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JRCOSTEP Summer 2018
University of Georgia – Athens
Bemidji Area Office
Bemidji, Minnesota

My name is Quinn McDaniels and I am a JRCOSTEP intern from the University of Georgia – Athens, located in Athens, GA. I am a student in the environmental health program, which is part of the School of Public Health at UGA. Our school has many thriving areas of study in epidemiology, occupational health, waste management, and more. I am proud to say that when I graduate in the spring of 2019, I will have a Bachelor of Science in Environmental Health from UGA.

My summer as a JRCOSTEP had me assigned to the Bemidji Area Office of the Indian Health Service in Bemidji, MN. Bemidji is a small town in northern MN, about two hours from the Canadian border. This was the first time I had ever been so far north, having lived in the South most of my life. The town is situated between three Native American reservations: White Earth Reservation; Leech Lake Reservation; and Red Lake Reservation; all of which are Ojibwe tribes. The Bemidji Area IHS, Office of Environmental Health and Engineering, Division of Environmental Health Services, serves many tribes in the Great Lakes region, including the Mille Lacs Band of Ojibwe Indians, the Fond du Lac Band of Ojibwe Indians, both Upper and Lower Sioux communities, and more. My preceptor was LCDR Timothy Taylor, a Registered Environmental Health Specialist who is the Bemidji Area's Institutional Environmental Health Specialist. Tim was highly knowledgeable, especially when it came to radiation safety in the health clinics.

My activities and projects were widely varied within environmental health. The main goal of the Division of Environmental Health is to ensure the minimization of environmental health risks both in the work place and at home. A large portion of our activity revolved around surveying food service establishments to minimize the risk of foodborne illness. This included taking the temperature of food to ensure it was held at temperatures that were high or low enough to prevent pathogen growth, ensuring proper handwashing practices, and ensuring the kitchen had policies in place to prevent sick employees from coming to work. In addition to servicing restaurant kitchens, we also inspected food vendors at tribal powwows. These came with their own challenges, as it was often difficult for vendors to keep their foods at appropriate temperatures and they often were missing functional handwashing stations. After each of these establishment surveys, an official report was written to submit to the tribe to note places where the kitchen or food vendor fell short. After observing the first few surveys, I wrote several reports, which was a valuable experience for a future regulatory career.

One of my larger projects this summer was assisting Tim create a guidance document for radiation safety in dental clinics. The procedure for collecting radiation measurements involves exposing a probe that measures radiation at various doses and amounts of time. The project involved creating a spreadsheet with equations that could calculate if a machine was in or out of compliance. And writing a detailed procedure with pictures so that another Environmental Health Officer could recreate the survey. We also put together a full binder with procedures,

conversion tables, and references to the regulatory codes that govern the use of medical radiation equipment.

My main project of the summer was organizing a tick surveillance program so that the occurrence of Lyme disease on tribal land can be monitored. This involved a lot of learning on my part, as I had never actively collected arthropods for disease surveillance. My project was to establish guidelines and methods so that the surveillance could easily be picked up year after year by other members of the environmental health team. Monitoring Lyme disease is very important because it has been on the rise in the Great Lakes region for the past decade, and state health departments typically do not conduct surveillance on tribal lands. It is critical to monitor the disease so that tribes can be aware of the risk presented on their lands. My project was to create documentation on needed supplies and proper procedures for tick collection, as well as to establish a connection with the Center for Disease Control and Prevention where the collected ticks would be analyzed. Then, I performed field studies to gain and document the experience to add to the procedure document.

One of my biggest challenges was learning to interact with tribal members, as I had not had much experience in the Atlanta suburbs where I'm from. There is great influence placed on respecting elders.

Overall, my favorite part about my JRCOSTEP assignment was the variety of activities I participated in. I surveyed food vendors at powwows, helped perform radiation and nitrous oxide surveys in clinical settings, inspected a printing company, and helped set up a disease surveillance procedure to be carried on in future years. These experiences could help in a large variety of positions that I could pursue after graduation. My best piece of advice for those considering a JRCOSTEP assignment is to say yes to every opportunity that your preceptor and office give you. You never know what could be valuable experience for the future.