

**ENS Andrae Genus**  
**JRCOSTEP Summer 2022**  
**University of Florida**  
**Whiteriver Service Unit**  
**Whiteriver, AZ**



My name is Andrae Genus and I am a Master of Public Health (MPH) student with a concentration in Environmental Health (EH) at the University of Florida College of Public Health & Health Professions (PHHP). I became interested in the U.S. Public Health Service (USPHS) and the Junior Commissioned Officer Student Training and Extern Program (JRCOSTEP) while serving in the U.S. Navy as a Hospital Corpsman at Naval Air Station Jacksonville

Florida in the Department of Public Health. I've always had a passion to pursue a profession in which I can apply my scientific and technical skills to help society. Therefore, applying to the JRCOSTEP seemed like a great opportunity to continue to serve underserved populations, as well as gain practical and professional experience while working with an experienced mentor and accomplished public health agency.

I was employed by Indian Health Service (IHS) in Whiteriver, AZ at the Office of Environmental Health & Engineering (OEHE). I lived in Jacksonville, FL, so I had to embark on a long journey from Jacksonville to Whiteriver, which took 28 hours to complete. My first impression of Whiteriver was that it looked a little arid, but when the yearly monsoon rains came through the region, the vegetation transitioned into a beautiful lush green appearance.

My preceptor was LCDR Kathryn Pink, who is an Environmental Health Officer (EHO) at the Whiteriver Service Unit (WRSU) within OEHE. A few of the priority areas for the environmental health staff are reducing the incidence of foodborne illnesses on the Ft. Apache Indian Reservation, increasing awareness of the detrimental effects of Rocky Mountain spotted fever (RMSF) among tribal members, and decreasing the incidence of injury and death due to injury within the community.

My JRCOSTEP project focused on RMSF, which is a severe tick-borne illness that first appeared in Arizona in 2003. When left untreated, or when treatment is delayed, this disease can be fatal.

The project I worked on was a RMSF tick oil pilot project. The main goal was to assess the effectiveness and feasibility of using topical tick treatment on dogs. The pilot study revealed that the topical tick treatment was effective in reducing ticks on dogs from the first topical application to the second. The RMSF prevention program and animal control program will use my data to continue the study and possibly implement a second pilot with a comparator community. As part of my project, I updated the tick oil pilot project implementation plan so that this type of study can be applied in other tribal communities. Additionally, I created a more interactive volunteer packet for people interested in assisting the RMSF prevention program to reduce the tick population on the reservation.

My COSTEP experience has afforded me the opportunity to improve my leadership skills by working collaboratively with members of the White Mountain Apache Tribe. In addition, this opportunity has helped me strengthen several environmental health competencies, which includes: (1) applying different approaches for assessing environmental exposures; (2) applying awareness of cultural values and practices to the design or implementation of public health policies or programs; (3) communicate audience-appropriate public health content both in writing and through oral presentations; (4) examine the direct and indirect human and ecological health effects of major environmental agents; and (5) demonstrate cultural sensitivity and appropriate communication when engaged in public health practice.

Some challenges I experienced during my time as a JRCOSTEP were adapting to the slow pace of life on the reservation since I came from a larger bustling city, and the dry and humid conditions.

I would certainly recommend this internship site to future student interns. The JRCOSTEP provided invaluable practical experience in general and institutional environmental health; additionally, the student will have the opportunity to work with underserved populations to help prevent a variety of environmental health problems these communities face daily.

All in all, my JRCOSTEP experience was a rewarding opportunity to work and interact with wonderful people and if given a second opportunity I would do it all over again.

I would like to extend a sincere thank you to my preceptor LCDR Kathryn Pink, CDR Sarah Snyder, and Mr. Daniel Dicks for fostering a positive working environment during my JRCOSTEP experience.

