

# Environmental Careers & Education Pathways for Underrepresented Youth

Proposal for a one-year pilot project focused on Colorado's first-generation-to-college students and Denver's South Platte River and its underserved neighborhoods

*Mission: To develop environmental careers and education pathways for underrepresented youth grounded in a deep commitment to community, environment, culture, unity, and justice.*

The Environmental Careers and Education Pathways Program will connect underrepresented youth to transformative, hands-on, outdoor learning experiences and community service—and make them aware of possible environmental jobs. Students participating in the program will:

- ✓ Gain a broader perspective on environmental careers and educational opportunities by working with subject matter experts on real projects
- ✓ Have transformative, nature-based experiences solving environmental problems important to the community
- ✓ Be exposed to a wide and deep professional environmental network that can connect them to future projects, education, and jobs
- ✓ Be better prepared and motivated to apply to colleges and graduate schools because of enriched project-based STEAM coursework
- ✓ Gain 21st century learning and career skills—such as teamwork, communications, creativity, and critical thinking—that can motivate them to stay in school and be leaders in their schools, professions, and communities.

The Pathways Program responds directly to the conclusions Haynes and Jacobson (2015) reached in reviewing the literature on racial/ethnic groups and natural resource careers:

*“Lack of exposure to nature and the outdoors, perceptions of career barriers, lack of knowledge of the natural resource field, and lack of support through the academic pipeline, hinders minority recruitment and retention into natural resource careers.”<sup>†</sup>*

This first-year summer pilot will focus on first-gen students who are **A**► rising high school seniors thinking about going to college, **B**► entering college freshmen considering majors and careers, and **C**► more advanced college students interested in the environment and sustainability. (See below.)

**Environmental  
Careers &  
Community  
Service**

**A**► **14** rising senior high school students from Denver Public Schools enrolled in the CSU Upward Bound Program will do hands-on South Platte River restoration and project-based learning for five weeks in the summer.

**B**► **18** incoming freshmen participating in CSU's Bridge Scholars Program will develop solutions to community problems while participating in project-based learning focused on the South Platte River for eight weeks in the summer.

**Summer 2019  
Pilot Participants**

**C**► **6** undergraduate students from CSU's Water Sustainability Fellows Program will learn environmental leadership skills by planning and implementing a fall River Festival in Denver that showcases the South Platte River work of all of the Pathways high school and college students—and the students themselves.

**A PARTNERSHIP OF:**



**ACCESS CENTER**  
COLORADO STATE UNIVERSITY



**EL LABORATORIO**

**SPECIFICS.** The Environmental Careers and Education Pathways Program will bring together teams of underrepresented high school and college youth in a replicable and scalable summer program that is characterized by:

- Radical integration of culturally sensitive citizen science with hands-on project-based learning
- Focus on rivers and clean environment and the “One Water” sustainability paradigm
- Meaningful engagement and interaction between youth, community, decision-makers, and subject matter experts
- Regained wonder of nature by our youth, who often have lacked access to safe outdoors.

The Pathways Program will:

- ✓ Provide students with salaried hands-on river restoration work that is integrated with learning that engages students with

subject matter experts and decision-makers on real-world projects

- ✓ Create youth leaders through citizen-science and the production of a student-planned and student-run River Festival in Denver
- ✓ Facilitate environmental Peer-to-Peer exchanges between students across the high school-university continuum.

**WHO, WHERE.** Colorado State University and El Laboratorio, and their partners will create and integrate the components of the Pathways Program. The major projects will be in Denver along the South Platte River corridor. The Upward Bound students will be based in Denver for two weeks and at CSU for four weeks. The Bridge Scholars will be based at CSU for eight weeks and will work on Denver projects.

**WIDESPREAD BENEFITS.** The student participants will be the major beneficiaries of the Careers and Education Program, as they experience, hands-on learn, see possibilities for self and community through enriched program activities.

The Denver neighborhoods that are the direct recipients of the student projects and festival will also benefit, as will the city as a whole, because improvements to the river corridor benefit everyone. Other

communities where graduates may go to live also will benefit because they gain vigorous and knowledgeable community voices and professionals.

Existing programs at Colorado State University will be enhanced through added resources, making them more effective and more attractive to applicants. Employers, including conservation nonprofits and government agencies will see more diverse and better prepared applicants.

*Bringing together the state's land grant university with leading African American and Latino nonprofit environmental organizations, Denver Public Schools and other Colorado students, City and County of Denver agencies, and local neighborhood leaders, the project will create environmental careers and education pathways anchored in a River Festival and watershed restoration and project-based citizen science activities along the South Platte River in North Denver.*

† Nia A. Haynes & Susan Jacobson (2015) “Barriers and Perceptions of Natural Resource Careers by Minority Students,” *Journal of Environmental Education*, 46:3, 166-182.

## Diane Meraz: a student example—and inspiration—for the Careers Pathways Program



Colorado State University Senior Diane Meraz was one of the inspirations for the proposed Environmental Pathways Project.

She found her way through each of the three educational programs that make up the proposed program and is headed for a career she might not have otherwise considered.

It all started in Diane's second year of high school (Greeley Central) when she was admitted to the federally funded Upward Bound program managed by CSU since 1977 (A▶). Participating in Upward Bound helped prepare her

to apply to college, but also gave her outdoor experiences she rarely had had before. In particular, Diane recalls an Upward Bound rafting trip in the mountains above Denver, during which her interests in water and nature started to come into sharper focus.

Diane was admitted to CSU and began her studies—as a CSU Bridge Scholar (B▶)—in the summer after her high school graduation. At first her major was “undeclared with an engineering interest,” but Diane realized that she wanted to do something related to the environment. With the help of a thoughtful advisor, she discovered

watershed science and declared it as her major.

At the start of her senior year Diane was selected as a CSU Water Sustainability Fellow (C▶), which has allowed her to meet water professionals and develop an expanded working knowledge of crucial water issues, and helped prepare her for a career as a hydrologist.

**The proposed Pathways Program would scale up Diane's experience, making it more readily available to a larger number of first-gen students, while making it an even more impactful experience.**