



# HIGH MACH

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## AFMC Commander Gen. Pawlikowski visits AEDC



Gen. Ellen M. Pawlikowski, commander of Air Force Materiel Command, toured Arnold Air Force Base, Tenn., Oct. 15, with members of the AFMC Community Liaison Program. Hosted by Col. Rod Todaro, commander of the Arnold Engineering Development Complex, Pawlikowski and CLP members received briefings, toured facilities and exchanged ideas. The 24 attending members of the CLP group represent communities surrounding AFMC installations across the United States, and serve as a civilian interface between the Air Force and their respective civilian communities. The group is pictured at the J-6 Large Rocket Motor Test Facility High Bay. See additional photos on page 3. (U.S. Air Force photo/ Jackie Cowan)

## Hero Award presented to AEDC engineer

By Deidre Ortiz  
ATA Public Affairs

Dr. Robert Knapke, ATA engineer and scientist, was selected as recipient of the Hero Award for the Up and Coming in High Performance Computing Modernization Program.

Sandy Landsberg, associate director of Resource Management for the HPCMP, presented Knapke with the award during a presentation held Oct. 19.

Bonnie Heikkinen, ATA project manager, said she nominated Knapke "for rapidly becoming proficient at executing and validating the CREATE™ AV Kestrel product in support of the Air Force F-22 Digital Thread effort, demonstrating the exact skills needed by program offices to accelerate vehicle design processes and minimize costly redesign – proving that significant ground test cost savings are possible."



ATA engineer and scientist Dr. Robert Knapke, second from left, is a recent recipient of the Hero Award for the Up and Coming in High Performance Computing Modernization Program. Pictured here during the award presentation Oct. 19 at AEDC are Sandy Landsberg, associate director of Resource Management for HPCMP; Dr. Robert Knapke; Dr. Edward Kraft, AFTC/AEDC Chief Technologist; and Dr. Robert Hiers III, AEDC Fellow and Technology Engineering Analysis Branch manager. (Photo by Holly Fowler)

## The history behind German wind tunnels at AEDC



A man stands beside some parts that were captured from the BMW vehicle plant in Munich. The facility was crated up piece-by-piece and shipped to America. The crated plant, 42 train car loads, eventually made its way to Tullahoma, Tenn., where it was reused in the AEDC Engine Test Facility. (Photo provided)

By Chris Rumley  
AEDC Historian

The story of the German wind tunnels at AEDC begins in July 1944 somewhere in the air over Germany.

That is when our Air Force bomber pilots first encountered high speed German aircraft flying without the aid of propellers. These jet aircraft were faster than anything in the skies and they tore apart many an allied bomber formation in the summer of 1944.

The German Messerschmitt ME-262 jet aircraft was just one technological breakthrough for Germany during WWII. Two other advanced weapons, the V1 and V2 missiles, appeared almost simultaneously with enemy jets. The German military fired thousands of the missiles across the English Channel at targets near London.

The most feared weapon was the V2 supersonic missile. The V2 arrived at a target without warning, carried a large explosive payload, and was virtually

unstoppable. All three weapons were advanced beyond American technology with capabilities that rendered our ground test facilities inadequate. Had Hitler realized the full potential of this weaponry earlier, he could have mass produced them to win the war or sue for peace. These were the weapons of the future.

Air Force General Henry "Hap" Arnold was in England in 1944 just after D-Day and saw the first V-1 buzz bombs

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## HIGH MACH

**Arnold Engineering Development Complex**  
An Air Force Test Center  
Test Complex

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Commander

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Chief,  
Public Affairs



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### Core Values

- Integrity first
- Service before self
- Excellence in all we do



### Vision

*"ATA will be a trusted partner in delivering best value warfighter support and assert stewardship to AEDC"*

### Core Values

- Be accountable for our own actions
- Ensure the safety of individuals and equipment
- Demonstrate the highest integrity and ethical standards
- Communicate clearly and openly
- Deliver professional and technical excellence
- Nurture, enable and treat people fairly
- Align with customer goals and objectives
  - Use disciplined and innovative processes
- Continually improve in all that we do

## HISTORY from page 1

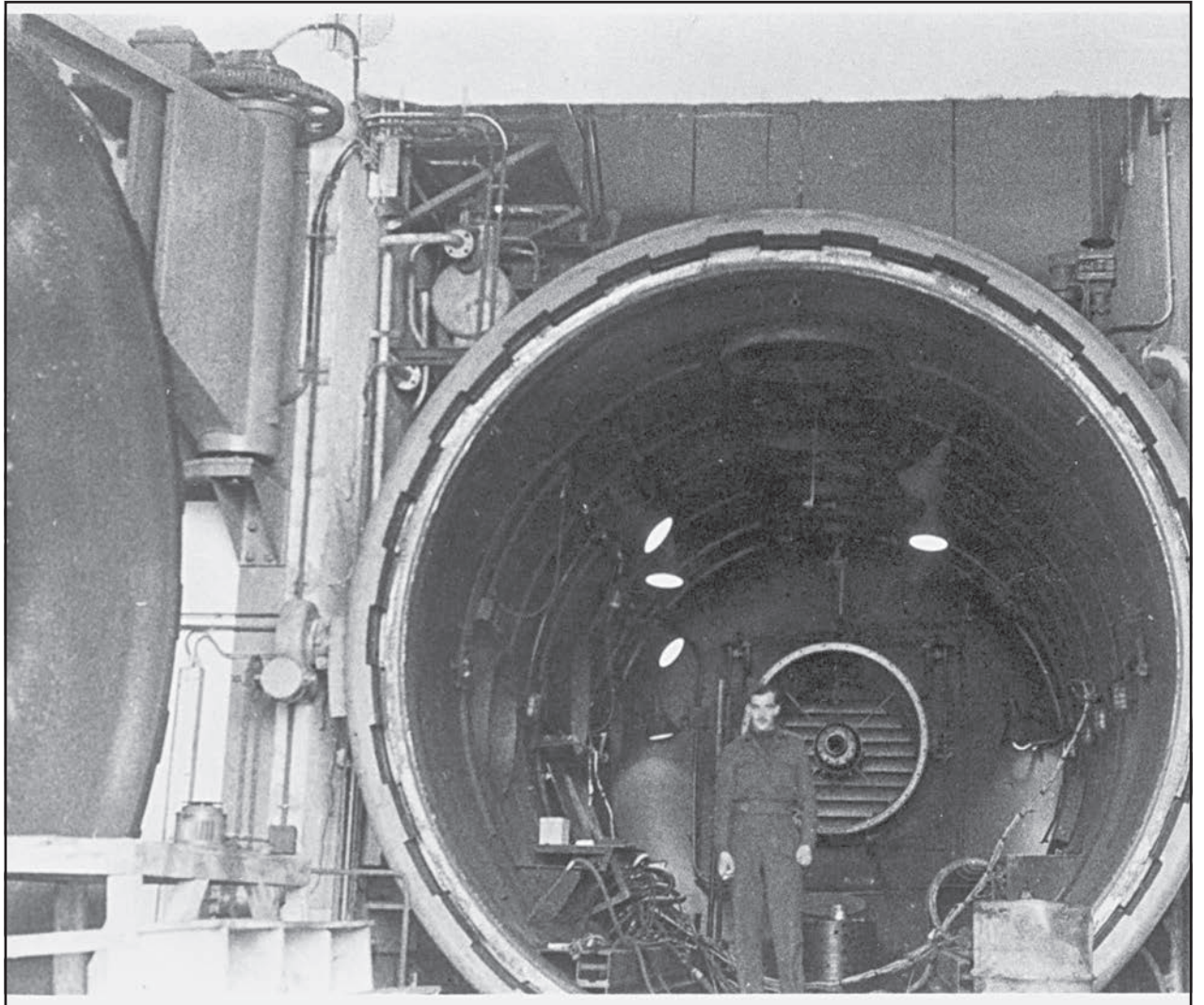
and the devastation caused by the V2s. Realizing America had fallen behind in missile and jet technology, Hap ordered the confiscation of German weapons. Specifically, he wanted to capture an intact missile and have it reverse engineered in America. The operation was a success and led to America's first cruise missiles and long range rockets based on German technology.

In addition to capturing wayward missiles, Gen. Arnold sent a small team of scientists into Europe just behind the advancing line of our troops. Their mission, known as the Karman Mission, was to discover German Air Force technologies and locate the research facilities used for their advancement.

Mild mannered scientists disguised as high ranking military officers made their way into Europe searching for the German secrets. To be sure, the mission included an element of danger. There were armed pockets of resistance one could stumble across, and many German civilians, whose cities had been bombed to rubble, were none too cooperative.

Dr. Theodore Von Karman, for whom the mission adopted its name, and his close associate Dr. Frank Wattendorf were two of the scientists scouring Europe to capture advanced weapons, research facilities, and German scientists.

Dr. Wattendorf explained what he found, "The Germans kept these facilities very well secreted. One whole installation- a complete, up-to-date aeronautical establishment- had been built in the middle of a forest. The



**A 1945 photo shows one of the two high altitude cells at the Munich BMW plant. Engines having up to 4,400 pounds of thrust could be tested at conditions simulating Mach number 0.8 (about 525 mph) at 55,000 feet. Inlet air supply totaled 55 pounds per second. (Photo provided)**

buildings all had trees on top of them so that, from the air, it just looked like a forest."

In Munich, hidden deep inside the Bavarian Motor Works (BMW) military vehicle plant, the scientists found the world's most advanced jet engine test facility. Here the Germans could test advanced jet propulsion units at simulated altitudes.

Because America had focused on mass production of existing technologies to win the war, we had not invested in testing facilities that could produce the quantity of air required by jet engines. When Dr. Wattendorf learned that our Military Government in Germany had agreed to surrender the BMW ve-

hicle plant to Russia, he recommended the quick dismantling of the jet engine facility.

The facility was crated up piece-by-piece and shipped to America before the Russians took any equipment. The crated plant, 42 train car loads, eventually made its way to Tullahoma, Tenn., where it was reused in our own AEDC Engine Test Facility. While many of the parts have been replaced over the years or are just no longer used, some of the original German parts, including two test chambers, are still used.

Another German wind tunnel found at Kochel, Bavaria, was capable of producing wind speeds in excess of Mach 4 and the

Allied advance interrupted construction of a Mach 10 hypersonic tunnel at the same location. The captured tunnels were sent to the U.S. Navy laboratories at White Oak, Maryland, which is now a geographically separated AEDC facility. The original German tunnels remained in use at White Oak for some time. The T-1 supersonic tunnel was used for calibrations until 1997. American engineers used the captured plans from these tunnels to build our Gas Dynamics Facility later renamed the von Karman Facility. A third 18 x 18 cm supersonic tunnel from Kochel went to White Oak, but was given to the University of Maryland. Engineers took the

basic plan of that tunnel and expanded it to build our 16-foot supersonic tunnel at Arnold AFB.

In addition to the tunnels, 8 German scientists came to AEDC and 12 more went to the Navy at White Oak. These scientists helped rebuild and operate these facilities. Dr. Wattendorf's suggestion to dismantle and reuse the German facilities to build a new Air Engineering Development Center for the USAF saved millions of dollars and about 10 years of design and planning.

With the coming cold war and the need for advanced jet aircraft and ICBMs, those 10 years were crucial for America's defense.



**This photo is from one of the wind tunnels in Kochel, Bavaria, that was later obtained and sent to the U.S. Navy laboratories at White Oak, Md., which is now a geographically separated AEDC test facility. Pictured here are German scientific and military personnel operating the tunnel. (Photo provided)**

## Smoking Policy

1. The following revised AEDC smoking policy is effective immediately. Smoking is permitted solely in designated areas identified by a plastic "smoke genie." This receptacle is for the sole purpose of cigarette butt disposal. If there is no receptacle, smoking is not permitted in that area. It is the responsibility of all smokers to clean up the area surrounding the receptacles for any cigarette butts on the ground. Smoking in government-owned vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time. Smoking areas will be held to the absolute minimum and will be located in low traffic, low visibility areas away from points of building ingress/egress and air intakes. A map of all authorized smoking areas is available on the Team AEDC SharePoint site. Smoking near a facility in an area not designated on the map is prohibited and any smoking receptacles located in areas not shown on the map will be removed. All "smoking permitted" and "no smoking" signs will be removed unless specifically required by OSHA.

The fact a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the company/agency personnel policies that apply to all employees.

Smoking, including the use of electronic cigarettes and smokeless tobacco, is prohibited in any area, at times when official business is being conducted with government clients, test customers, outside visitors and dignitaries, and where official business is being conducted including conference rooms, auditorium settings, business meetings, or in any other area where Air Force regulations specifically prohibit use. Containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), the use of said products will abide by the same rules for tobacco products stated above and governed by AFI 40-102, *Tobacco Use in the Air Force*.

2. Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.

3. Updates to this policy will be made in the future to further align with Air Force guidelines.

4. This policy remains effective until rescinded. (This policy is dated December 20, 2013)

## Action Line

### Team AEDC

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests. They can access the Action Line in one of two ways: via the AEDC intranet home page, and by calling 454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

**Col. Rodney Todaro**  
AEDC Commander





### AFMC Commander visits AEDC

Gen. Ellen M. Pawlikowski (left), commander of Air Force Materiel Command, presents the Commander's Coin to Staff Sgt. Jared Vanwey, AEDC Financial Management and Comptrollers Division, during the Arnold Air Force Base, Tenn., Commander's Call at the University of Tennessee Space Institute auditorium Oct. 16. The general also presented coins to Clark Brandon, deputy of the AEDC Test Support Division, and 2nd Lt. Roy Fisher, of the Propulsion Wind Tunnel Test Branch. Commander's Coins are presented to recognize a job well done. (U.S. Air Force photo/ Holly Fowler)

Gen. Ellen M. Pawlikowski (back row, second from left), commander of Air Force Materiel Command, pauses for a group photo while touring the AEDC Arc Heaters Test Facility Oct. 16. The facility provides high-enthalpy environments to test materials and thermal protection. Pictured in the front row from left is Lt. Col. Mark O'Reilly, AEDC Test System Sustainment Division Chief; Col. Timothy West, AEDC Test Operations Division Chief; Gary Hammock, Space and Missile Combined Test Force aerospace test engineer; back row from left: Maj. Gen. Warren D. Berry, AFMC vice commander; Pawlikowski; Lt. Col. Jason Armstrong, Space and Missile CTF director; 1st Lt. Zahi Abi Chaker, AEDC Command Executive Officer; Col. Rodney Todaro, commander of AEDC; and Dr. Edward Kraft, AEDC Chief Technologist. (U.S. Air Force photo/ Jacqueline Cowan)

### Arnold Medical Aid Station announces new hours and procedures

The new office hours for the Arnold Air Force Base Medical Aid Station are 7 a.m. – noon and 1 – 3:30 p.m. The office will close for lunch between 12 – 1 p.m. All patients will be seen by appointment only. Walk-in customers, who need vaccinations, eye glass orders, blood drawn, Periodic Health Assessments, and other medical visits, will be scheduled by appointment. The base Medical Aid Station provides medical services only to active duty military and their dependents, and retirees. To schedule an appointment, call the clinic at 454-5351.

### Judges and Referees needed for FIRST® LEGO® League Tournament



Judges and referees are needed for the FIRST® LEGO® League Regional Qualifying Tournament at Tullahoma High School Dec. 5.

Organizers of the event will host more than 30 teams from Tennessee who will be competing with Lego robots and showing their projects related to the 2015 theme "Trash Trek".

To volunteer, call 454-3348 by Nov. 13.



### ATA presents donation to South Middle School

ATA Employee and Community Activities Committee member Ted Boswell presents a \$100 ATA donation to Amelia Myers for the South Middle School Athletic Program. The E&CAC is responsible for making ATA donations to charitable organizations in the area surrounding Arnold Air Force Base. (Photo provided)

#### AWARD from page 1

Knapke was hired at AEDC in September 2014 and right away started working on the Air Force F-22 Digital Thread project, an effort that uses computational science and engineering tools such as the HPCMP CREATE™-AV Kestrel product for acquisition programs. "These products are intended to provide flight vehicle performance insight early in the design process in order to accelerate the vehicle design process and minimize costly re-design. Validation of Kestrel product with AEDC wind tunnel test data provides confidence in the use of these tools," Heikkinen said. "Using the CREATE™-AV Kestrel tool, Knapke determined the 'best practices' for running numerous simulations to compare with wind tunnel tests."

Knapke stated he was "excited to hit the ground running" and to be part of

the Digital Thread project. "I have used the DOD High-Performance Computing resources to perform numerous CFD simulations of the wind tunnel scale F-22," he said. "The results of these simulations were used to validate the CFD software against wind tunnel data. Also, I was granted early access to Gordon, a new supercomputer at the Navy DOD Supercomputing Resource Center, as part of a HPCMP Capabilities Application Project. On Gordon, I had access to 50,000 CPUs (central processing units). Using those resources, I performed a scalability analysis of the CFD software and I completed simulations of the F-22 that were much larger than previously possible." A three-time graduate of the University of Cincinnati, Knapke said he's always had an interest in physics and math,

and when contemplating career paths, it was aerospace engineering that interested him most. "After entering college, I found that I enjoyed programming and performing computer simulations. I was able to combine those interests with CFD," he said. "The focus of my master's degree was on the unsteady flow physics of a Counter-Rotating Aspirated Compressor. My [doctorate] topic was on unsteady heat transfer using the Harmonic Balance and Conjugate Heat Transfer methods." Knapke said he's glad to have the opportunity to put his background to use and thanks his project manager for acknowledging his recent efforts. "I am grateful for the recognition of my hard work and for the support of my project manager, Bonnie Heikkinen, who nominated me for the award."



# AEDC quarterly award winners announced



**Capt. Brett Johnson**  
Company Grade Officer of the Quarter



**Tech. Sgt. Rodney Clemmons**  
Non-Commissioned Officer of the Quarter



**2nd Lt. Roy Fisher**  
Honor Guard of the Quarter



**Gena McDonald**  
Civilian of the Quarter Administrative



**James Lawson**  
Civilian of the Quarter Scientist/Engineer



**Emily Howell**  
Non-Appropriated Fund employee of the Quarter Category II



**Glenda Petty**  
Non-Appropriated Fund employee of the Quarter Category I

# AFMC promotes Freeze the Gain with the DASH Eating Plan

By Air Force Materiel Command Health and Wellness Team

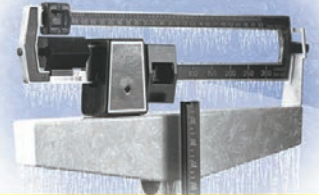
**WRIGHT-PATTERSON AIR FORCE BASE, Ohio** – During the holiday season, Air Force Materiel Command will promote the Freeze the Gain Challenge to help the AFMC workforce prevent and control high blood pressure. According to the Centers for Disease Control and Prevention, 1 in 3 adults in the United States has HBP.

HBP is called the “silent killer” because it often has no warning signs or symptoms; you can have it for years without knowing it. During this time, HBP can damage your heart, blood vessels, kidneys and other parts of your body. You can prevent high blood pressure by reducing sodium (salt) intake, being active and keeping a healthy weight.

Freeze the Gain is a weight maintenance program that encourages participants to maintain – not gain – weight during the eight week challenge period, which runs from Nov. 16 through Jan. 8, 2016. Participants in the FTG challenge will receive a copy of the DASH Eating Plan, developed by the National Institutes of Health. DASH stands for Dietary Approaches to Stop Hypertension. The DASH Eating Plan has been ranked the #1 Overall Diet by U.S. News and World Report five years in a row. It is also recommended by the U.S. Department of Agriculture and the American Heart Association. Civilian Health Promotion Services will conduct the FTG challenge.

The Freeze the Gain program has four parts:

## FREEZE THE GAIN



Open to DoD Civilians and Active Duty

1. Enroll online at [AFMCwellness.com](http://AFMCwellness.com) between Oct. 13 and Nov. 13 (appropriated fund Department of Defense civilians need to complete the online Health Risk Assessment when they enroll)
2. Print your FTG confirmation email and complete official FTG weigh-in by CHPS staff between Nov. 2 and Nov. 13 to finalize enrollment. Participants will receive the DASH Eating Plan booklet at weigh-in.
3. Attend the CHPS class, “FTG with the DASH Diet.”
4. Complete official weigh-out by CHPS staff between Jan. 11 and Jan. 21, 2016.

Participants who complete the FTG challenge without gaining more than two pounds from their initial weight will receive a free lunch container and doubled-sided measuring spoon. For more information, contact your local CHPS team or visit [AFMCwellness.com](http://AFMCwellness.com).

## Summit on Veterans Health

Holistic Health for Veterans: Physical, Mental, and Spiritual

Friday, November 13, 2015

Holistic Health for Veterans – Physical, Mental, and Spiritual will discuss ways to improve the health and well-being of Veterans.

The Tennessee Department of Veterans Services Commissioner, **Many-Bears Grinder** will give a keynote address.

Active duty armed forces members and Veterans are encouraged to attend.

**Free and open to the public. Military families, community members, and organizations that serve Veterans are also encouraged to attend.**

This event is brought to you by:



**What:** Holistic Health for Veterans – Physical, Mental, and Spiritual

**When:** November 13, 2015

Time: 8:00 a.m. - 3:00 p.m.

**Where:** The Avon Williams Campus of Tennessee State University, 330 10th Ave N, Nashville, TN 37203

**Contact**  
[cjone132@my.tnstate.edu](mailto:cjone132@my.tnstate.edu)  
to register



**Arnold AFB Base Commissary WILL BE OPEN Veterans' Day November 11**



# Practice safety in the immediate aftermath

By AEDC Safety, Health and Environmental

Although each type of disaster brings its own unique challenges, the American Red Cross provides these general steps that are applicable to many different situations.

- Check the area around you for safety. In the case of biological, chemical or radiological threats, listen for instructions on local radio or television stations about safe places to go.
- Have injuries treated by a medical professional if possible.

Wash small wounds with soap and water. To help prevent infection of small wounds, use bandages and replace them if they become soiled, damaged or waterlogged.

- Some natural hazards, like severe storms or earthquakes, may recur as new storms or aftershocks over the next several days. Take all safety precautions if the hazard strikes again. For earthquake aftershock, drop, cover and hold on. These are the same steps as during the initial earthquake.
- Avoid using

the telephone (cellular or landlines) if a large number of homes in your area have been affected by a disaster. Emergency responders need to have the telephone lines available to coordinate their response. During the immediate post-disaster time period, only use the telephone to report life-threatening conditions and call your out-of-town emergency contact.

- Remain calm. Pace yourself. You may find yourself in the position of taking charge of other people. Listen carefully to what people are telling you, and deal

patiently with urgent situations first.

- If you had to leave your home, return only when local authorities advise that it is safe to do so. Also, be sure to have photo identification available, because sometimes local authorities will only permit people who own property in a disaster-affected area back into the area.
- Except in extreme emergencies or unless told to do so by emergency officials, avoid driving during the immediate post-disaster period. Keep roads clear for rescue and emer-

gency vehicles. If you must drive, do not drive on roads covered with water. They could be damaged or eroded. Additionally, vehicles can begin to float in as little as six inches of water. Vehicles such as trucks and SUVs have larger tires and are more buoyant. However, the buoyancy caused by the larger amount of air in their tires actually makes these vehicles more likely to float in water than smaller vehicles.

- If the disaster was widespread, listen to radio or television for instructions from local

authorities. Information may change rapidly after a widespread disaster, so continue to listen regularly for updates. If the power is still out, listen to a battery-powered radio, television or car radio.

- If the area was flooded and children are present, warn them to stay away from storm drains, culverts and ditches where they can be trapped and injured.
- Stay away from downed power lines. They carry 4,000 to 345,000 volts of electricity that can injure or kill on contact.

## Air Force releases new SAPR strategy

By Secretary of the Air Force Public Affairs

WASHINGTON (AFNS) – Air Force leaders released a five-year Sexual Assault Prevention and Response Strategy that will guide the Air Force in developing a robust prevention model while continually honing response capabilities today.

The secretary, chief of staff and chief master sergeant of the Air Force signed a foreword to the strategy charging all Airmen with the responsibility of preventing sexual assault.

“Sexual assault prevention is critical to the health, morale and welfare of Airmen and ultimately essential to Air Force readiness,” said

Secretary of the Air Force Deborah Lee James. “This strategy lays out the deliberate, science-based process we will follow to eradicate this crime from our ranks.”

The two-part document outlines both response and prevention strategies. Although Airmen will likely be familiar with the programs included in the response portion of the strategy, the prevention strategy presents a new phase in Air Force SAPR efforts, said Dr. Andra Tharp, an Air Force sexual assault prevention and response highly qualified prevention expert.

“Using a public health approach to prevention, the strategy will use proven prevention programs, policies and best practices to reduce risk factors and enhance protective factors,” Tharp said. “Fostering skills such as being an active and engaged bystander, managing emotions and resisting peer pressure are proven approaches to preventing violence.”

The Sexual Assault Prevention Strategy lays out the sexual assault prevention tenets: preventing violence before it occurs; promoting prevention at every level; and providing ongoing prevention activities that reflect the unique roles and development of each Airman.

In line with the Defense Department strategy published in April 2014, the Air Force strategy promotes a comprehensive prevention approach that ensures prevention messages and skills are consistent and reinforced across the different environments in which an Airman may live and work.

“Our Air Force family comes from all walks of life, but we all work together to protect our nation,” said Air Force Chief of Staff Gen. Mark A. Welsh III. “Our core values are what bind each of us together, and it’s on us to take the time to really know our people. We’re all part of the solution or there is no solution.”

According to the strategy, a key long-term objective of SAPR programs is to provide every Airman with standardized, developmental education and training throughout their career, strengthening the Air Force culture of dignity and respect and sustaining an environment inhospitable to sexual assault perpetrators. Effective enhanced developmental education and training will be tailored to address specific populations and behaviors of individuals, groups, and cultures.

“We’re moving away from a one-size-fits-all approach to preven-

tion and thinking hard about who needs what and when,” Tharp said. “We know that risk factors change as people age and that an Airman’s role in prevention might change as he or she takes on different leadership roles; so, we are moving towards a more nuanced approach to prevention that focuses on delivering relevant skills and messages to the right people at the right time.”

The strategy document explains factors that put an individual at risk for perpetration such as previous unhealthy experiences, beliefs or relationships, and outlines a plan to tailor training to address risk factors in every setting.

“We listened to Airmen’s concerns and we’re

excited about the new model that will be introduced to the force,” said Chief Master Sgt. of the Air Force James A. Cody. “It’s on us to ensure our Airmen are trained appropriately to shape our culture in a manner that does not allow sexual assault or harassment to occur.”

Airmen will begin seeing portions of the prevention strategy in action this year. The Air Force SAPR office is working with a contracted prevention training company to tailor the company’s training to address specific populations and behaviors of individuals, groups and cultures within the Air Force.

Focus groups to assist in this effort are currently ongoing at Little Rock

Air Force Base, Arkansas, and Keesler AFB, Mississippi, and the new training will be presented to Airmen beginning in January 2016. Additionally, major commands across the Air Force have already begun to use advisory boards or existing installation delivery systems to support the rollout of the prevention strategy and new training model.

“Sexual assault has a direct impact on our Airmen and our mission. Our Airmen deserve to carry out our vital missions in an environment where they are treated with respect and dignity,” James said. “We will not stop looking for ways to improve until we have an Air Force free from sexual assault.”

## This day in espionage history

By AEDC Industrial Security

**Nov. 6, 1998 – Kelly Therese Warren** pled guilty to conspiracy to commit espionage, sentenced to 26 years in prison

**Nov. 8, 1996 – Philip Tyler Seldon** sentenced to two years in prison for passing classified information to the Salvadoran Air Force

**Nov. 12, 1985 – Arthur James Walker** sentenced to life imprisonment for seven counts of espionage

### Most Common Areas Espionage Began:

- ❖ 66% began in the United States
  - Large majority of those on the East Coast
- ❖ Of the 34% that started outside the U.S.
  - 66% began in Western Europe
  - 20% in Asia or Southeast Asia

MY STRENGTH IS FOR DEFENDING  
**AEDC Victim Advocates Hotline:**  
**(931) 581-7494**  
 Preventing Sexual Assault is part of our duty

Visit: [MyDuty.mil](http://MyDuty.mil)

READINESS = RESPECT



# Project Management Professionals Luncheon organizers present local STEM opportunities

By Robert Lindeman  
Project Management Institute Chattanooga Chapter

Organizers of the Project Management Professionals Luncheon are excited to announce that Nov. 19, 11 a.m. to 12:30 p.m. at the AEDC Science, Technology, Engineering and Mathematics Center, Jere Matty will speak about the STEM Program in our area.

The PMPs are members of the Southern Middle Tennessee Branch of the Chattanooga Chapter of the Project Management Institute.

STEM is a nationwide effort to encourage and inspire our nation's future scientific and technical workforce to pursue careers in high tech fields. Programs provided at the AEDC STEM Center include: aviation, mathematics, astronomy, aerodynamics, cybersecurity, rocketry, electronics, robotics (elementary through high school), motion and forces, the NASA Rover Challenge and the Story Time from Space reading program.

Matty, AEDC STEM coordinator, has been instrumental in establishing and growing this program. He will discuss the project management challenges in organizing and developing the facilities, volunteers, community, education and business resources to support STEM activities



Barbara Birdsong, Stefan Lindorfer and Jack Ly learn how to use hands-on learning equipment available at the AEDC STEM Center. Here they try out the rocket launchers that schools can use as part of their STEM learning programs. (Photo by Jacqueline Cowan)

in the middle Tennessee area.

One Professional Development Unit will also be awarded at the luncheon. The cost to attend the luncheon is \$10.

The Project Management Institute is the world's leading not-for-profit professional membership association for the project, program and portfolio management profession. Founded in

1969, PMI delivers value for more than 2.9 million professionals working in nearly every country in the world through global advocacy, collaboration, education and research. PMI advances careers, improves organizational success and further matures the profession of project management through its globally recognized standards, certifications, resources, tools, academic research,

publications, professional development courses, and networking opportunities.

To join PMI, go to [www.pmi.org](http://www.pmi.org) and select the Chattanooga Chapter

or for more information email [vp\\_smt\\_branch@chattanooga.pmi.org](mailto:vp_smt_branch@chattanooga.pmi.org).

## Command committed to saving energy, reducing costs

By Tech. Sgt. James M. Hodgman  
U.S. Air Forces in Europe-  
Air Forces Africa Public Affairs

**RAMSTEIN AIR BASE, Germany (AFNS)** – Saving energy and reducing costs is something many people strive to do. When an energy bill exceeds \$150 million, it becomes a necessity.

The energy tab for U.S. Air Forces in Europe and Air Forces Africa for fiscal year 2013 was a whopping \$157.5 million. Since 2003, energy costs have risen about 10 percent, on average annually. These rising costs inspired the command to find ways to save money and precious resources.

Kelly A. Jaramillo, the energy manager for USAFE-AFAFRICA, said the command has several initiatives under way to reduce energy usage and save money at each base.

One of those initiatives is the Residential Energy Efficiency Program, which is designed to show base housing residents how much energy they use and how much it costs.

Under the program, energy monitors are installed in the houses of base residents. The monitors provide residents with instant feedback on the amount of electricity used and how much the energy costs per kilowatt hour.

Jaramillo said housing costs amount to 17 percent of the command's energy bill. A command goal is to have every military family housing resident participating in REEP.

RAF Lakenheath, England, was the first base in USAFE to take part in REEP. Now, about 18 percent of its housing population participates in the pro-

gram, including residents at RAFs Mildenhall, Feltwell and Ely.

This has led to a drop of nearly 30 percent in electricity use and gas consumption by base residents, Jaramillo said.

Sean R. Cockrell, a 48th Civil Engineer Squadron energy manager, said he's impressed with the reductions at Lakenheath.

"I'm excited because we're making a difference," he said. "By applying smart principles, it doesn't take a lot of effort to apply energy conservation and if you follow simple steps there's massive amount of savings."

Cockrell said that through the Lakenheath REEP, the base has the potential to save thousands of dollars every year. However, the housing initiative is one of many Team Lakenheath is using to reduce energy usage.

The base removed most transformers from its office buildings resulting in a savings of about \$250,000 annually. The base also converted 20 buildings to waterless urinals at minimal cost saving about 2 million gallons of water a year.

Cockrell said that since 2007, RAF Lakenheath has also reduced water use by 17 percent.

Examples of energy conservation abound across USAFE-AFAFRICA. RAF Fairford, England, reduced water consumption by nearly 50 percent since 2007. Spangdahlem Air Base, Germany, implemented several base-wide initiatives that could save about \$5.7 million a year. Incirlik AB in Turkey saved \$500,000 after installing a solar water heating system in 19 facilities.

The solar water heating project at Incirlik took

slightly more than two years to complete and cost \$2.4 million. The base expects to receive a complete return on that investment in less than five years.

Artemiz Avci, the energy manager for the 39th Civil Engineer Squadron, said Incirlik is currently looking to install solar water heating systems in military family housing, a project that could save \$205,000 annually.

Avci also said Incirlik saved more than \$700,000 by reducing energy consumption across the base by 26 percent and water usage by 19 percent in fiscal 2013.

Jaramillo said she's pleased with the USAFE-AFAFRICA energy team.

"I'm very proud of the results so far," she said. "Our energy program is only successful when the whole team gets involved. We have energy managers quarterbacking on the field at every base. We're also starting to get people excited and we're making a difference."

While Jaramillo is thrilled with the energy savings USAFE-AFAFRICA has achieved, she said she wants everyone to share their ideas and take part in what she calls the wave.

When one person does the wave in a baseball stadium it's a complete flop, Jaramillo said. The same thing can be said for trying to save energy.

"You need everyone to work together to make a huge wave and we need everyone to do the wave with us," she said. "We have so many buildings and each base is like a small city, we need people to do all they can to reduce energy, everybody has a role, everybody has a part, join the wave."





# Illinois Airmen unveil combat simulator for tactical air controllers



Tech. Sgt. Cody L. Canfield, tactical air control party specialist with the 169th Air Support Operations Squadron, Illinois Air National Guard, uses an LA-5 to illuminate a target while, from left, state Rep. Michael Unes, R-Ill., state Sen. David Koehler, D-Ill., and U.S. Rep. Cheri Bustos, D-Ill., watch during a demonstration of the Air National Guard Advanced Joint Terminal Attack Controller Training System at the 182nd Airlift Wing in Peoria, Ill., Oct. 5. (U.S. Air National Guard photo/Staff Sgt. Lealan Buehrer)

By Staff Sgt. Lealan Buehrer  
182nd Airlift Wing

**PEORIA, Ill. (AFNS)** – Airmen with the Illinois Air National Guard unveiled a combat simulator they helped create for tactical air controllers during a ceremony with lawmakers Oct. 5 at

the 182nd Airlift Wing. The Air National Guard Advanced Joint Terminal Attack Controller Training System allows tactical air control party specialists to practice coordinating airstrikes while deployed overseas with ground forces. The AAJTS will potentially save the gov-

ernment \$95 million through fiscal year 2018, by reducing the cost of qualification training by 48 percent, according to an analysis presented to the Air Force.

Maj. Jason Clifford, commander of the 169th Air Support Operations Squadron that launched the simulator, said while



Lt. Col. Scott R. Twesme, air liaison officer with the 182nd Air Support Operations Group, Illinois Air National Guard, pilots a close air support aircraft during an Air National Guard Advanced Joint Terminal Attack Controller Training System training session at the 182nd Airlift Wing in Peoria, Ill., Oct. 5. (U.S. Air National Guard photo/Staff Sgt. Lealan Buehrer)

nothing can replace the experience of controlling live aircraft, the simulator is a cost-effective alternative.

The system is a realistic way for tactical air control parties to train and maintain proficiency, especially in a time of financial restraint when resources are not always available, Clifford said.

The AAJTS also provides an enhanced training environment not available in a live training range.

“We can stop and start events so that guys can learn where they failed or where they did well in their training,” he said. “We can pause the mission, pause the aircraft, give a quick debrief, steer them back in right direction and have them pick up right where they left off.”

Matt Hruska, simulator operator and maintainer for the 169th ASOS, said that the end result of incorporating simulator training will be Airmen equipped to

provide close air support to ground troops in danger.

“I’ve been that grunt that never had air support, so I’ve been in situations where you’re getting shot at and you’re like ‘This is it, I’m dying,’” Hruska said. “With this, we give hope. Once you hear that (aircraft) come in, it’s like ‘Yes!’ So motivation goes up. They know that Air Force is watching their backs, and that’s the biggest thing – just watching that guy’s six.”

The simulator is comprised of a 270-degree dome projection screen, a control station and an aircraft simulator station. The dome contains 14 high-end projectors that immerse the user in wartime scenarios. It can be networked with other AAJTS simulators, allowing TACPs and pilots to train together worldwide without leaving their bases.

State and federal legislators experienced the simulator firsthand after

they participated in its ribbon cutting.

State Rep. Michael Unes, R-East Peoria, said he was amazed at the simulator’s realism and its applications to real-world operations.

“I heard about it, but it’s one thing to hear about it and it’s another thing to actually see it in action and how real it is from the ground to the air,” Unes said. “It’s great that we’re able to have this type of training to bring our guys home safely.”

The Peoria TACPs teamed up with the QuantaDyn Corporation in 2012 to help create the AAJTS by ensuring it emulated the battlefield, from the sound of being shot at to equipment malfunctions.

U.S. Rep. Cheri Bustos, D-Ill., said she was impressed that the concept originating in Central Illinois has now spread throughout the country and overseas.

“I’ve very impressed with that, and I think it shows ingenuity,” Bustos said. “It shows that the folks here are not giving up on making sure that they’re always viable, always moving to the next step, and I’m just very, very impressed with the whole operation here.”

To date, TACPs with Peoria’s 169th ASOS have completed 101 combat deployments, during which they controlled more than 1,500 aircraft missions. The unit’s Airmen have earned 29 Bronze Stars, 69 commendation medals, 26 Combat Action badges and one Purple Heart.







# Milestones



**40 YEARS**  
Randall Quinn, AF

**35 YEARS**  
George Houston, ATA

**30 YEARS**  
Brian Bergmann, ATA  
Timothy McNeese, ATA  
Robert Porter, ATA

**25 YEARS**  
William Crabtree, ATA  
Keith Robinson, ATA

**20 YEARS**  
Christopher Harter, ATA

**10 YEARS**  
John Adams, ATA  
Mark Brown, ATA  
Nathan Crocker, ATA  
Todd Altaffer, ATA  
Mark Brown, ATA  
Billy Farless, ATA  
Darrell Hargrove, ATA  
Michael Mills, ATA  
Nichol Northcutt, ATA  
Russell Parker, ATA  
Chris Smith, AF  
Lee Roy Wilkinson, ATA

**5 YEARS**  
David Ansley, ATA  
Devon Parker, AF  
Mike Lazalier, AF  
Christopher Stevens, ATA

**NEW HIRES**  
Cynthia Bevel, ATA  
Barrett Guenthoer, ATA  
Zachary Jones, ATA  
Cynthia Matlock, ATA  
Kyle Reece, AF  
Zachary Smith, ATA

**PROMOTIONS**  
Sonia Gault, ATA  
2<sup>nd</sup> Lt. Chris Handy to first lieutenant  
Carson McAfee, ATA  
Russell Parker, ATA  
Russ Roosa, ATA  
Terry Tate, ATA



## ATA Golf Tournament winners announced

The Annual ATA Golf Tournament was held at the WillowBrook Golf Club in Manchester Oct. 9. The winners are pictured below, left to right: First place – Brad Reid, Fred Battles, Stephen George and Lamont Snipes (Photos provided)



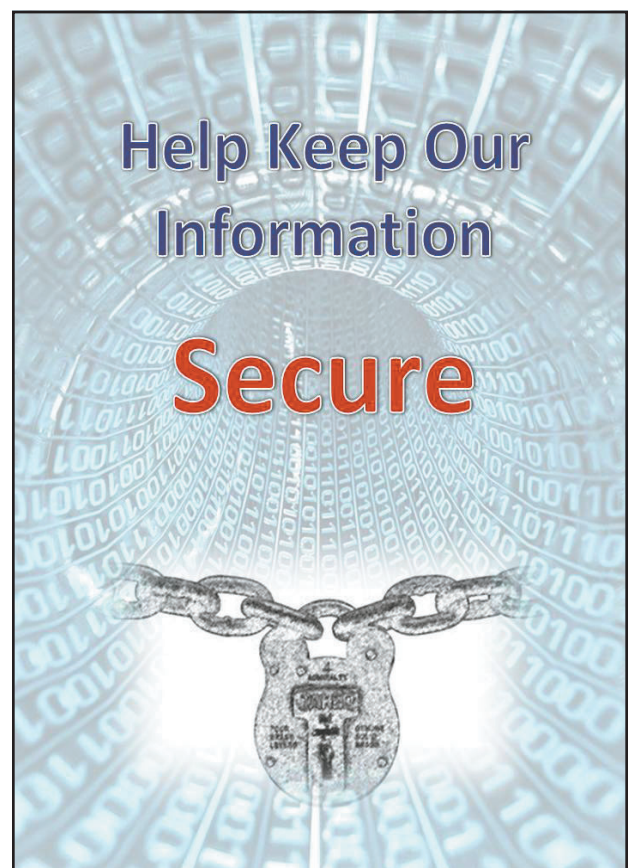
**Second place – Calvin Eads, David Hurst, Warren Gilbert and Tracy McDonald (not shown)**



**Third place – Billy Bailey, Bill Longmire, Jimmy Bradford and Tim Reed**



**Fourth place – Bob Lindeman, J.T. Northcutt, Barry McWhorter and Rick Hoots**





# Honor Flight takes veterans to Washington D.C.



Pictured here are the Honor Flight of Middle Tennessee veterans (first and second row) and escorts (top row) at the World War II Memorial in Washington D.C. Sept. 29. Honor Flight is a nation-wide program that takes eligible World War II and Korean Conflict veterans from all the armed services on a free trip to see their war memorials in the nation's capital. (Photo by Claude Morse)



Sen. Bob Corker takes a photo with Isabelle Kentner, a Navy Korean Conflict veteran, at the Korean Conflict Memorial in Washington D.C., Sept. 29. Kentner visited the memorial while participating in the Honor Flight of Middle Tennessee. (Photo by Claude Morse)



Army Maj. Paul Sipe (kneeling) speaks with veteran and Honor Flight of Middle Tennessee participant Harold Pratt at the Tomb of the Unknown Soldiers at the Arlington National Cemetery Sept. 29. Sipe is a Manchester native who is assigned to the Army Corps of Engineers at the Arlington National Cemetery. (Photo by Claude Morse)

By Claude Morse

Honor Flight of Middle Tennessee

**COFFEE COUNTY, Tenn.** – The Honor Flight of Middle Tennessee completed its last flight of 2015 on Sept. 29 with 51 World War II, Korean War veterans and their escorts.

Honor Flight is a nation-wide program that takes eligible World War II and Korean Conflict veterans from all the armed services on a free trip to see the war memorials in the nation's capital. World War II veterans get top priority followed by Korean War veterans. Terminally ill veterans from those wars, who are well enough to fly with a doctor's approval, go to the front of the line.

The fall flight had veterans from the Army, Army Air Corps, Marines and the Air Force. One of the veterans served in World War II, Korea and Vietnam. The oldest veteran on the trip was 96 years old and most participants were residents of Tennessee, although one veteran was from Alabama.

The veterans were picked up in Winchester, Tullahoma and Manchester. Police and sheriff's departments from Franklin and Coffee counties and the Tennessee National Guard escorted the group. Members of the Patriot Guard Rid-

ers greeted the veterans at the Nashville Airport with an American flag arch when they arrived and when they returned from their one-day trip.

The group flew out of Nashville, Tenn., on Southwest Airlines, the official airline of Honor Flight, to Reagan National Airport and back from Baltimore Washington Airport.

In Washington D.C., the veterans visited the World War II Memorial, Korean Conflict Memorial and The Vietnam War Memorial. They drove by the Air Force Memorial, the Marine Corps Iwo Jima Memorial and the Pentagon.

Rep. Jim Cooper met the group at the World War II Memorial and Sens. Bob Corker and Lamar Alexander met the group at the Korean Conflict Memorial.

The afternoon concluded with the solemn changing of the guard ceremony at the Tomb of the Unknown Soldiers at Arlington National Cemetery. This was followed by supper with the post commander in the base dining hall at Fort Meade, Md., before flying home.

The Honor Flight of Middle Tennessee is a Tennessee 501c3 non-profit cooperation. All donations are tax deductible.

The veterans' trip – airfare, meals and incidentals – are covered by

donations. Each veteran receives a distinctive ball cap and polo shirt. For this flight, Harton Hospital, Tullahoma, donated backpacks for each participant. Escorts pay their own way.

At least one doctor and one nurse accompany each flight. Dr. Cerisia Cummings and Charlsie Estes, RN, have made every flight for the last several years. Nurse Charlie Young, a member of the board of directors, contacts each veteran and their families before the flight to make sure it is safe for them to fly. It costs approximately \$18,000 - \$20,000 to conduct each flight.

Fundraising is underway for the spring 2016 flight as the group will have to spend \$13,000-\$14,000 in advance for airfare and buses to reserve the spring date by January. Veterans are already applying to go on the spring flight.

Veterans, a family member or a friend can call (931) 924-3000 or email [tennesseans2@blomand.net](mailto:tennesseans2@blomand.net) for more information. The seats are filled on a first come, first served basis.

Persons interested in serving as an escort on the spring 2016 flight should call 434-5664.

More information can also be found on the group's Facebook page - Honor Flight of Middle Tennessee.



