

Fostering a Work Environment Where All Can Thrive

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1 / 1 Show Caption + (Left to right) USACE engineers Mallory Harvey, Marneshia Richard, and Meg Johnson are in the Memphis District's Structural Engineering Section. They provided insight into their motivation for becoming engineers and what USACE is doing to create a work environment where they can thrive. (Photo Credit: Vance Harris, USACE Memphis District Visual Information) [VIEW ORIGINAL](#)

Increasing the number of females earning degrees and working in the field of engineering is a well-known challenge. There are many programs and organizations dedicated to understanding and overcoming this gender gap. One such organization is the Society of Women Engineers. It reports that only 11 percent of practicing engineers are women.

After reading the research results, I sat down with three female engineers from the Memphis District's Structural Engineering Section to get their perspectives on the issue, find out how and why they entered the field and what the U.S. Army

Corps of Engineers and their supervisors are doing that encourages them to remain in the field.

Marneshia Richard

"I have always liked math and science," said Marneshia Richard. She originally wanted to go into architecture, but after attending an engineering camp held at Mississippi State University, which one of her teachers suggested, she switched her interest to engineering. At the camp she did activities involving mechanical, electrical, structural, and civil engineering. She said after doing more research, she settled on structural engineering.

"One of my biggest influences was my high school math teacher, Pam Cockrell," Richard said. "She was always pushing and motivating us to do different things. She offered us different types of sessions and classes that wasn't offered on the curriculum out of the goodness of her heart and on her own time."

She said her other major influences were her parents and her Aunt Sarah who encouraged her to do what she wanted to do.

Richard said she believes there should be a lot more females in engineering.

"The Structure section here in the Memphis District is unique in that we have three female engineers. I would like to see more females in engineering because I think it would provide a different perspective on things like design," she added.

Richard recently participated in a Science, Technology, Engineering, and Math (STEM) Camp, encouraging young girls to enter engineering, telling them about USACE and what the engineering field is all about.

"One of the biggest things I've noticed here at the Memphis District is that we have good supervisors," Richard said. "I've been fortunate to have good supervisors who have been encouraging. My previous supervisor at the Vicksburg District was female and that was unique."

Richard said she believes USACE is putting people in leadership positions who are unbiased and who think that females can do just as much as males.

Mallory Harvey

"I was doing business courses for a couple of years making decent grades, but I didn't know what I wanted to do," Mallory Harvey said about her start in engineering. "I got pretty bored. A friend recommended I take some engineering courses and I decided it was a lot more fun than business. So I stuck with it."

Harvey said she believes the outlook for women in engineering is good.

"There are a lot of efforts to improve the statistics regarding women in engineering," she said. "I'm part of the Society of Women Engineers here in Memphis and I participate in a lot of STEM activities to encourage females to enter engineering."

Harvey said fellow engineer Tanya Wells is a big influence for her.

"I look up to Tanya Wells because she is the go-to bridge expert. She's very smart and dedicated to her work," Harvey said. "Also, I look up to my boss, Daniel Rocha and my instructors at school. They take the time to teach and explain the details I don't understand."

Harvey said she believes there's a conscious effort to encourage women and other minorities to enter engineering.

"Leaders in USACE are very supportive and encouraging of what we do here and they acknowledge the endeavors of women and that works," she said.

Meg Johnson

"I came to engineering in middle age. I had a math degree and I ended up working for an engineering firm here in Memphis as their marketing director," said Meg Johnson. "After working there for several years I felt like I had missed my calling. I was working with engineers but I wasn't doing engineering and that's where I thought my talents were. So, I told my boss about it and he was very supportive. He moved me into structural engineering, taught me how to use CAD and paid for me to go to school. So, that's how I ended up in engineering."

Johnson said she's glad she took the risk of going back to school and changing her career because she's been much more satisfied since she made the switch.

Johnson said anytime she has an opportunity to encourage other females to get into the field she takes it.

"Recently, I did a career day for eighth graders. Though there are both boys and girls in the class, I make it a point to address the girls and let them know this is a really good career and that there are many opportunities out there for females," Johnson said.

"My father was a big influence for me entering the field. My father was an engineer and had a construction company. I had a hard hat as a kid and he would take me to job sites. I worked for him during the summers. So, I certainly was exposed to engineering early," Johnson said. "He always encouraged me to do whatever I thought I would enjoy doing. The exposure he give me to engineering had great influence in my deciding to go back to school and become an engineer," she added.

Johnson said coming to work for USACE has been really refreshing. "There's a lot of transparency here that gives you a certain amount of confidence that you are being treated fairly and that goes a long way towards being happy to come to work every day," she said. "I've never worked anywhere with an environment like this. It's very comfortable and I do love seeing the diversity."

Johnson said it's very encouraging that a group of people can work together without ever thinking about differences.

"There's so much more diversity and opportunities here. You can get on a track, do well and advance," she added.

The university researchers who conducted the study suggest the solution to keeping female engineers on the job is not a matter of fixing them or how they adapt to the work environment, but rather how organizations adapt to a more diverse workforce. They recommend organizations work at fostering a culture of inclusiveness, develop clear pathways for career advancement, and create more civil work environments.