Program Overview

Soils play a fundamental role in many global processes. The need to understand the flow of elements, energy, and water through soils is immense and widely accepted across the geosciences community. Yet, the number of scientists trained with specific soils expertise is rapidly declining.

Working through the National Science Foundation’s Research Experience for Undergraduates (REU) Program, we developed a new REU Site focused on attracting undergraduates toward a career in Soil Science. Hosted at NCSU, the Basic and Environmental Soil Science Training (BESST) REU utilizes a diverse, multi-disciplinary team of scientists to deliver individualized student research experiences in state-of-the art soil science topics, connected through unifying team training opportunities.

Program objectives are to:

i) Recruit outstanding students with or without extensive previous experience in soil science, with an emphasis on those from under-represented groups

ii) Train students by providing a substantive research experience and exposure to broad opportunities in basic and environmental soil science

iii) Develop a pool of future professionals empowered to advance understanding of soils in the geoscience community

Mentored Research

*Year 1 of the program included 13 students from 11 institutions throughout the U.S. and one international institution.* Projects covered a wide range of topics from fundamental research to applications in contemporary environmental issues. Students were matched with mentors and worked to develop their own research.

Project presentations from national meetings are listed on the right.

Integrative Activities

Integrative activities within the program broaden experience in soil science and provide professional development opportunities. Highlights included:

- **Sea to Mountain Tour** – students visit 20 sites throughout NC during a week-long field camp

- **Science-Policy Interface Workshop** – led by EPA research scientists at the U.S. EPA National Risk Management Laboratory

- **Grand Challenges Workshop** – led by participating scientists at the Calhoun NSF Critical Zone Observatory

### Mentored Research

#### Student Application and Participation

We are actively recruiting students for summer 2016.

- Candidates are rising sophomore, junior, or senior undergraduates.
- Application materials are available at [reu.soil.ncsu.edu](reu.soil.ncsu.edu), due February 15.
- Program dates are May 26 to August 3, 2016 (similar timeline in 2017).
- **Participating students receive a $5K stipend; housing; travel and meal allowances; and travel support for participation in a post-summer national scientific conference.**