URGE Policies for Working with Communities of Color for Colorado College Geosciences

This is what was found by Colorado College Geoscience on Policies for Working with Communities of Color as well as plans for improved processes and/or needed resources.

- **Audit of previous interactions with communities of color at our organization:**
  - At the College level, our Collaborative for Community Engagement has resulted in interactions with communities of color, particularly with an underserved K-12 institution, Mitchell School, urban organizations that serve populations of color, and some Latinx communities in rural parts of Colorado and New Mexico.
  - Mentoring students of color on senior thesis projects and original research in earth sciences. For example, Professor Siddoway: five black or biracial students [US citizens] mentored in past 10 years; Professor Gratz: four domestic students of color and 4 international students in past 6 years; Professor Myrow: two biracial and three international students in the last four years; Professor Schanz: one domestic student of color in the last one year.
  - Offer sophomore-level, course-based research opportunity for prospective STEM, BIPOC undergraduates [Siddoway course in 2021, 6 of 9 students enrolled are biracial or students of color (and 7 of 9 students are women)]
  - The Environmental Studies program incorporates a service learning project into its Environmental Thermodynamics course, in which students perform an energy audit and retrofit on a home in our local community, with support from the Energy Resource Center (ERC) nonprofit. The project began with Professors Barbara Whitten (Physics, retired) and Sally Meyer (Chemistry) as a partnership with a low income community near campus, but that partnership dissolved in 2015. Pod member Lynne Gratz resumed the project in 2015 and has worked in several nearby neighborhoods as well as on-campus houses. In 2020 Gratz began working with several community center directors to build a new partnership with another of our adjacent lower income neighborhoods. In future years, as Covid abates and community interaction (and entering homes with students) becomes possible, we will resume this work to lower energy costs and improve energy efficiency in these communities.
  - Geology and EV majors have been supported as summer interns with the municipal Department of Parks, Recreation and Cultural Services (with mentoring support from faculty in our Pod). The focus of most work was on trails at the urban–mountain interface, trail building, and geospatial analysis of urban watersheds and stormwater. Faculty investment has been modest, and much more could be done.
  - CC faculty mentoring of geodesign projects (geology and geospatial basis for plans to remediate urban environmental issues), co-sponsored by Colorado College State of the Rockies Program. Siddoway mentored one student of color (EV Jordan Vick) for a summer internship, and arranged a module involving CC geosciences students
in work with Colorado Springs community centers for a senior seminar course (GY400; Stratton Meadows). Stratton Meadows provides activities and educational programs for a largely black, lower income neighborhood.

- Gratz and three other Environmental Studies program faculty (Barnes, Angstadt, Lee) participated in a Community Engaged Research cohort in 2020-21 to develop community-based projects for our courses and scholarship.

International Efforts

- One of us (Myrow) has >20 years of experience in over a dozen countries in Asia. This work could be broken down into ~10 “projects”, and these were covered by four large grants from the National Science Foundation provided between year 2000 and present. In each country, local geologists were engaged in all aspects of the field work and writing, and were co-authors on 32 journal articles over that time period. Numerous students of color, including both US citizens and international students at CC were involved in the research, and in most cases those students were co-authors on journal articles. In one case, a Chinese CC student was first author on a GSA Bulletin paper; she is now a PhD student at Dartmouth.

- Myrow hired a Chinese postdoctoral fellow (using NSF funds) for three separate visits over a five year period. The postdoc worked very closely on projects both here in the US and in parts of Inner Mongolia and Ningxia provinces in China. Myrow’s collaboration with the postdoctoral fellow (now a researcher at Nanjing Institute of Geology and Palaeontology) has lasted over 10 years and continues today.

- Example: An outgrowth of Myrow’s NSF Asian work is a UNESCO International Geoscience Program (IGCP668), centered in southeast Asia and involving scientists from South Asia and Southeast Asia, for which Myrow is a Principal Investigator. The goal of the program is to facilitate scientific collaboration with scientists from countries across Asia.

- What worked well in these interactions?
  - Biracial/Black undergraduates who completed thesis research in earth science obtained employment or pursued higher degrees in earth science or education fields (e.g., five Siddoway advisees)
  - Developing community partnerships such as with the Energy Resource Center and community center leaders who can help facilitate community interactions and relationship-building.
  - Myrow’s work in Asia described above has resulted in the establishment of a World Heritage site in Thailand, several International research meetings in Asian (Thailand and Myanmar so far), and international field excursions. One outgrowth of this
research is a children’s book, written in Bengali and Hindi, which is aimed at girls age ~8–12, and has been printed in association with the Geological Survey of India. It was handed out free to young girls across parts of India. A new book is being written in collaboration with an Indian woman artist, and with help from a small village in Myanmar, to be written in Burmese. It will also be published and distributed free to girls in rural parts of Myanmar.

○ All geological materials, including fossils, collected in Asian countries in the work described above have been remanded back to museums in the countries from which they were collected. In cases, NSF money was used to purchase cabinets for storage of these specimens. One additional point is the official naming of a fossil for one of the past queens of Bhutan.

● What did not work well, and how can this be better addressed in future plans?

○ One of us (Siddoway) teaches courses and mentors thesis projects in Geodesign (applies geospatial methods and earth process principles to urban environments). Study sites have included locations occupied by homeless populations, and that border low income neighborhoods that suffer disproportionately from pollution, heat island effect, and environmental degradation. The designs produced and solutions identified could benefit people of color, but the academic work is not funded and there is little prospect of impacts on City governance decisions. Results have been limited to presentations to (receptive) city councils, but there is no means to guarantee that policy changes or implementation will follow.

○ It is a worthy goal to propose actionable proposals, but commonly the results work as intellectual exercises rather than collaborations that result in tangible outcomes.

○ We have written research proposals with people of color as informal collaborators, but not as co-primary investigators. For NSF grants, which require that the primary investigators be US citizens, if the work is centered on work abroad we could seek out people of color within the US to be co-investigators.

○ We also have not considered as thoroughly as we could how to partner with local communities, particularly indigenous communities, when developing proposals. Such collaborations can end up as an afterthought once a proposal has been funded, when it could have been part of the proposal development.

○ There is/has been little awareness of efforts and achievements in work with students of color, and communities of color, among current faculty and students, graduates and collaborators. A web presence that highlights successes might achieve some ‘reach,’ but maintaining current information on-line is unlikely to be achieved by our teaching- and research-active faculty (* supervising others, such as
paraprofessionals, who might be assigned this responsibility, requires a lot of time and focus).

- Programs and departments can be more responsive to events of racial injustice happening on our campus and in our communities, and demonstrate to our students that we will stand up against racism. An example was during summer 2020, following George Floyd’s death when some students indicated a desire for a more intentional and timely response on behalf of our faculty and programs/departments.
- For future partnerships, especially involving CC students in communities of color, a key consideration will be training the CC students and ourselves to work in communities of color without causing harm. This will be important if work is done during a block, i.e., only 3.5 weeks to make connections. This is a point that has been brought up by the Economics & Business Department to the Field Studies Program, and there may be a workshop/training for faculty on this topic. If this is not currently planned, then we will bring up the issue again to ensure a workshop is offered.

- Are there ways to improve the outcome of projects already undertaken?
  - For research undertaken in the US, we could add to our acknowledgement sections of papers a statement about the land on which the study took place, and the history of habitation on that land (e.g., the native Americans who lived there). The same could be done for academic and public presentations.
  - Work to develop community partnerships before planning and completing our course work and scholarship, not after we’ve committed to doing a project or course activity in a certain location or community.
  - For international work, Myrow has tried to engage Chinese CC students for work in China and a Thai student for work in Thailand (that was scrapped because of Covid). That has led to greater ownership of the research by the students. That model can be continued in the future.

- Are there specific resources or guidelines that are needed to improve the process for planning ahead and working with communities of color?
  - We aim to work with the Collaborative for Community Engagement at Colorado College, an office that helps facilitate sustainable community partnerships. The office help to create partnerships that increase social and environmental awareness, and these can be crafted to address issues of inequality, diversity, and social justice. At the very least, this resource can be used to facilitate collaborations with local people and color, and organizations run for the betterment of people of color.
Within our Pod, we will create a shared knowledge of the work we are doing. During this session, we realized we did not know the full extent to which others in our Pod were working with communities! We can also create a shared resource of contacts for community-based research and learning so that we can build on the trust and networks created by each other.