Tulare Irrigation District Internship
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Summer 2010

Employer: Tulare Irrigation District (TID) is a political subdivision of the state of California. TID is governed by a five-member Board of Directors and operates as an independent agency under the California Water Code. TID was founded in 1889 to supply surface water to the farmers in the San Joaquin Valley around the city of Tulare. Currently, the District supplies water to over 230 farmers in an area of 78,000 acres or 105 square miles. The District's two main goals are to provide surface water to the farmers in the area and to recharge the underground water level. TID achieves its first goal with the aid of numerous surface canals that carry the water throughout the District, and the second goal by filling several large recharge basins with water. As an intern, I worked under the District Engineer, and the Water Master.

Crop Surveying: Over a month of my summer work was spent crop surveying and creating a color-coded crop map of the district. I first had to drive all over the 115 square miles of the district and identify what crop was grown in every field. After several weeks of that work, I then transferred that data to a map of the district in AutoCAD. From there, I had to first draw in every field outline and then color it a certain color with the proper layer that corresponded to the correct crop. Approximately 55 different crops were grown in the district this past year. I created four crop maps during the past year: 2009 round one, 2009 round two, 2010 round one, and 2010 round two. The AutoCAD work really helped me get fast and efficient at using the program and I enjoyed learning how to use it in different ways.

Surveying: The biggest job I was assigned was surveying. Using portable survey equipment with a receiver on a 6.5 ft. pole and a handheld operating device, I was able to survey thousands of points around a new recharge water basin and along several of the canals. The canals are where I spent most of my time surveying because it was a very long and tiring job. After weeks of surveying, I only accomplished finishing a portion of the total canals in the district. For each canal that I surveyed, I would drive the baseline and every structure. I came to I would survey enough points to trace out the entire shape of it. Later I would download the points into AutoCAD and have a perfectly scaled drawing of the canals and structures along them.

Internship Overview: My internship included a variety of jobs. One of my jobs was to help keep the water orders and water charts recorded that constantly came through. I also did lots of AutoCAD work and excel spreadsheets. Another one of my job projects was to crop survey the entire District and then generate a color-coded map in AutoCAD. From crop surveying, I went on to my biggest job of the summer, which was to survey every structure in several of the main canals. My work varied daily, and sometimes I would be in the office in the morning and then surveying or collecting well water samples in the afternoon. I did part of my work under the Water Master, and the other part under the District Engineer. The experience was very valuable, and I really enjoyed working at TID and learning so many new things.

Conclusion: My internship at TID during the summer of 2010 was an amazing experience for me and so valuable. I learned so much and had a lot of fun doing it. The work was very enjoyable and always kept me busy. I appreciated getting to learn about the extensive water system in the San Joaquin Valley and all the work that goes on to manage an irrigation district.