Tuolumne River Trust Watershed Internship

Katrina Quadra
California State University, Stanislaus
USDA Internship: February 7, 2013 – August 9, 2013

Advisor: Dr. Peggy Hauselt
Department of Anthropology and Geography
California State University, Stanislaus

Report Submission: August 8, 2013
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Acknowledgements

This project was supported by Agriculture and Food Research Initiative Competitive Grant no. 2011-38422-31204 from the U. S. Department of Agriculture (USDA) National Institute of Food and Agriculture. I would like to express my sincere gratitude to Dr. Augustine Avwunudiogba and my advisor, Dr. Peggy Hauselt, for supporting me throughout this internship. A big thank you to Julie Lappin for helping me during this internship and answering any questions I had. And last but not least, I would like to thank Meg Gonzalez, Ramsses Vera, Analisa Freitas, Karyn Bryant, and Karlha Davies of the Tuolumne River Trust.
Executive Summary

The Tuolumne River’s primary source is Mount Lyell in the Yosemite National Forest and flows through Waterford, Empire, Ceres, and Modesto to its confluence with the San Joaquin River at the San Joaquin River National Wildlife Refuge. The Tuolumne River Trust is a non-profit organization working to protect and create a healthy Tuolumne River through education and community outreach. The internship focused on understanding the concerns regarding the Tuolumne River watershed, engaging with the communities surrounding the lower Tuolumne River, and learning how an environmental non-profit organization functions.

Project Objectives

As an intern for the Modesto, CA Tuolumne River Trust office, the majority of this internship took place in the riverside communities, such as Modesto’s airport neighborhood, located along the lower Tuolumne River. Throughout the duration of my six-month internship, I had the opportunity to work with most of the staff members at the Tuolumne River Trust.

The goal of the Nature and Neighborhood program is to improve the area surrounding the riverside communities, which includes the parks and the Tuolumne River. I aided the Nature and Neighborhood Project Director with planning community events hosted by the Tuolumne River Trust. I was responsible for creating flyers for events, such as river and neighborhood cleanups.

During the months of February to May 2013, I worked with the Get Up N’ Go program at Orville Wright Elementary School in Modesto, CA from Mondays to Wednesdays. Get Up N’ Go is a program that provides after-school outdoor
recreational activities to increase children's overall well-being and appreciation for nature. During the summer of 2013, I helped with the Tuolumne River Trust's Science Academy and Summer Camp. Some of my responsibilities included, but not limited to, guiding my assigned group during activities and setting up demonstrations. Like Get Up N' Go, the Science Academy and Summer Camp allowed kids from Modesto’s airport neighborhood to connect with nature and learn more about the Tuolumne River.

I also helped with water quality monitoring during my internship. Water quality monitoring was conducted once a month and samples were collected from a total of five different locations. Locations included Dry Creek, Ceres River Bluff, and Riverdale Park in Modesto, CA. Several devices, such as a turbidity meter, were used to collect data regarding the pH, turbidity, conductivity, nitrate levels, and water and air temperature of each site.

In June 2013, I participated in Paddle to the Sea in June, a month long paddle-a-thon to raise awareness and protect the Tuolumne River. I canoed the Lower Tuolumne and San Joaquin Rivers, specifically from Turlock Lake to Durham Ferry in Manteca, CA. This part of the Tuolumne River is Class I Flatwater meaning that no experience is required. Two legs of Paddle to the Sea, from Ceres River Bluff to Legion Park and Legion Park to Riverdale Park) were community days which families from West Modesto and the airport neighborhood were able to participate in. During Paddle to the Sea, I assisted with equipment maintenance as well as providing first time paddlers with basic information about canoeing whenever it was necessary.

After completing this internship, I have decided on a hydrologist position as a potential USDA career. I would like to further investigate ways to improve water quality
in underserved areas and prevent water pollution, as a result of hazardous wastes, to ensure that the health standards of local water supplies are met.

Project Approach
Throughout my internship with the Tuolumne River Trust, I worked closely with Karlha Davies, the Nature and Neighborhood Project Director; Meg Gonzalez, the Central Valley Director of Outreach Education; and Ramsses Vera, the Riverside Activities Coordinator. Events, such as neighborhood cleanups, and activities for the science academy and summer camp hosted by the Tuolumne River Trust were discussed during meetings. Water quality monitoring was conducted monthly at five regular sites to gather information about the condition of the Tuolumne River. We usually met at 9 AM on the weekends in front of the Downtown Modesto Tuolumne River Trust office and would return around 3 PM.

Project Outcomes
I was able to apply what I have learned in the classroom to the real world, but it also made me aware of the skills I need to further develop. During my time as an intern, I was able to improve my Photoshop skills after creating flyers for events hosted by the Tuolumne River Trust. In addition, I have gained hands-on experience working in the field and using devices for water quality monitoring. This has helped prepare me for a possible USDA career as a hydrologist. My time as an intern has also taught me how a non-profit environmental organization works to protect what is left of the Earth’s natural resources. With community awareness and education, the quality of the lower Tuolumne River and surrounding areas can be improved.
Conclusion

Not only have I gained experience working towards a potential USDA career as a hydrologist, but interning for the Tuolumne River Trust also gave me the opportunity to grow personally and professionally. Meeting and working with different people in my community have greatly improved my communication skills and boosted my self-confidence. This internship has exposed me to local water issues that I was not aware of before. I have also learned about what the Tuolumne River Trust is doing to improve the quality of the lower Tuolumne River’s habitat and recreational areas. After completing this internship, I believe this experience is beneficial for my future.
Appendices

**Figure 1.** One of the five locations used to collect data for water quality monitoring

*Waterford, CA*

**Figure 2.** Device used to measure the conductivity of the Tuolumne River