incorporate climate change into their classes, affecting thousands of students annually.
- **Interdisciplinary Climate Change Undergraduate Credentials**
Give the seed funding needed to launch innovative courses in climate change and help us in our goals to launch a minor and major to train the next generation of climate leaders.
- **Internships and Scholarships for Students**
Enhance access and opportunities for undergraduates to earn credentials and acquire practical skills and experiences, readying students for real-world jobs.

WAYS TO FUND OUR RESEARCH WORK

Our aim is to foster collaboration among CSU's departments and institutes by supporting interdisciplinary and innovative research.

- **World-Class Speaker Series**
Bring high-impact speakers to CSU and strengthen our research community and educational programming for students.
- **Cutting-Edge Research Teams**
Seed research teams on campus. Investing \$25,000 in innovative research teams typically has yielded 10-20x returns in research fundraising over three-to-five-year time frames.
- **Interdisciplinary Post-Doctoral Fellowship**
Give a budding, post-doctoral scholar a unique professional development opportunity while providing critical support for the CSU Climate Initiative and CSU researchers.



WAYS TO FUND OUR OUTREACH & ENGAGEMENT

We plan to build upon our extensive climate knowledge network at CSU and engage with government leaders at all levels (federal, state, and local), farmers and ranchers, industry innovators, other organizations, and the public to successfully navigate through the turbulence of adaptation to climate change and decarbonization.

- **Policymaker Engagement**
Fund students and researchers to receive training and engage directly with policymakers, strengthening science-policy connections.
- **Spur Climate Hub**
Support the CSU Spur Climate Hub, which will offer science syntheses, analytical and policy support, and training on adaptation and resilience planning for individuals, businesses, and communities.
- **Climate Events and Climate Showcase**
Support programs for faculty, staff, students, and the public to strengthen researcher impact, democratic deliberation, and climate change understanding.

WAYS TO FUND OUR CAPACITY BUILDING

Building on our first-year achievements, including the Spur Climate Hub and Climate Action Fund, the CSU Climate Initiative aims to create a second home for climate-focused faculty, staff, and researchers on campus.

- **Collaboration Space for the CSU Climate Initiative**
Help us build a new climate-centric hub in Fort Collins for CSU students, faculty, and researchers passionate about addressing climate change.
- **Long-Term Leadership**
Support an endowed position for Director of the CSU Climate Initiative to ensure longevity and capacity for climate change work at CSU.



CLIMATE INITIATIVE

COLORADO STATE UNIVERSITY

The CSU Climate Initiative thanks the Colorado State University community and our external partners for their support! As we enter our second year, we look forward to connecting with new partners inside and outside of CSU. If you have any questions, suggestions, or want to contribute to the CCI's work, please visit our website or email us.

Website: <https://climateinitiative.colostate.edu>

Email: climate_initiative@colostate.edu

