



ERDC Serves as Summer Home for Cadets

By Ms. Megan Holland

Ten cadets from the United States Military Academy at West Point, New York, found a temporary home in the United States Army Engineer Research and Development Center (ERDC) this summer while on Advanced Individual Academic Development Program assignments. Designed to give students hands-on experience, the assignments include weeks of research, with the cadets expected to create a final product, briefing, or report for West Point. In some cases, a cadet continues to work on the project as an individual study elective course during the following academic year, an option that many of ERDC's cadets chose.

The voluntary program offers many options, such as touring France to sharpen language skills and absorb the culture. ERDC has participated in the program intermittently since 1978, and this year's crop of 10 cadets was the largest yet hosted by the research organization.



Photo by Oscar Reihmann ACE-IT

A cadet helps an ERDC researcher prepare for an experimental explosion while working with ERDC's Geotechnical and Structures Laboratory.



Photo by David Roberts, ERDC PAO

A cadet works in ERDC's Environmental Laboratory in Vicksburg, Mississippi.

Three of the cadets worked with ERDC's Geotechnical and Structures Laboratory, four with the Environmental Laboratory, and one with the Coastal and Hydraulics Laboratory, all in Vicksburg, Mississippi; two more were assigned to ERDC's Construction Engineering Research Laboratory (CERL) in Champaign, Illinois.

ERDC engineers and scientists mentor the cadets on a variety of diverse projects. One of this year's projects focused on mitigation of improvised explosive device (IED) attacks against Soldiers. The project involved making roads safer by reducing the forces that act on a vehicle during an IED attack, in addition to lowering the insurgents' ability to emplace the explosive devices in the first place. The cadets working on this project tested small-scale models in the Geotechnical and Structures Laboratory centrifuge lab and worked in ERDC's United States Army Corps of Engineers Reachback Operations Center, evaluating the best measures to lessen these risks in-theater and testing software. They also spent time at ERDC's explosives range, testing ERDC-created mitigation measures on quarter- and half-scale models. Their goal was to determine if the measures could make IED blasts survivable by Soldiers.

Another cadet deployed to assist the Environmental Laboratory in response to efforts by the Department of the Interior (DOI) after the Deepwater Horizon oil spill in the Gulf of Mexico. He helped the Environmental

Laboratory and the United States Fish and Wildlife Service organize a natural resource damage assessment database to document injury to DOI public trust natural resources. He also helped in beach bird surveys by searching beach segments to collect data on bird populations in areas affected by the spill.

At CERL, a cadet majoring in civil engineering spent the summer researching renewable and alternative energy technologies in Afghanistan, concentrating on the potential to reduce the need for diesel fuel and reduce annual costs by installing a variety of energy-saving measures. He also studied the conversion of waste to energy through gasification, assessing the potential use of a gasifier to reduce the volume of waste while producing enough energy to automate the waste system and/or offset diesel fuel consumption for generators.

Much of the program's success is credited to the ERDC scientists and engineers who act as mentors for the cadets in their assignments. ERDC benefits from the efforts of the talented cadets, and the future leaders in turn learn about the center's important solutions to Army problems. 

Ms. Holland is a contract writer for ERDC. She holds a bachelor's in English and writing from Mississippi College. Before working at ERDC, she was a newspaper reporter in Vicksburg, Mississippi.