



®

**BUILDING STRONG<sup>®</sup>**  
**PEOPLE**



US Army Corps  
of Engineers  
St. Paul District

“ Now, more than ever,  
the nation will need a  
**lean, agile,  
strong, capable,  
competent** and  
**trusted**

**U.S. Army CORPS OF ENGINEERS.”**

– Lt. Gen. Thomas P. Bostick  
USACE Commanding General  
and Chief of Engineers

At nearly 37,000 strong, the U.S. Army Corps of Engineers team is a diverse group of men and women with a vast array of knowledge and skills. They work in a range of professions as biologists, lock and dam operators, power specialists, physicists, architects, boat captains, park rangers, contract specialists, hydrologists and engineers.

These civilian and military professionals recognize the critical role that Science, Technology, Engineering and Mathematics education plays in ensuring the security of our nation and enabling the U.S. to remain the economic and technological leader of the global marketplace. They are also committed to teaming with others to strengthen STEM-related programs that inspire current and future generations of young people to pursue careers in these fields.

They are forward thinkers, who develop engineering solutions for our nation's toughest challenges. They are innovative, disciplined, motivated and engaged. They are Traditionalists, Boomers, Generations Xers and Millenials who are confronting the obstacles of the 21st century and transforming the U.S. Army Corps of Engineers for the future.



They are  
**BUILDING STRONG®**



Renee McGarvey



Landscape Architect



Avid yogi



This is a diverse profession. I get to use my **ecology** and **environmental backgrounds.**

# ENVIRONMENTAL MULTI-TASKER

Landscape architects are in a multi-disciplinary field. I get to bring in my ecology and environmental backgrounds when working on most of my projects. I often look at the land and the project—how the project will fit into the location with the design parameters we have. I also work with a diverse set of people including my geo-technology and hydraulics and hydrology team members as well as local sponsors and the public. In the private sector, landscape architects most often specialize in one area. But in the Army Corps of Engineers, you do larger projects that you don't often get to do in the private sector.



Dr. Nicholas Jabari Lee



Physicist



Jazz Enthusiast



“ I don't see any other purpose for science than to advance technology in order to **improve the lives of people.**”

# GAME-CHANGING RESEARCHER

I think everyone wants to do things that have purpose and will outlast them. With a team of scientists and engineers at the Engineer Research and Development Center in Mississippi, I use computer simulations to study the physical properties of carbon nanotube-based materials. Carbon nanotubes are similar in size to a strand of DNA and research at this level has major implications. The molecules are  $1/6$  the weight of steel but 150 times stronger. This technology means stronger yet more lightweight cars, bridges, aircraft, and buildings. But it doesn't stop there. This research also has uses in biomedicine and could mean lighter and stronger equipment for our warfighters, which could save lives.





Eric Jolliffe



Biologist



Outdoorsman



A project like this was very appealing to me ...

this is **the reason I work here.**"

# DIFFERENCE MAKER

I don't mind getting a little mud on my shoes. In fact, it's part of my job as a biologist in the San Francisco District. Mud, or more accurately, dredged material, has played a key role in the development of the Hamilton Wetland Restoration Project in Novato, Calif. We are essentially using the mud to raise the elevation of the site, which would happen naturally if we breached it, but it would take decades longer. This is a critical area for a couple of endangered species: the salt marsh harvest mouse and the [California] clapper rail. So there's an advantage to creating this site as fast as possible.



Jasmine Austin



Civil Engineer



Fashionista

“There’s  
**a little  
investigative work**  
that goes along  
with my job.”

**TALENTED  
SOLUTIONEER**

I fell into civil engineering because I like math and science. It wasn't something I selected initially, but it came organically. I work with entire project teams focusing on the earth-material side of levees and dams. Civil engineers are just one piece of the puzzle on projects. I also work with structural and hydraulic engineers to accomplish the mission. Structural engineers choose their materials for a project, such as steel or concrete. However, we have to investigate what we have on site, such as clay or soil, to determine the design of the dam or levee.



Heather Wright



Park Ranger



Kayaker



Many people don't know that there are rangers for the U.S. Army Corps of Engineers, but

**we're here for good reasons."**



# ENVIRONMENTAL STEWARD

I have been working as a park ranger for the U.S. Army Corps of Engineers for nearly a decade—ensuring visitors to Stanislaus River Parks in California have a safe and enjoyable experience. The parks' river, recreational opportunities and annual events like the Civil War Days and the Gold Country Peddler's Fair bring in thousands of visitors each year. To be a park ranger, it takes a genuine love for people and natural resources. It's really our job to have the parks open, ready and available for people to come out and recreate.





Staff Sgt. Oliver Hairston



Sr. Power Station Mechanic



Car fanatic



“Electricity is often overlooked ... until it goes out.”

# POWER BROKER

I work in the 249th Engineer Battalion (Prime Power). Most people are familiar with the electrical support we provide, but we are a multi-faceted group of Soldiers who cover a wide range of missions. We assess facilities all over the world to ensure reliable, correct back-up power. We service and maintain fuel stations and pump stations, install secondary distribution centers, provide electrical support for hospitals—we do a little bit of everything. Once a problem is identified, we work to provide support. We are open for business worldwide for anyone who wants us.





Liz Finn



Master, Class IV Tug



Frequent traveler



I never underestimate the

power of a team."



# WATERWAYS NAVIGATOR

In 24 years with New York District I've learned a lot. I'm assigned to a floating plant at Caven Point Marine Terminal and I've deployed with the Temporary Housing Team on numerous disasters. I wear many hats including instructor for the Motorboat Operator Licensing Examiner course and Alternate Diving Coordinator/Inspector. I also patrol the waters of one of the busiest harbors in the world. My main mission is to keep the navigable channels clear of debris and wreckage. I also have to be ready for anything such as performing search and recovery operations like TWA Flight 800 or US Airways Flight 1549 ("Miracle on the Hudson") and the mass evacuation of lower Manhattan on September 11th. I'm always prepared to support my team and the mission regardless of what comes up.



Marco Ciarla



Geographer



Guitarist



“ I have always been interested in the ability for **humans to map the landscape.**”

# 21ST CENTURY PTOLEMY

I use cutting-edge GPS technology to create accurate, timely and actionable geographical data that is critical to make important decisions, both for commanders in the battlefield and community leaders at home. My unique skills allow me to combine this key data with GIS software to strategically manipulate it for specific purposes, including landing zones, flood inundation mapping, land slope determination, and watershed delineations. I chose this field because I have always been interested in the ability for humans to map the landscape. These GPS and GIS technologies allow us to do so more efficiently and accurately than ever before.



Hank DeHaan



Project Manager



Wine Maker



Project managers are

**passionate  
about working  
diligently**

**with our customers and  
fellow teammates."**

**CAPABLE  
MASTER-MIND**

I get involved in a variety of interesting and challenging water resource projects including flood risk management, environmental restoration and inland navigation projects. I lead and manage diverse teams comprised of engineers, scientists and planners in the execution of projects. I work closely with stakeholders and sponsors to clearly understand their needs and find solutions that effectively meet their goals—whether it be reducing their flood risk or restoring an ecosystem. Project managers are passionate about working diligently with our customers and fellow teammates to develop and implement high-quality water resource projects that best serve the nation.





Lillian Taylor Fox



Contracting Officer



Accomplished singer

“A strong leader must possess **a clear vision.**”

# RISING STAR

I wear two hats, but don't mind sharing what I know about being a good leader with others in either capacity. In fact, it's part of my job as a division chief and contracting officer. I began work with the Huntsville Center as a co-op student in 2004 and have held jobs as a procurement analyst, intern coordinator and acquisition workforce liaison. As a division chief, I have an opportunity to foster an environment where challenges are welcomed, knowledge sharing is common place and innovative thought is encouraged. As a contracting officer, my goal is to develop contracting professionals who use sound business judgment to meet customer needs. My journey in the contracting field has been exciting: from day one, my focus has been on being prepared and remaining flexible enough to willingly adapt to change.



Barb Lester



Construction Branch Chief



Musician



Construction is where the **rubber meets the road.**

# STRUCTURAL MAVEN

As a construction engineer, I get the opportunity to utilize my engineering, management and team-building skills to assure that a quality project is built. A successful or quality project is one that meets stakeholder expectations and protects the best interest of the nation. I enjoy working with contractors, customers and our USACE team to collectively solve problems in a fast-paced, dynamic work environment. Construction is where the rubber meets the road as a team's visions and efforts are often brought to life during the construction phase of a project.



Jim Ernst



Dam Operator



Muscle car restorer

“ Being able to

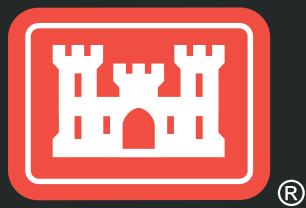
work outdoors,  
that’s just what  
I really like.”



# RISK MANAGER

I've been employed with the U.S. Army Corps of Engineers for 31 years, and I have worked at the Santa Fe Dam for 20 years. Each morning, I conduct a walking inspection of my work area: a 23,800-foot-long dam. I check for debris that may have traveled down the Santa Ana River during the night or for fresh graffiti painted on the massive intake tower. A lot of people don't realize the full purpose of this facility. If this dam was not here, much of the metropolitan area and the businesses wouldn't be built up. The structure provides protection for the community downstream. When I connect with the community, I use that time as an opportunity to brief visitors who come by foot and bike on the importance of the dam.





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