

Net Impact Davis Project Proposal

Project: Water Conservation on Farms

Agriculture is the greatest consumer of water, a valuable resource that is currently in low supply in California. This project will focus around water conservation on small-scale, local farms. Analysis of current water use will be done in order to locate inefficient use of resources on farms. This project will culminate in a feasibility study of effective conservation methods for farms, with the possibility of consulting on development of technology or educational outreach.

Time Frame: September 2016 – June 2017

Summary

The Water Conservation Project's goal is to implement water conservation practices on small local farms. In the context of the California drought, it is more important than ever to use effective conservation of resources to prevent infrastructure collapse as well as sustain output for a growing population. Given UC Davis' environmental focus, there are a myriad of resources on campus to combat this inefficiency and create a local impact. This will be done through farm irrigation analysis and creating a needs assessment to find the area with the greatest growth potential. Using expert opinions, we will consult farms on new irrigation techniques and help with implementation.

Methodology

Fall quarter 2016 will focus on context research and understanding the needs of the client. This will include creating a Gantt chart to set up a timetable for future quarters, as well as narrowing the scope of what is feasible in a year. University professors and campus organizations will be contacted for their understanding of water conservation and any information to influence the direction of this project. Farm visits will be completed to not only see the needs of local farms firsthand, but also be immersed in the context of the project.

Winter quarter 2017 will focus on brainstorming and prototyping for a solution to the discovered problem. This will involve compiling all gathered research, and creating a concrete problem statement to work towards. This information, along with our own understanding, will lead to brainstorming possible solutions to water conservation on farms. We will perform a KT design analysis for our proposed solution to meet all project needs and constraints, such as budget, space and time. Prototyping of our design, whether a physical deliverable or a interactive process, will take place along with initial testing.

Spring quarter 2017 will involve implementation of our solution as well as evaluation. This will include enacting the reform or technology in the context of the farm and monitoring its effects. Changes will be made to the initial design to promote effectiveness. Education will be provided to farms for their own effective use in the future. A project report will be compiled, and additional clients will be contacted for further implementation of the design.