

**ENS Lauren Butner
Jr COSTEP Summer 2011
Western Carolina University
Eastern Arizona District Office
Lakeside, AZ**

My name is Lauren Butner. I live in Cullowhee North Carolina and attend Western Carolina University. This year I will be a rising senior and I'll work to complete my Environmental Health degree.



All students must participate in four hundred hours of internship credit. This summer I had the pleasure to complete my hours as a COSTEP working with the Indian Health Service, Office of Environmental Health and Engineering (OEH&E). My duty station was at the Eastern Arizona District Office, Lakeside, AZ and my preceptor was Stephen Piontkowski. I was lucky enough to work with four tribes on the: San Carlos Apache Reservation, the Hopi Reservation, the Kaibab-Paiute Reservation and the White Mountain Apache Reservation. Being stationed at the District Office was such a benefit for me. The amount of experience I accumulated working with four tribes was remarkable. While working with the Indian Health Service I enhanced my knowledge of Environmental Health. This internship gave me a real world perspective of prior course work and gave me a glimpse of what has yet to come.

I began my summer by visiting each reservation and received orientation from Environmental Health Officers at their Service Units (i.e. reservations). The first three weeks were spent in the Arizona heat. I participated in the annual rabies vaccination clinic at the San Carlos Service Unit. This consisted of filling out vaccination forms and placing tick collars on dogs. This really helped reveal the purpose of the activity we had planned for the following two weeks. Rocky Mountain spotted fever has become a problem in Eastern Arizona over the past few years. The OEH&E helps two tribes conduct annual prevention campaigns where I applied pesticide around all the homes on each reservation with folks from many tribal programs, the Arizona Department of Health Services (ADHS), and the Centers for Disease Control and Prevention (photo below right). It was easy to observe just how many dogs are infested with ticks while collaring them the week before so I was truly inclined to help with this cause any way I could.

I co-conducted institutional environmental health surveys with each EHO at the three Service Units. Some of the institutions included three swimming pools, a jail, two senior citizen kitchens, an elementary school, and two campgrounds. I determined 97% of campgrounds in the District met the defined criteria of what a campground should include (solid waste disposal, sewage disposal, drinking water source, designated camping areas, and a recreational swimming area). This was important to help OEH&E prioritize future work.



Other work included mosquito collection to test for West Nile virus (results were negative) with a member of the ADHS. This was very fun and will help me with my vector control course this fall. Water is a major interest of mine. In addition to surveying swimming pools I had the opportunity to tour the surface water treatment plant in Whiteriver. I visited one before but this gave me a perspective that not each one is the same. I was informed later that the facility is considered a fairly big deal because it is one of few in Indian Country. I performed water lab proficiency testing with the two Environmental Health Officers for Whiteriver which was a new experience. This testing is required by the U.S. Environmental Protection Agency to ensure authorized procedures are followed.

My summer project was to implement a questionnaire at the Keams Canyon Service Unit. I managed the entire project from logistics, administered the questionnaire alongside a multidisciplinary team, designed a spreadsheet for data entry, evaluation, and interpretation, and summarized key findings in a summary report and oral presentation to officials. We conducted a door-to-door survey to evaluate community support for the installation of a dump station used to dispose household wastewater and to determine the community's preferred locations for it. The questionnaire was administered to 213 household members over the age of 18 years (response rate 84%). We documented considerable community support (99%) and 98% indicated they would utilize one if it was made accessible. Dump station locations varied but the most preferred were around the edges/outskirts of the village (30%), in multiple directions or locations (23%), and by specific housing (14%). We recommended the installation of a dump station to provide residents a sanitary method of household wastewater disposal and enhance public health. This was one of my favorite things about the summer's field experience because I really got a good chance to view the Hopi culture from inside the home.



The experience I received during my COSTEP internship is something I will never forget. I was able to obtain more knowledge about my environmental health major and I was able to get out on my own and learn about myself. If I had to do it all over I would pick the same location and people because they are the two things that made my time in Arizona so special. I would highly recommend this internship to anyone who is looking for new ways to broaden their knowledge and experience of the environmental health field. I can personally say it is one that will change your life.