

## “Pallet Spear” innovation saves time, enhances safety

By Capt. Rachel Ingram  
445th Airlift Wing Public Affairs

Two innovative 445th Airlift Wing Airmen are at it again. Staff Sgt. Kirk Laytart, 87th Aerial Port Squadron passenger service representative, and Staff Sgt. Daniel Schnaars, 87th APS air freight representative, previously developed creative solutions relating to base facilities, maintenance, and personal protective equipment while on deployment. Now the pair is finalizing a prototype for their Pallet Spear, a tool they designed specifically for Airmen in their career field to build and breakdown tall pallets in austere locations in a safer, quicker manner.

“It’s assistive. It’s not going to replace anything entirely,” said Schnaars, emphasizing that the tool won’t likely have a place of prominence in home station operations because cargo processing warehouses usually have pallet pits, where Airmen can lower a pallet into the floor with a hydraulic lift, and more easily reach the top of tall pallets.

“You’re not taking away the traditional way,” Laytart echoed. “With the Pallet Spear, you’re just adding an additional tool to your arsenal. It’s an alternative for when you’re in an environment where you’d otherwise need to use a ladder.”

It was a ladder that sparked the idea originally. During a unit training assembly last year, Airmen in the 87th APS were building pallets outside the cargo warehouse on skids on the ground. When it came time to put the top net on an 8-foot-tall pallet, the team had only one ladder available.

“It was musical chairs,” Schnaars recalled. “Either you’re hopping up on a ladder and then repositioning



Master Sgt. Patrick O'Reilly

**Staff Sgt. Daniel Schnaars, 87th Aerial Port Squadron air freight representative, uses a pallet spear to grab and lift a top net from a tall pallet so Staff Sgt. Kirk Laytart, 87th APS passenger service representative, can pull it off and away from the pallet during the breaking down process at Wright-Patterson Air Force Base, Ohio, May 4, 2024. The Airmen are developing the spear to replace the inefficient ladder system currently in use to remove nets from pallets and would also be a more safe option.**

it again, and again, and again, until the net is in place, or you grab a Pallet Spear and coax the net over those corners.”

It’s not always a simple process to correctly place a top net, he explained.

Sometimes it takes several attempts, physically throwing a net, with its attached metal rings and hooks, up and overhead, before the cargo can be properly secured and tightened down.

This can be a laborious task; the nets are heavy and become easily tangled. Airmen then must untwist the net and its hooks by hand before moving on to the next step.

If a net becomes too twisted, or is off-centered, Airmen may have to pull the net completely off the pallet and start over by spreading the net out on the ground and then tossing it up again.

“After watching Airmen throw top nets three or four times just to build one pallet, you start thinking, there has to be a better way to do this,” Schnaars said.

Beyond promoting time efficiency and reducing physical labor, the Pallet Spear enhances safety on two fronts: reducing both the dependence on ladders, and the subsequent fall hazard, and the risks associated with throwing metal appendages over a large object into a blind spot.

“Usually two or three people work together to build a pallet and attach the nets,” Laytart said. “With the Pallet Spear, you’re alleviating the risk of someone getting hit in the head with a piece of metal flying over



# 445th CES: Maintaining infrastructure in any environment

By Tech. Sgt. Joel McCullough  
445th Airlift Wing Public Affairs

The 445th Civil Engineer Squadron's mission statement is to provide ready engineers anywhere, anytime. Their mission vision statement reads, "Ready to assure combat airpower by delivering and sustaining reliable infrastructure at any time in any environment."

The 445th CES is made up of 135 Airmen, 103 of which are under the operations umbrella.

The 445th CE enterprise consists of 11 different Air Force Specialty Codes that include: electrical systems; electric power production; heating, ventilation, air conditioning and refrigeration; pavements and construction equipment; structural; water and fuels system maintenance; pest management; engineering assistants; operations management; fire protection; and emergency management.

The squadron is a total package that ensures a mission's capability to an airfield.

"Launching and recovering airplanes is our primary job," said Maj. Jeff Sweet, 445th CES operations chief. "We are here to ensure that the right infrastructure is there to support and sustain that operation as long as the Air Force requires."

Sweet said that in a deployed location, they are usually the first and last stops. He said before an airfield becomes an airfield there must be someone who creates that atmosphere.

Although the 445th is not a Red Horse designated unit, they do augment Red Horse units when they deploy. Red Horse provides the initial operating capability



Photos by Master Sgt. Patrick O'Reilly

**Airmen with the 445th Civil Engineer Squadron put out an aircraft structural fire during a live-fire training exercise at Wright-Patterson Air Force Base, Ohio, May 3, 2024. The annual training exposes firefighters to heat and smoke, and low-to-zero visibility they might respond to in real-world situations.**

ity for airfields and to land and recover aircraft.

Downrange, CE Airmen also set up latrines, barracks and expeditionary kitchens while providing and sustaining power to those facilities.

What gets a unit ready for deployment is training. Senior Airman Johnny York is in the 445th CES water fuel system and maintenance section where he said they take care of anything that deals with water distribution, filtration or purification, as well as fuel storage, hydrants and fuel distribution to planes.

"Any chance we get, we try to get out and get hands-on," York said, regarding training. "We need to be ready Airmen who can deploy at any moment."

Sweet added that recently CE received some big updates to their Career Field Education Training Plans. He said that in the last two years, all their Air Force Specialty Codes have received revised CFETPs.

"That changed a lot of training statuses to red," Sweet said. "We have been working hard to backfill that training."

Sweet said a major advantage the 445th has is its location, because the Air Force Institute of Technology's CE course is also located at Wright-Patterson Air Force Base.

He said that is where a lot of upgrade training, in the form of competency-based items, is taught and

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**Members of the 445th Civil Engineer Squadron erect an Alaskan tent during a bivouac training exercise at the Warfighter Training Center, Sept. 7, 2023. Alaska military tents are lightweight, easy to setup and long-lasting. They can be scaled to provide complete base camp systems.**



# Around the wing ...



Tech. Sgt. Joel McCullough

**(left) Senior Airmen Steven Shultz and London Foreman, 445th Maintenance Squadron aircraft structural maintenance specialists, perform consolidated tool kit inspections at Wright-Patterson, Air Force Base, Ohio, May 5, 2024. The Airmen inspect each tool for cleanliness and damage and then rub them down with a lubricant to slow the rusting process on metal items.**



Tech. Sgt. Joel McCullough

**(right) Airmen from the 445th Aeromedical Evacuation Squadron and 89th Airlift Squadron participate in water survival training at the Dodge gym at Wright-Patterson Air Force Base, Ohio, May 5, 2024. The training is conducted by the 445th Operations Support Squadron's Survival, Evasion, Resistance and Escape personnel.**



Tech. Sgt. Joel McCullough

**(left) Maj. Luke McKeeth, deputy wing chaplain, speaks to 445th Aerospace Medicine Squadron Airmen during their Poker Run Team Building event at Wright-Patterson Air Force Base, Ohio, May 5, 2024. The team building exercise consisted of several stations to include spiritual resiliency, key support liaisons, military and family readiness, and fitness.**



Senior Airman Angela Jackson

**(right) Col. Matthew Muha, 445th Airlift Wing deputy commander, passes the guidon to Lt. Col. Melissa Seacat, incoming 445th Aeromedical Evacuation Squadron commander, during the 445th AES Change of Command ceremony at Wright-Patterson Air Force Base, Ohio, May 4, 2024. Col. Keith Larson, the outgoing commander, retired.**





# Med tech brings ‘great wealth’ of knowledge to AES

By Tech. Sgt. Joel McCullough  
445th Airlift Wing Public Affairs



Photos by Tech. Sgt. Joel McCullough

**Senior Airman Hailey Bullock, a 445th Aeromedical Evacuation Squadron medical technician, looks on as members from both the 445th AES and 349th AES from Travis Air Force Base, California, prepare for the return flight home after making stops at Joint Base Elmendorf-Richardson, Alaska, and Joint Base Pearl Harbor-Hickam, Hawaii, May 12, 2024.**

An Air Force Reserve member’s career can be an ever-changing path. Some cross-train; some change from Reserve to active duty; some commission; but some Airmen love exactly where they are and exactly where their Air Force careers are heading.

Senior Airman Hailey Bullock, a 445th Aeromedical Evacuation Squadron medical technician, said she joined the Air Force three years ago knowing exactly what she wanted to do. She described an AE med tech as the eyes and ears of patient care. They assist nurses but can also do a lot of different things. They are the pinnacle of air transportation healthcare.

“I love it. I love this job so much,” Bullock said. “It provides me an escape sometimes from nursing. I love coming here and doing this. I get such cool opportunities to go places and to help people. My reach is so vast now that I’m in the military.”

Bullock has a degree from The Ohio State University and also attended Central Technical College for her nursing degree.

Maj. Nathaniel Copen, 445th AES director of operations, said what makes Bullock unique is that even after completing her college degrees, she has chosen not to commission.

“We’re very fortunate to have members like her because she’s a highly skilled ICU nurse on the outside,” Copen said. “She just brings great wealth to the crew. When you look at a crew, you see three med techs and two nurses. But what I see when I have someone like

Bullock in my crew, I now have three nurses and two med techs.”

Copen said something he has always admired about the Air Force Reserve is the people.

“Don’t judge a book by its cover,” Copen explained. “You may see a senior airman but that doesn’t mean that same senior airman on the civilian side isn’t doing something big. In fact, most of our enlisted have more degrees than our officers.”

Bullock said rank has its place in AE, but at the end of the day, they’re all taking care of people.

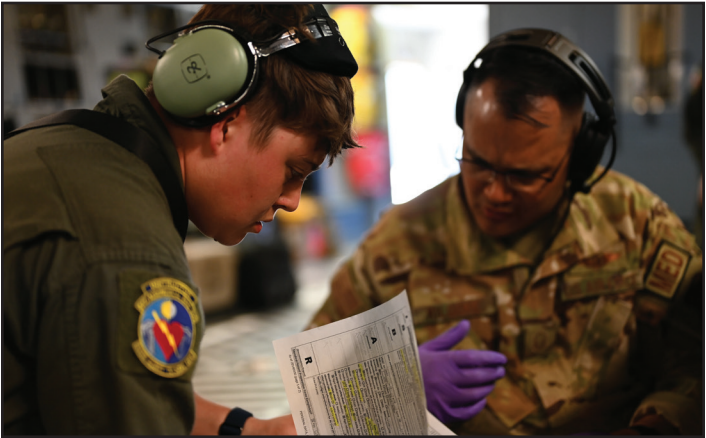
“It’s just people working alongside each other to get the mission done,” she stated. “We are just out there doing what needs to be done.”

She added that although AE is amongst the best jobs in the world, it does have a lengthy training process.

“It is so worth it,” Bullock continued. “At the end of the day, you are out there and you’re genuinely making a difference to not only the people that you’re taking home but to their families, to their loved ones. This is probably my most favorite thing in my life. It has helped me personally, professionally, and financially in so many different ways. It gave me another outlook on life.”

There was nothing but praise from her leadership.

“Like I said, it’s very fortunate for our squadron to have the enlisted core that we have,” Copen said. “They’re very dedicated to their craft and they never stop learning and they always want more. Bullock is a hell of a nurse, a hell of a med tech, and we are very fortunate to have her.”



**Senior Airman Hailey Bullock, a 445th Aeromedical Evacuation Squadron medical technician, checks some paperwork alongside Master Sgt. Charles Kilgore, 445th AES med tech, on a C-17 Globemaster III, May 11, 2024.**

# 445th Airmen bolster AE skills during May training



Photos by Tech. Sgt. Joel McCullough

**(left) Capt. Alexandra Cunningham, a 445th Aeromedical Evacuation Squadron flight nurse, straps in a patient played by Maj. Brianne Koessel, a 445th AES flight nurse, during a training mission flying out of Joint Base Pearl Harbor-Hickam, Hawaii, May 12, 2024. Flight nurses work alongside medical technicians to provide medical care to patients in flight.**

**(right) Staff Sgt. Eric Lovingmire, a 445th Aeromedical Evacuation Squadron medical technician, gives simulated medical treatment to a patient in flight during a training mission flying out of Joint Base Pearl Harbor-Hickam, Hawaii, May 12, 2024. Lovingmire was checking the vitals of his patients as they rested.**

# OSS Airman selected as May Diamond Sharp winner



Courtesy Photo

**Master Sgt. Josh Hall, 445th Operations Support Squadron first sergeant, presents the May 2024 Diamond Sharp Award to Staff Sgt. Xavier Blurton, 445th OSS combat crew communication technician, during the unit training assembly, May 5, 2024.**

The award is given for exemplary performance, adherence to the Air Force Core Values, attitude, appearance and ability. Staff Sgt. Xavier Blurton volunteered to manage both the emergency management and security programs. He dedicates hours outside of his regular duties to ensure five Management Control Toolset in compliance. He fulfilled several critical roles, acting as the primary MICT checklist validator for both the EM and Chemical, Biological, Radiological, Nuclear defense programs. Additionally, he scheduled unit training for the EM working group. Blurton completed the first-ever NCO 500 Foundations course offered Air Force wide, using it to train and mentor younger Airman. Furthermore, Blurton volunteered countless times to stay past normal work hours, ensuring zero mission delays.





SPOTLIGHT

**Rank/Name:** Senior Airman Alexandra Harris

**Unit:** 445th Maintenance Squadron

**Duty Title:** C-17 electrical and environmental systems technician

**Hometown:** Mount Sterling, Kentucky

**Civilian Job:** Radiologic technologist at the University of Kentucky

**Education:** Associate degree in radiologic technology. Currently working on an associate degree in aviation maintenance technology.

**Hobbies:** I enjoy hiking, kayak-



ing, shooting and hanging out with friends and family.

**Career Goal:** On the civilian side, my goal is to become a traveling X-ray technologist. On the military side, my goal is to expand my knowledge in my career field and become a better leader.

**What do you like about working at the 445th?** I get to do something completely different from what I do on an everyday basis, and I enjoy working with my wingmen.

**Why did you join the Air Force?** My father served in the Air Force before I was born and I had always thought it was so fascinating. When I was in college, I needed to take a student loan out to finish my degree. One day, I decided that I should join because I didn't want to wait until it was too late and regret not even trying. Joining the Air Force has helped me finish my degree without any more student loans, and I have met so many amazing people thus far. The Air Force has also given me the opportunity to travel the world.

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the top.”

In developing the Pallet Spear, a process they began in October 2023, Laytart and Schnaars spent about \$125 in supplies and 25 man-hours. They plan to share their prototype specifications, and they embrace a collaborative approach to innovation.

“We’ve involved 15 different people in this process of brainstorming and testing,” Schnaars said. “Just whoever was around, we’d invite them into the process and just ask, ‘Hey, what do you think about this?’”

For them, this is just the starting point for the Pallet



Capt. Rachel Ingram

**Staff Sgts. Daniel Schnaars and Kirk Laytart pose with the evolutions of their Pallet Spear tool net inside the cargo processing warehouse at Wright-Patterson Air Force Base, Ohio, May 4, 2024.**

Spear. They are fine tuning the details of the prototype they’ve found works best, but are quick to admit their limitations.

“If this were to be fabricated, I don’t know what the ideal material would be,” Schnaars said. “I settled on wood because that’s a material I’m familiar with and have the tools to work with. Maybe a titanium pole with welded hooks is the better tool. I just don’t have the ability to produce that in my home workshop.

“I would love for someone to see this idea, take it and improve it,” he added. “All we’re trying to do is make something a little bit better.”

News Briefs

Wellness Fair

The 445th Airlift Wing Annual Wellness Fair is June 2 from 11 a.m. to 1 p.m. between buildings 4010 and 4012.

The following organizations will be on hand to provide information: Veterans Affairs, Wounded Warriors, Military One Source, 4Paws for Ability and 445th AW/88th Air Base Wing helping agencies.

Self-pay food trucks will be available.

In case of inclement weather, the fair will move to Hangar 4026.

Promotions

**Senior Master Sergeant**  
Keric Johnson, MXS

Eric Riehle, AES

**Master Sergeant**  
Aaron Watts, CES

**Technical Sergeant**  
Mariah Martin, AES  
Trey Naber, AES  
Bradley Scheidt, SFS

**Staff Sergeant**  
Haley Andrews, ASTS  
Vanessa Dongmo, LRS  
Ian Steck, MSG

**Senior Airman**  
Zachary Kegley, AMXS  
Zachary Slone, FSS  
**Airman First Class**  
Carissa Dillard, ASTS

**Airman**  
Timothy Dang, ASTS  
Gracia Halimoya Musa, FSS

Fuja Khabatari, SFS  
Kennedy Masey, 87 APS  
Tatiana Rivera, 87 APS

Newcomers

Maj Marcus Branch, AW  
Maj Travis Rich, 89 AS  
2 Lt Joseph Calandra, 89 AS  
TSgt Russel Baker, MXS  
TSgt Timothy Young, AES  
SSgt Jacob Parsons, LRS  
SrA Chad Morrison, AMXS  
SrA Cameron Seibertreed, AMDS  
A1C Salchuk Gafurov, AMXS  
A1C Kristopher Garlock, SFS  
A1C Boris Nyambo, CES  
A1C Ethan Perry, SFS  
AB Katelyn Weber, 89 AS  
AB Ricardo White, AMDS

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learned.

Another component to training is annual training opportunities. The 445th engages with active-duty components frequently.

Sweet explained that they like to find different active-duty units to augment for annual tour.

They also engage with the local 88th Air Base Wing CES to process work orders and other activities.

Additionally, the unit holds a large four-day site detail training event every year at the Warfighter Training Center.

During the training, they take heavy equipment operators, as well as some raw materials, to perform pavement, asphalt and gravel construction.

They set up a “tent city” and provide power distribution including secondary and primary distribution to HVAC.

“We basically exercise the oper-



Master Sgt. Patrick O'Reilly

**Senior Airman Aaron Borden, 445th Civil Engineer Squadron firefighter, carries a dummy during a training exercise at the Warfighter Training Center, Sept. 7, 2023.**

ational capability of providing bedding space for Airman in whatever environment we would be asked to deploy to,” Sweet added.

“I think progressively as a unit we have gotten a lot better at getting hands-on,” said Staff Sgt. Brian Wood, 445th CES structural journeyman. “With our career field obviously hands-on is where it’s at. In this job you have to be able to go out and perform the job and duties.”

Wood, who has worked in the unit since 2014, said he deployed last year and the tasks he was able to accomplish while downrange really helped him gain confidence in his skills.

Over his years with the unit Wood added they continue to make improvements.

“Regardless of what we have on hand or what the mission is, we get the job done,” Wood explained.



## June awareness focuses on mental health, wellness

By Vera Ensalcado

445th Airlift Wing Director of Psychological Health

The month of June highlights several awarenesses: Men's Mental Health, National Post-Traumatic Stress Disorder (PTSD) and National Employee Wellness Month. That gives us a few to discuss this month! So how do we wrap it all up into one? You really can't but here are some things for you to think about.

This past month, I have been out for knee replacement surgery. It wasn't an easy decision to make though it was a truly necessary one. The pain I had prior to surgery was permanent and would get worse. The pain after is temporary and will get better, as long as I take care of myself.

My surgeon tells me that it was genetics and running that was my undoing.

A little self-disclosure from me – little over five years ago I lost my adult son. There is not a clear way to address significant losses such as these. What I chose to do was run. I wanted to run out of my body so this was the closest thing I could think of to do. I ran pretty much daily. When I lost the ability to run, I needed to find another way to deal with my grief.

I saw a grief counselor and looked for other ways to exercise. Additionally, I have a close, safe circle of support. I mention this not to say my way is "it." With PTSD, mental health wellness, for men and women alike, there are always things that we can do.

Some ways to support mental and emotional well-being are to talk with a friend, family member, trusted

colleague, pastoral member, healthy online support systems or a professional. You are not in this alone.

You're not expected to cope alone.

Sharing experiences and encouraging others helps with our own coping (kind of like what I just did in this article). Make time for activities that improve your well-being such as exercise, meditation, and connecting with your passions and nature.

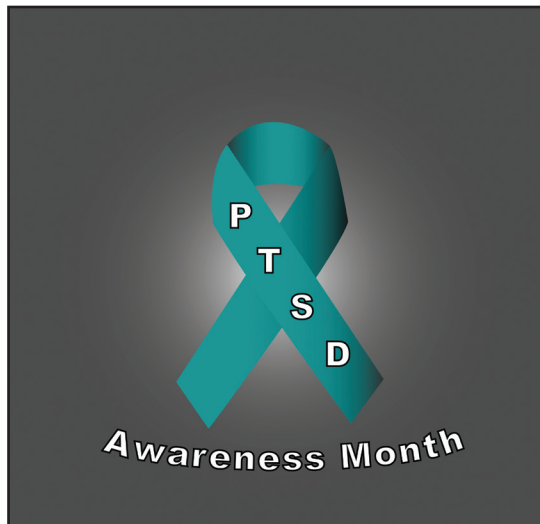
Some things you can do physically are to eat well and get rest.

There is evidence that the "super agers," or those who have matured into their 80s that have the memory and faculties of those 20 or more years younger than them, achieve that with some simple practices such as regular exercise targeting mobility, balance, and coordination; good dental hygiene – it makes sense

that what goes into your mouth reaches systemically throughout your body, that includes your brain; mental activity is as important as physical. Super agers challenge themselves by reading, taking classes and learning new skills.

Social activity and engaging with others regularly has been shown to increase happiness, reduce illness and assist with staying cognitively intact longer. These are just a few things you can do.

Please take care of yourself. Reach out as needed via phone at (937) 257-6267 or email at vera.ensalaco@us.af.mil. We need you here.



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