Ventura County Resource Conservation District Storm Water Quality Program and Mobile Irrigation Lab

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Internship Time Period: January 2014- August 26 2014

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Report Submission:
August 26, 2014
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Acknowledgements

This project was supported by Agriculture and Food Research Initiative Competitive Grant no. 2011-38422-31204 from the USDA National Institute of Food and Agriculture. First and foremost I would like to thank my family for the immense help and support they’ve given me. I would like to give thanks to the Ventura County Resource Conservation District for giving me the opportunity to participate in this internship and for also being a great support system to me. I would also like to thank Dr. Donald Rodriguez for informing me about this wonderful opportunity and supporting me through the time period of the internship.
Executive Summary

For the past 8 months I have been working with the Resource Conservation District of Ventura County (RCD) as their student intern. The RCD focuses on 2 projects, Mobile Irrigation Lab (MIL) and the Storm Water Quality Program (SWQP). I was fortunate enough to dedicate time to both projects although my original intentions were to focus on one. Most of my internship I devoted my time to working on the Storm Water Quality Program. Both the SWQP and the MIL however do address water quality issues affecting the watersheds of Ventura County. Most of the tasks I performed involved field work as well as outreach. The RCD’s mission is “to collaborate with landowners, government agencies, and other willing partners to facilitate the conservation and restoration of Ventura County’s natural resources.” As I worked on my internship, I focused on fulfilling the agencies mission to the best of my ability.

The Storm Water Quality Program was developed as a non-regulatory program to help and support land and livestock owners in Ventura County with the proper management of runoff from their property which generates from storm activity. Under section 303 d of the Clean Water Act, the State of California must identify its impaired waters. Over a decade ago, there were 700 waterways which required TMDLs and amongst those listed was algae in the Ventura River. TMDLs or Total Maximum Daily Loads were developed by the state as a standard of the maximum daily load allowed of the pollutant. TMDLs were developed in order to help restore clean water on the affected water bodies. As part of my internship and working on the SWQP project I along with the RCD worked very closely with a group that developed in Ventura County called the Horse and Livestock Watershed Alliance to mitigate the primary TMDL of the Ventura River caused by Horses and Livestock.
The second project which I also had the opportunity to work on was the Mobile Irrigation Lab. Although I did not spend as much time working on this project as I did with the SWQP, I quickly learned the tasks and responsibilities of working with the MIL project. In fact as I started off my internship with the RCD, my first intentions were to work with the MIL project yet I had the opportunity to work with both. The MIL is a program which was developed to help farmers and landowners manage and improve irrigation efficiency for the improvement of water quality and runoff. It provides an analysis of irrigation efficiency for Agricultural producers in Ventura County. The resource Conservation District assists the landowners and farmers in using best management practices to develop water quality on their land.

**Project objectives**

As I searched for an internship that would best interest me and best fit my area of study, I encountered several different organizations that work closely with areas that I found to be very interesting. I decided to intern with the Ventura County Resource Conservation District after doing brief research on their work and finding that their work revolves a lot around areas that I am highly interested in including the Ventura County watersheds. My original goal as I came in to work with the RCD was to learn and explore the watershed in Ventura County and their impairments. When I started off with my internship my original goal was to only work on the MIL Program to learn best management practices for irrigation efficiency in agriculture and water quality which are factors that highly affect the watershed of Ventura County. Yet moving forward with that project I then was able to work with the Storm Water Quality Program which I personally found to be more closely related to my area of interest. Since there are two different programs which the RCD works on, at the beginning of my internship there were occasions when I dedicated more time to one project than the other. However overall I dedicated the majority of
my time to the SWQP because I found more relevance and connection to the Ventura River watershed.

After the experience which I obtained through my internship, I feel highly motivated and enthusiastic about obtaining a career pertaining to the United States Department of Agriculture. I would like to seek a potential career within USDA agencies that work with soil and watersheds. Although through my internship with the RCD I did little work related to soil, it is still an area which I’m interested in learning more about as I did have the opportunity to network with individuals who have knowledge regarding this area of study. This internship has broadened my knowledge of the many different types of employment that are offered related to my field of study.

**Project Approach**

As I worked on my internship, while focusing on the MIL my supervisors for the project were Vahid Akundzadeh and Jamie Whiteford. After a site visit was requested by a farmer or landowner, I would accompany Vahid and Jamie to the site of the irrigation system. The site visits usually took place in the morning, between 8 and 9. At the site visit, we would perform the field work in order to test the irrigation efficiency of the system on that specific site. I was responsible for placing the measuring equipment along the row of the crops where water could be collected at a stable rate of time, in this case 30 seconds. I would then take notes of the amount of water which was collected within the time frame. Then I would note the pressure of the irrigation system. My final task was to take waypoints of the area that was evaluated using a GPS. I would then give all the information which was collected to my supervisors and they would later develop a report which would be reported back to the landowner with best
management practices which they could follow to improve their irrigation system. I took my job very seriously and performed my tasks in the most professional manner.

While working on the SWQP I also took my tasks and the project very seriously and professionally to make sure that all the tasks were performed and the RCD’s mission was fulfilled. When a site visit was requested by a landowner, I would accompany my supervisors Marty Melvin and Dana Bogdanich to the site for evaluations of the specific property in order to assist the land owner with proper management or best management practice (BMP). During these site visits, the soil and health were evaluated as well as the facility structure and livestock and land management practices. The results and information gathered after the site visit were then taken back to the office and a report was developed by my supervisors which was later reported back to the landowner. The report informed the landowner of BMPs which could be performed to improve the management of the site.

**Project Outcomes**

There were two different results which I came to as I finalized my internship with the Resource Conservation District of Ventura County. This was due to the two projects which I worked on through my internship. Although both project are currently still active and taking place, I came to my own conclusion of the projects based on my work and contributions during my time period as an intern. First, the MIL project continues to run and is a project that holds a lot of potential for water quality and irrigation efficiency in agriculture. In Ventura County on average, farmers and landowners are irrigating efficiently and using best management practices when irrigating their land. However there are still landowners and farmers who chose to irrigate using older irrigation systems therefore leaving some room for improvement within Ventura County. The fact that there are still farmers and landowners who chose not to use newer
irrigation technology implies that outreach is necessary in order to make other be aware of the potential consequences of an inefficient irrigation system.

The results for the SWQP are more difficult to analyze because it is a project consisting of a very slow process in which it is difficult to see results quickly. As I helped my supervisors with the SWQP I concluded as well that outreach is a very important and necessary task in order to raise awareness of a particular matter. In Ventura County there are many livestock and landowners who are working diligently and responsibly to maintain their property clean and meet the TMDL requirements. In fact, I had the opportunity to attend a site visit in which the site was very well maintained and there were no changes which needed to take place. Yet it is difficult to grasp a full audience and make them understand the importance of the TMDL and the consequences of not following regulations.

In working on both projects, I learned the importance of team work. I strongly believe that team work or collaborating with others is necessary in the professional world because it is best to always have feedback and support from your colleagues. There are times when one may struggle with finding an answer but when more than one person is providing support it is easier to reach a solid answer and conclusion. I’ve also learned of the importance of networking as it was a great part of my internship as well. From doing so I gained an extreme amount of confidence as well as knowledge of the different groups and organizations within Ventura County that are aiming to protect our watersheds and our natural world overall. I also learned a basis of the process to developing a grant proposal which can be very helpful especially when working with nonprofit organizations.
Conclusion

The Resource Conservation District of Ventura County continues to work very closely with the Mobile Irrigation Lab and the Storm Water Quality Program. There are still today many efforts taking place to have the community understand and gain knowledge and awareness of the water quality issues faced within Ventura County. After my internship, I would highly advice any other students or anyone seeking an internship in which they will benefit from as well as make a difference in their community, to consider their county’s Resource Conservation District. I feel like the Resources Conservation Districts have a great amount of potential to develop.

After this opportunity, I am highly motivated in pursuing a position within a USDA career. I would like to be a part of an agency or organization which makes a difference within their community. My next step will be to volunteer with another agency such as the Natural Resource Conservation Service (NRCS), so that I may gain more experience and be more aware of the different opportunities that exist. I feel like the NRCS is somewhat like the RCD because they work on programs together and overall have the same goals, to serve and help the community and preserve our natural world. I strongly hope and feel that the skills which I learned from my internship with the Resource Conservation District of Ventura County will be applied to my work in school as well as to the career field which I decide to enter and become a part of.

Overall, I plan to take action in a way that will make a positive difference on our environment.
Appendices

Storm Water Quality Program
Mobile Irrigation Lab
Work Citations

http://www.vcrcd.org/