

NRCS USDA Internship

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## Acknowledgements

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## Executive Summary:

The other intern, Blake, and I spent most of our time driving to fields and systems to check that no pre-existing system existed, that the system had been installed per the contract, and that the installed system worked correctly. Using proposed irrigation system maps, we learned to calculate gallons per minute and PSI required for a system to work. We were taught to use Trimble Survey equipment, and later, how to map the points taken using ArcGis and AutoCad. Early in the internship, we received training at the Irrigation Training & Research Center (ITRC) at Cal Poly for a week regarding different irrigation systems and equipment, and how to evaluate a fields Distribution Uniformity (DU).

## Project Objectives:

During the internship, the other intern and I were not given a specific project to work on, instead, I focused on familiarizing myself with the AutoCad and Trimble Survey Equipment. After gaining experience working with both, I focused on recognizing and understanding the different systems we evaluated, and acquainting myself with the various ways to easily conserve water and soil. Although my major chemical engineering has little to do with NRCS specifically, I could go into agriculture by researching and designing pesticides and plant growth stimulants.

## Project Approach:

In order to acquaint myself with AutoCad I practiced using following YouTube videos, and actually mapping the surveys. I used the Trimble Survey Equipment in the fields as Bradley, my supervisor, Blake, the other intern, and I evaluated fields and finished contracts. As we spent the

majority of our time during the internship driving to the fields and checking on proposed, in progress, and completed contracts, I was soon able to identify the different components in a pump and irrigation system with relative ease.

### Project Outcomes:

Although we were not given a project to complete, we gained valuable experience in using different survey equipment and mapping out systems on AutoCad. We also greatly improved our navigational skills for finding farms and dairies using only two crossroads.

### Conclusions:

In the future, I would recommend the interns do more desk jobs, and learn more about the actual mapping of irrigation systems, and are allowed more opportunities to evaluate fields on paper. This internship has given me great experience and knowledge on conservation and preservation, and I will definitely be using their common sense conservation approach in my next internship or job if applicable. Although I do not believe I will work with NRCS in the future, I will certainly attempt to obtain a job that allows me to continue conserving resources, albeit in different ways.

I made a presentation about the entirety of my NRCS internship, detailing what I did and I learned.

[https://docs.google.com/presentation/d/18vzwXlo2rfqclhBLxg60e1VF3M\\_XlkdtYiIELDYmazI/edit?usp=sharing](https://docs.google.com/presentation/d/18vzwXlo2rfqclhBLxg60e1VF3M_XlkdtYiIELDYmazI/edit?usp=sharing)