

CAREERS & EDUCATION

Relationship Building

University partnerships benefit students and the Corps



USACE BALTIMORE DISTRICT

Civil engineer Fontaine Jones of the Corps' Baltimore District works with students during a Career Connections program in 2014.

By Robin Roenker

CORY WILLIAMS MAKES IT a point to be a fixture at college job fairs, where he can talk to students about careers in engineering — particularly with the U.S. Army Corps of Engineers.

Williams, chief of the geotechnical engineering branch in the Corps' Memphis District, says his visits help build

relationships with college and university STEM programs, where students are often unaware of potential careers with the Corps.

“Our goal is to hire highly qualified civilians from diverse backgrounds,” says Williams. “The better we can get at relationship building with universities and professors, the better chances we have of getting really high-quality students to hire.”

NATURAL PARTNERS

Like Williams, many members of the Memphis District have fostered collaborations with engineering programs at the University of Memphis and Memphis-based Christian Brothers University (CBU), in particular.

Corps members have assisted CBU in its development of a new Surface Water Institute, which provides hands-on hydraulics and water resources training

for its students. They also have provided technical assistance on groundwater research projects with the University of Memphis' Center for Applied Earth Science and Engineering Research (CAESER), among other projects, says David Berretta, a retired Corps member now working as a civil engineer with the Memphis District.

“Our relationships with the local universities are solid,” adds Berretta, who

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USACE MEMPHIS DISTRICT

Cory Williams visits with students at Christian Brothers University in 2019 to discuss career opportunities with the U.S. Army Corps of Engineers.

has taught water resources courses for the University of Memphis in the past. “We get along great together.”

RECRUITING DIVERSITY

Across the country, Corps districts are working to build new and stronger partnerships with historically Black colleges and universities (HBCUs) and other educational institutions that serve a diverse student body.

“We take diversity, equality and inclusiveness seriously,” says Col. Zachary Miller, commander and district engineer of the Memphis District, which plans to increase its recruiting efforts at HBCUs in Tennessee and Mississippi in the coming months.

“Diverse and inclusive organizations are more effective organizations,” Miller says. “When you bring diverse thinking styles and backgrounds and viewpoints

together, it has a positive impact on the solutions and the innovation of whatever you deliver.”

In Baltimore, civil engineer Fontaine Jones is involved in outreach at her alma mater, Morgan State University, the largest HBCU in Maryland. She also frequently leads presentations about the Corps and its mission at Johns Hopkins

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— APRIL FALCON-VILLA,
deputy chief, geotechnical branch,
New Orleans District

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STUDYING NATURAL INFRASTRUCTURE

In late 2020, the Army Corps announced a partnership with the University of Georgia's (UGA) Institute for Resilient Infrastructure Systems to form the Network for Engineering with Nature (N-EWN).

The goal of the collaboration is to accelerate the use of natural infrastructure in public and private sectors. Application of "natural infrastructure" might include reconnecting rivers with their floodplains to reduce flooding downstream or protecting reefs, mangrove forests or natural marshes to work as "speed bumps and shock absorbers to reduce

the impact of storms," says Brian Bledsoe, a professor in UGA's College of Engineering who specializes in resilient infrastructure.

Recently, UGA students and faculty have been involved in projects at Tybee Island, Ga., to create a "living shoreline" rich with oyster reefs and salt marshes, which can help prevent shore erosion.

While the Engineering with Nature initiative began in 2010, the recent launch of N-EWN will establish a formalized headquarters at UGA for groups interested in "leveraging natural systems

and processes as a more intentional part of our infrastructure development," says Todd Bridges, national lead for the Engineering with Nature initiative and a senior research scientist for environmental science based at the Corps' Vicksburg (Miss.) District.

While based at UGA, N-EWN also incorporates the Corps' collaborations with the University of Florida, the University of Oklahoma, Arizona State University and others, Bridges says.

Through these partnerships, N-EWN will support research,

education and on-the-ground project applications to encourage the development of new engineering standards that incorporate innovative, natural and sustainable systems into their design.

"There is such enthusiastic passion among students to find ways to reconcile traditional means of building infrastructure and (concepts behind) engineering with nature," Bridges says. "It's very heartening from my vantage point, when I come in contact with these students and their faculty at universities across the country."



Researchers from the Engineer Research and Development Center Environmental Laboratory monitor conditions at a 12-acre marsh on Drake Wilson Island off the coast of Florida in the Gulf of Mexico, where dredged sediment has improved habitats for a variety of species.

HOLLY KUZMITSKI

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— CORY WILLIAMS,
chief of geotechnical
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Memphis District



ENGINEER RESEARCH AND DEVELOPMENT CENTER

Todd Bridges, national lead of the Engineering with Nature initiative, lectures to University of Georgia students in 2019. The initiative, based at the school, also includes Corps partnerships with several other universities.

University’s STEM summer camps, which attract high school students from diverse backgrounds.

Jones found her calling in engineering through the recommendation of her high school counselor, and she hopes to help pay that forward by encouraging students, particularly girls, to consider engineering as a profession. Through her career in the Corps, Jones’ engineering skills have taken her around the world, working on projects in Germany, Italy, Kosovo, Kenya, Tanzania and more.

She sees her volunteerism at Morgan State, Johns Hopkins and Baltimore elementary schools — where she often leads toothpick and marshmallow bridge-building exercises — as a way to help open young students’ eyes to the rich array of engineering opportunities

within the Corps.

When talking to university students, in particular, Jones emphasizes the Corps’ internship and recent graduate program opportunities, which she says helped jump-start her career. “You get to rotate for two to three years among the different USACE departments, and I even had the opportunity to go overseas,” she says. “It is an excellent program, which I recommend to a lot of young people.”

DISPELLING MISCONCEPTIONS

April Falcon-Villa, deputy chief of the geotechnical branch in the New Orleans District, has found success recruiting at HBCUs and national conferences of Black and Hispanic engineers.

Falcon-Villa has primarily recruited at colleges in the New Orleans region,

but in the past several years, she has widened the circle to include HBCUs in other areas of the country. The effort is paying off.

“We have found very talented candidates from this outreach that we would not have normally been privy to,” she says. “We recently hired some candidates from colleges like Spelman and Jackson State University who have hit the ground running with their contributions. I am very proud of the diverse group that we have working in our branch.”

Part of opening students’ eyes to potential careers is dispelling misconceptions many of them have about what it means to be part of the Corps.

“A lot of folks are very surprised to learn that I am not in the military,” Falcon-Villa says. She relishes opportunities

to speak to university students about the Corps’ mission and diverse civilian engineering opportunities — including flood-risk reduction projects along Lake Pontchartrain, which the New Orleans District is tackling now. “Once you help people understand what it is that we do, you can see it spark the interest on their end,” she says.

Williams agrees.

Staffing booths at college job fairs, he says, allows him to have one-on-one conversations with students about what the Corps is and what it does — and affords the opportunity to correct many students’ misconception that you must enlist in the Army to be part of it. Williams says he enjoys the chance to “plant the seed that the Corps is a really good place to work.”