



Academic Affairs Division

Annual Accomplishment 2014-2015

A. Center for Environmental Inquiry – Director Claudia Luke, Ph.D.

CEI Accomplishments

- Aligned Center for Environmental Inquiry (previously SSU Preserves) with SSU academic priorities through a strategic marketing effort. Our renewed focus is on career building, technology and innovation.
- Secured \$227,602 in support for faculty and student research, and developed new long-term partnership with PG&E.
- Engaged 472 students (12 departments) in inquiry-based experiences by providing funding and staff support for faculty as part of 4 funding programs.
- Engaged 296 students (9 departments) in learning about technology using the Osborn Sensor Network. Network development was undertaken by 6 student employees working under faculty oversight. We additionally expanded the network to include an extreme high-resolution LiDAR dataset of the Osborn Preserve.
- Trained 70 students (4 departments) in environmental education and restoration techniques and scheduled them to work with 26 elementary schools and 5 regional restoration organization and agencies.
- Continued to build partnerships with over 50 community partners to assist in connecting faculty and students to regional issues.
- Land management and facility development projects included \$800,000 road upgrade, resolution of complex trespass issue, PG&E right-of-way construction project oversight, reroofing a barn, facility development planning, and invasive species control.

New Funding

- Sonoma County Water Agency, WATERS Collaborative Year 3: \$68,102
- PG&E Research Donation, Right-of-Way Research: \$79,500
- Private Donations, Operations and Special Projects: \$40,000
- IRA Grant, Preserve Stewardship: \$16,000 (recurring)
- IRA Grant, Osborn Sensor Network (Lead: Farid Farahmand): \$14,000
- GMC Academic Integration Grant: \$10,000

CEI Grant Programs for Faculty and Student Support

- WATERS Watershed Research Grants (\$9,000/yr): 12 faculty were awarded funds (amounts vary) to support service-learning projects related to watershed management.
- Steve Norwick Memorial Research Grant (\$5,000/yr): 5 faculty were awarded \$1,000 grants to support student research at the Fairfield Osborn Preserve.
- PG&E Research Program (\$91,000): CEI secured \$45,000 for 3 faculty research on right-of-way related studies. LiDAR products were acquired to support any researcher or student working at the Osborn Preserve. Further donations are in discussion.
- Sustainability in the Classroom (\$6,000/yr): Four faculty were awarded \$1,500 each for summer stipend to revise existing course syllabi to include inquiry-based learning on sustainability topics. This program is co-funded by CEI and Sustainable SSU.

Events Funded

- SSU Science Symposium (\$3,000/yr) – WATERS and the School of Science & Technology co-hosted the 3rd annual science symposium which celebrated the achievements of SSU students engaged in scientific research, including all those funded through CEI funding programs. Over 300 attendees talked to students about their research projects. WATERS, Sustainability in the Classroom, PG&E Research, and Steve Norwick Memorial Fund projects (listed below) were presented. The best water-related poster was presented by Supervisor Efren Carrillo.

Projects Funded by CEI Grant Programs

- Mike Cohen (Biology) and Mark Perri (Chemistry). Nutrient and E. coli levels upstream and downstream of the proposed detention and recharge basin. 61 Students (Funded by: WATERS)
- Farid Farahmand and Chris Halle (Engineering Science). Establishment of hydrological and meteorological sensor network in the Copeland Creek Watershed. 8 students. (Funded by: WATERS, Steve Norwick Memorial Fund)
- Nick Geist (Biology) Assessing invertebrate diversity in two highly altered aquatic ecosystems. 2 students (Funded by: WATERS)
- Michelle Goman (Geography). Tracking changes in fluvial processes at the Fairfield Osborn Preserve. 16 students (Funded by: WATERS)
- Jackie Guilford (ENSP) Rohnert Park nutrient loading project. 18 students (Funded by: WATERS)
- Martha Shott (Math and Statistics) and Chris Halle (Engineering Science). Predicting extreme rainfall in the Copeland Creek watershed. 23 students. (Funded by: Sustainability in the Classroom)
- Dan Soto (ENSP) SSU Facilities Water efficiency on campus and the SSU Toilet Report. 2 students. (WATERS staff support)
- John Sullins (Philosophy) Philosophy and ethics of water choice. 25 students (Funded by: Sustainability in the Classroom Award)
- Jeff Baldwin (Geography) Dry Creek backwater hydrology. 1 student. (WATERS staff support)
- Suzanne DeCoursey (CEI) Trail erosion and remediation at the Osborn Preserve. 20 students (Funded by: WATERS).
- Debora Hammond (Liberal Studies). Copeland creek water quality monitoring. 70 students. (WATERS Collaborative).
- Fran Keller (Biology). Insect biodiversity monitoring at the Colgan Creek restoration project. 1 student (Funded by: WATERS).
- Nathan Rank (Biology) and Jeremy Qualls (Physics). Freshman year studies in invasive species, microclimate, special status species, and water quality. 45 students. (WATERS staff support).
- Bulent Sokmen (Kinesiology). Effects of self-paced restoration work and walking on heart rate responses, energy expenditure, and psychological wellbeing. 16 students. (Funded by: WATERS)
- Suzanne DeCoursey (CEI) and Craig Dawson (SSU Facilities). Engaging disadvantaged youth in riparian restoration at Fairfield Osborn Preserve and SSU Campus. 6 students (IRA Program through Preserve Steward and staff support).
- Mike Cohen (Biology) and Farid Farahmand (Engineering Science). Development of modular biotreatment system for winery and brewery wastewater. 2 students. (Funded by: WATERS).
- Farid Farahmand and Chris Halle (Engineering Science). Image processing for environmental monitoring at the Fairfield Osborn Preserve. 1 student (Funded by: Steve Norwick Memorial Fund)
- Nicholas Geist (Biology). A quantitative assessment of macroinvertebrate diversity in Turtle Pond at the Fairfield Osborn Preserve. 1 students (Funded by: Steve Norwick Memorial Fund).

- Nathan Rank (Biology). Abundance of key insect species on CA Bay Laurel. 2 students (Funded by: Steve Norwick Memorial Fund).
 - Caroline Christian (ENSP). Effect of large predators in influencing the prevalence of Lyme disease. 3 student (Funded by: Steve Norwick Memorial Fund)
 - Chris Halle (Engineering Science). Long-term changes in microclimate, vegetation, and wildlife movement in the PG&E ROW. 2 students (Funded by: PG&E Donation)
 - Matthew Clark (Geography). Effects of LiDAR resolution on vegetation biomass estimates. 25 students. 25 student (Funded by: PG&E Donation)
 - Nathan Rank (Biology) and Ross Meentemeyer (North Carolina State University). Sudden oak death processes and effects of PG&E ROWs. 1 student (Funded by: PG&E Donation)
 - Claudia Luke (CEI). Long-term tree growth monitoring at the Galbreath Wildlands Preserve. 1 student. 1 student (Funded by: CEI)
 - Farid Farahmand (Engineering Science) Projects in microcontroller architecture, wireless communications, and network. 50 students (Funded by: Osborn Sensor Network IRA).
 - Suzanne DeCoursey (CEI). Effects of environment on radio signal strength. 70 students (Funded by: CEI and Osborn Sensor Network IRA).
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