

Warren J. Baker Endowment

for Excellence in Project-Based Learning

Robert D. Koob Endowment *for Student Success*

FINAL REPORT

*inal reports will be published on the Cal Poly Digital Commons website
(<http://digitalcommons.calpoly.edu>).*

- I. **Project Title: Food Sustainability at Cal Poly: Comparative Analysis Between Global and Local Distribution of Produce Items**
- II. **Project Completion Date: March 2017**
- III. **Student(s), Department(s), and Major(s)**
 - (1) Ariana Brandao, Social Sciences, Anthropology and Geography
 - (2) Elizabeth Jacobs, Social Sciences, Anthropology and Geography
 - (3) Olivia Surnow, Social Sciences, Anthropology and Geography
 - (4) Stacy Olsen, Social Sciences, Anthropology and Geography & Biology
- IV. **Faculty Advisor and Department: Dr. Dawn Neill, Social Sciences**
- V. **Cooperating Industry, Agency, Non-Profit, or University Organization(s)**
Harvest Santa Barbara, Cal Poly Real Food Collaborative, The Real Food Challenge
- VI. **Executive Summary**

Baseline data for Cal Poly produce items purchased in 2014, were generated using food miles and Life Cycle Assessment (LCA) of transportation related impacts measured in units of global warming potential. A regional simulation of a local food system compiled using Harvest Santa Barbara serves as a model of a regional wholesale produce distributor. Research objectives aim to identify produce items that would significantly decrease food miles and transportation related impacts when sourced through a regional food distributor. Comparative analysis between the global and local food distribution systems, associated with 59 produce types illustrate tomatoes having the most significant impact between the two models, based off of two quantitative metrics (mileage and CO₂). Overall switching to a local food distribution system would reduce Cal Poly's produce transportation emissions by 59.48%.

VII. Major Accomplishments

- (1) Produce sourcing habits of Cal Poly were quantitatively measured in a meaningful comparison with regional sourcing potential.**
- (2) Report was presented at 42nd Annual SSRIC Social Sciences Student Symposium.**
- (3) Produce items were recommended by produce type as pathways for feasible sustainability increase through metrics of food miles and global warming potential.**
- (4) Report findings presented at Annual CLA Dean's Advisory Council Meeting.**

VIII. Expenditure of Funds

Funds for project included travel expenses to present research findings at 42nd Annual SSRIC Social Sciences Student Symposium and online survey tool subscriptions. Total expenditure for the students were \$607.45.

IX. Impact on Student Learning

The way in which research objectives evolved from the initial proposal resulted in three separate, yet related papers. Initial research objectives were not feasible within the scope of available data regarding produce that is grown in the region. The result was research experience in which the involved student researchers had learning experience that highlighted feasible pathways to data acquisition. A powerful learning outcome was through the process of data generation in producing metrics to measure baseline produce purchasing habits. The way in which the research took new forms and shifts in direction allowed for students to learn about working with student cohorts in meaningful research that was disseminated amongst campus officials.