



# HIGH MACH

Serving the World's Premier Flight Simulation Test Complex



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## Cutting-edge scene projection system tested in 7V

By Philip Lorenz III  
Aerospace Testing Alliance

Engineers at Arnold Engineering Development Complex are leading the way in evaluating and demonstrating leading-edge technology and facility upgrades that support space and airborne defense systems testing for the Missile Defense Agency's (MDA) early detection and interception of missiles.

A new optical collimator that will enable the projection of space targets into a wider field-of-view has been installed in AEDC's 7V Space Chamber and is being tested to validate its ability to function effectively in the simulated cold and heat of outer space.

"A collimator is a device that focuses parallel light to a point, and operating in reverse can make an object close at hand appear to be very far away, as if it were in space," said Dr. Heard Lowry, ATA Technical Fellow for Space Sensors.

"What's being tested in our 7V facility is called the Short Focal Length Collimator (SFLC), and will eventually be combined with a dynamic infrared scene projector, MDA's Optimized Array for Space-based Infrared Simulation (OASIS) resistive emitter array. A translator system will move the SFLC between the deployed and stowed positions inside the 7V Chamber so that the original collimator can still be utilized.

"In addition, a digital multi-mirror device (DMD), such

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In preparation for a test on a new optical collimator and a digital multi-mirror device in AEDC's 7V Space Chamber, Ken Bynum, ATA electrical engineer, checks the components' connectivity while running input data files to check the performance of the projection system. (Photo provided)

## Housing ribbon cutting



Children who will live in the 14 new homes that make up Arnold AFB's new on-base housing cut the ribbon during a dedication ceremony July 31. (Photo by Jacqueline Cowan)

## Families move into new base housing

By Patrick Ary  
Aerospace Testing Alliance

Capt. Allyson Benko's family is moving into a new home that has everything they need at Arnold Air Force Base.

The home is a big move up from their current on-base residence. It has a two-car garage, a spacious kitchen, a screened-in back porch and lots of storage space both inside and out. The design of the home is

also energy efficient.

One of the best parts for Benko, though, is that it's all brand-new.

"I like that it's new and no one else has ever lived here," she said. "We get to be the first ones to live here."

Benko, an engineer in Arnold Engineering Development Complex's Space and Missiles Branch, and several other families at Arnold are moving into the new, state-of-the-art houses this week

in Arnold Village. Officials held a ribbon cutting July 31, and families started moving in just hours after the ceremony.

The new homes built by Forest City Military Communities, LLC, are replacing units that were close to 50 years old. Forest City signed a 50-year deal in September and started tearing down the 40 existing structures that will ultimately be

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## Process improvement saves \$25K

By Consetta Woosley  
Aerospace Testing Alliance

Nathan Lister doesn't just sit on ideas — he takes action.

Lister, a test engineer in the High Temperature Lab (HTL) area of ATA's Integrated Test and Evaluation Department, took the initiative to improve a process that will result in a cost savings of \$25,500.

"The idea had been discussed by our test team, but I wanted to take it and run with it," Lister said.

The initial idea was to improve the process of hydrostatic testing such that the segments used in the modules of the arcs heater can be initially tested at operational pressures.

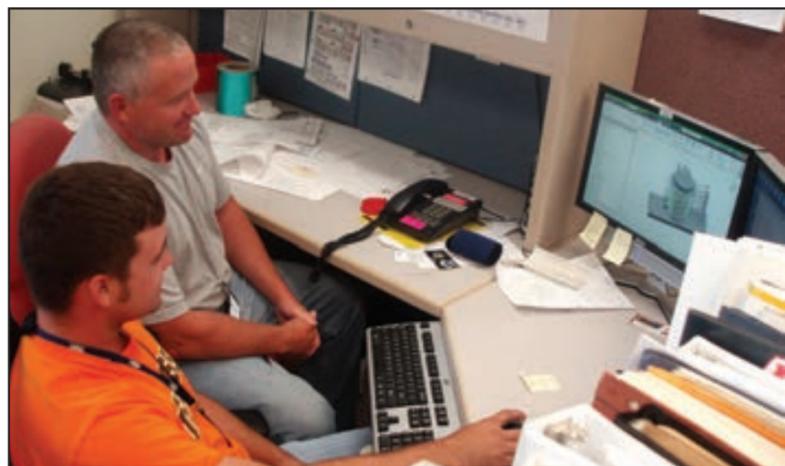
"The segments used in the HTL facility

are purchased off-base and are required to go through an acceptance test upon arrival at AEDC," Lister said. "The acceptance test includes hydrostatic testing of each individual segment. Since the segments are not supported (uncompressed) they cannot be hydrostatically tested at operational pressures without being damaged."

Due to the inability to hydrostatically test the segments at operational pressures, the segments periodically leak during pre-operation water flow checks. When this happens, the module and segments must be removed from the heater and another one installed, costing many hours of work.

"The idea was really not mine," Lister

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Kevin Thompson, HTL lead engineer, left, and Nathan Lister, HTL test engineer, review Lister's design that will result in a cost savings of \$25,500. (Photo by Consetta Woosley)

## New base entry requirements implemented

New base entry requirements have been implemented for the Arnold Engineering Development Complex Mission Area and Arnold Village to comply with revisions to Air Force Instruction 31-113, "Installation Perimeter Access Control."

The new requirements were implemented Aug. 1.

Everyone driving within the mission area or Arnold Village now must be prepared to show their license, registration and insurance if requested by Arnold Police as a condition of entry. If these documents cannot be produced, the driver will not be allowed to drive on base.

Large vehicles, defined as a 15-passenger van or larger, or vehicles towing a trailer or boat, may be subject to additional security scrutiny upon entry.

Additionally, if employees lose or have their common access card or AEDC badge stolen, employees must exhaust all efforts to locate the missing card before being issued a new card. Employees will be required to file an Arnold Police report to detail the circumstances associated with the missing card.

Events such as retirements, promotions or other ceremonies will require coordination with Arnold Police personnel as far in advance as possible with a

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## HIGH MACH

**Arnold Engineering Development Complex**  
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**The complex's vision:** AEDC as the test complex of choice, the workplace of choice for our people and a model of environmental excellence.



### 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

# A welcome message from the AFTC commander

By Brig. Gen. Arnold W. Bunch Jr.  
*Air Force Test Center Commander*

**EDWARDS AIR FORCE BASE, Calif.** – Team,

On the 18th of July we celebrated the beginning of an exciting journey as a unified team in the newly designated Air Force Test Center. The realignment of the 96th Test Wing to the Air Force Test Center in a ceremony Wednesday was the final realignment and for the first time, all aspects of the AFMC Test Enterprise are aligned under one center.

But the realignment of organizations to a single center is only the first step.

We must seize this opportunity to standardize and optimize processes as well as search out and identify best practices so we can propagate those ideas and processes across the center. I also want to identify items we don't really believe we need to be doing. Our overall goal in this is to be more efficient and effective while at the same time providing improved support.

I must stress the team nature of this effort. Despite our geographical separation, difference in time zones and different ways of doing



**Bunch**

business today, we are all on the same team. One of the sayings I have embraced is "none of us are as smart as all of us." By working together I am confident we will not only continue to make tremendous contributions to this nation's defense but also

make those contributions in a more efficient manner.

I ask each and every one of you to join me in my commitment to the success of this new organization. Today our warfighters have a distinct advantage on the battlefield. That advantage was gained through the dedicated efforts of men and women across the AFMC Test Enterprise working with AFMC's key mission areas. We play a critical role in the acquisition of systems for the warfighter and they are counting on us. Now is not the time for a passive posture. If you see something that is not working, take action or identify the issue so we can help. If

you have ideas on how to improve our processes or customer support, please let your leadership know.

I am truly humbled to have the opportunity to work with and for each of you as the commander of the Air Force Test Center. The Air Force Test Center now has hundreds of aircraft and facilities worth billions of dollars, but our most valuable resource is...YOU! You form the backbone of this center. I know I can count on you to make this new construct successful.

Thank you for what you do each and every day to make the Air Force Test Center Team successful.

## Be patient and complete all of your checklists

By Gary S. "Buddha" Rudman  
*9th Air Force/U.S. Air Force Central Command*

**SHAW AIR FORCE BASE, S.C.** – We often hear the safety officer discuss at staff meetings a mishap where checklists weren't used. Checklists are not only required in the flying and maintenance environment, but actually apply to most of our professional and personal activities.

We're told during all phases of life what to do and how to do it. A parent, for example, might help their young child learn how to clean their room by making a list with tasks such as, "Place your toys in the basket." While simple, the basics start to become engrained in the youngster.

Upon successful completion of the tasks, the parent might reward the child with ice cream or a monetary award, such as allowance. The simple feedback system may help the child to learn. The child may then remember to follow the checklist the next time the parent asks them to complete that task. In this case, the child has a written plan and direction.

As the child grows older and wiser, the parent broadens the guidelines. The child becomes a teenager and may begin to see the world from a different point of view – a world where there is no need for checklists.

In reality, the teen continues to depend on checklists. School checklists detail homework assignments, sports practice times and band competitions ... all complete with schedules. Internal checklists reside within those: "What do I need to take to the band competition?"

"How will I make sure I'm adequately trained for my half-marathon?"

"What training plan do I need to follow?"

Some teenagers might seek additional guidance from a parent, coach or teacher. With the guidance, usually provided in a step-by-step format, such as a checklist, the teenager is set on the right path. The teenager then has the tools necessary to accomplish the

task at hand.

The teenager is re-learning through patience, with detailed and complete direction.

Next comes graduation from high school and college and then entry into the real world. Perhaps for some, all that's been learned is quickly discarded. For others – the successful and the eager – nothing is thrown away. They use the path that has been learned.

The use of tools gained from lessons learned is key to a successful future on personal and professional levels. Consider entering pilot training or technical school, buying a car or boat, assembling a barbecue grill. Each requires attention to specific detail.

Checklists, simple or complex, are involved in each operation to ensure success.

Checklists incorporate lessons learned. For example, running a car without engine oil will result in catastrophic damage and a very high repair bill, while simply checking the engine oil can prevent the damage and expense.

Flying and maintenance training involve considerable complex issues.

Have you ever thought how many checklists are involved in getting an airplane off the ground, or to complete the engine change operation? How much have you learned? What's become engrained over the years? Did your predecessor adequately mentor you so that his/her lessons learned could be passed down?

Most checklists don't require an extensive period of time to complete. Checklists detail hazards that, if not precisely followed, could

result in an injury or death.

The majority of the notes, warnings, and cautions have been written in blood.

Still, there are times when checklists are simply not used. The end result could be a Class A mishap.

Causal? The operator could be found causal for not running the "before landing gear checklist." How many times have you put the gear up, and put the gear down?

Once without a checklist is a lapse in reason.

I enjoy time on the lake with the family. All want to get going quickly. There's no time to check the oil to ensure the engine's fluids are at appropriate levels.

Wrong! I make it a point to do a five-minute inspection of my engine compartment every time I take the boat out.

One day during my "pre-flight inspection," I noticed the outdrive gear lube reservoir was low, and fluid was collecting in the bilge compartment.

Before leaving the dock, I topped off the reservoir and continuously checked the levels during the day. Had I not taken the time, had I not been patient, my beautiful day on the lake would have been ruined and resulted in a very expensive repair bill.

The next day, the boat was serviced and the hair-line crack in a connector was fixed.

So, take the time, usually just a few minutes, to safely complete whatever the task at hand. Be patient; the world can wait a short time.

Your family, friends and co-workers look to you to ensure success in your daily accomplishments.

Complete the checklists, at work AND at home.

### Checklist mentality ...



## My job is prosecuting sexual assault

By Col. Don M. Christensen  
*Chief, government trial and appellate counsel*

**WASHINGTON (AFNS)** – Here's a simple truth...sexual offenders reject our core values of integrity, service and excellence, in favor of following their own base, undisciplined, criminal desires. Most sexual assaults committed by Airmen are "blue on blue," or Airmen victimizing other Airmen. So in addition to rejecting our core values, these undisciplined Airmen reject the Wingman concept that we prize in the Air Force. They represent a direct threat to unit morale, good order and discipline. They degrade combat readiness but with the combined efforts of command, law enforcement, and our team of prosecutors, they will be held accountable. Together, as a team, we will protect other Airmen and protect our strength and combat readiness as the world's greatest Air Force.

Detecting and prosecuting sexual assault is our priority. Recently, we posted on the internet significant Air Force sexual assault prosecutions. The posting may be found at [www.afjag.af.mil/sexualassaultprosecution/index.asp](http://www.afjag.af.mil/sexualassaultprosecution/index.asp). As you can tell from a quick review of this information, we will prosecute sexual offenders anywhere they are found. From reviewing these cases, you can see sexual assault in the Air Force carries substantial penalties.

Our partners in AFOSI thoroughly investigate each allegation to provide commanders with timely, accurate and prosecutable evidence. They pass the ball to

commanders, who call upon my team to prosecute the offender to the maximum extent allowed under law.

Our team of prosecutors is better than any you will see in the civilian community or on TV. I have 17 highly skilled senior trial prosecutors, who are selected from among hundreds of judge advocates for their top notch trial skills.

They have the very best trial skills in the Air Force JAG Corps. They prosecute the Air Force's most serious courts-martial.

Seven of my senior trial prosecutors have been identified as "Special Victim Unit (SVU)" prosecutors, due to their training and experience in combating sexual assault. They are dedicated to bringing justice to victims of sexual assault and ensuring commanders are able to appropriately hold offenders accountable.

In the typical case we prosecute, the accused Airman exploits his victim's intoxicated state to commit the sexual assault. We are very effective in prosecuting these offenders, and the law encourages us to prosecute Airmen who use alcohol to facilitate sexual assault of substantially incapacitated victims. Prosecuting this kind of case is one of our core specialties.

The Air Force has done a great job training Airmen about respecting other Airmen and not sexually abusing their fellow Airmen. Training can reach many Airmen who might be tempted to commit this crime.

## 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 three ways: via the AEDC intranet home page, Action Line boxes at the base cafeterias 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. Raymond Toth**  
AEDC Commander

## 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, you cannot smoke 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. In case of inclement or cold weather, employees are encouraged to use their personal vehicles if a sheltered designated smoking area is not available nearby. 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 AEDC web portal at [https://lpaapro.arnold.af.mil/PORTALimages/Smoking area map.pdf](https://lpaapro.arnold.af.mil/PORTALimages/Smoking%20area%20map.pdf). 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.

Regarding use of smokeless tobacco, 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. Smokeless is strictly prohibited in conference room meetings and other areas, e.g. PMEL, where Air Force regulations specifically prohibit.

Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), they are considered to be in the same category of tobacco products whose use is governed by Air Force Instruction (AFI) 40-102, Tobacco Use in the Air Force. Therefore, all rules stated above for tobacco products apply to electronic cigarettes.

- Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.
- Updates to this policy will be made in the future to further align with Air Force guidelines.
- This letter supersedes previous letter dated 28 October 2006, subject as above.

## New civilian pay system on the way

By Master Sgt. Cecilio Ricardo  
Air Force Public Affairs Agency

All Air Force civilian employees are slated to be using a new, standardized Air Force pay system by June 2013.

The Automated Time Attendance and Production System will standardize the pay method across the service and will be implemented first at Air Force Global Strike Command and Air National Guard bases on July 29.

According to Doug Bennett, associate deputy assistant secretary for Air Force Financial Management Operations, the system will be implemented service-wide in eight waves during the next year and is meant to save time so personnel can focus on accomplishing the Air Force mission.

"It allows folks to focus on the mission, and allows the Secretary of the Air Force and Chief of Staff of the Air Force to make informed decisions about where we need to spend our money," Bennett said.

Along with better account-

ability and efficiency, the system also eliminates paper use. Currently, many Air Force civilians manually report their hours using the old paper-based system, Bennett said.

ATAAPS will allow a user to enter his or her time and have the supervisor approve it electronically, providing an audit trail, while increasing the accuracy of financial statements.

"It's a lot easier to trace timecards when it is centrally located," said Benjamin Yarish, Air Force Financial Management Information Technology Portfolio manager.

According to an Air Force study, 50 percent of the Air Force's civilian timecards were not properly approved by supervisors, or entered into the Defense Civilian Personnel System in a timely manner.

These inaccuracies have resulted in overpayments, underpayments, or, in some cases, no payments, according to the study.

"This standardized system

will provide transparency and auditability," said John Koski, director of Air Force Information Systems and Technology.

"When your boss spends two hours every other week signing time cards, that's time that person isn't making sure that aircraft are being repaired or ready to fly," said Bennett.

The Air Force is not the first service branch to use the system.

"This system has been around for about 10 years. Army is already using it. Navy is looking to use it," said Yarish. "Therefore its track record provides confidence to use the system Air Force-wide."

The first bases to receive the ATAAPS system are Barksdale Air Force Base, La., Whiteman Air Force Base, Mo., Minot Air Force Base, N.D., F.E. Warren, Wyo., and Malmstrom Air Force Base, Mont.

"I think this is a great step forward," said Bennett. "I hope folks approach this system with an open mind and embrace this opportunity."

## Reward fund established to bring justice for family of AEDC employee

A reward fund for information leading to the arrest of the person or people responsible for Erika Megan Sharpton's death on July 2, has been established at American City Bank, Tullahoma.

Megan is the second born of four children, an older sister, two younger brothers, all of whom are Kelly Sharpton's children.

Ms. Sharpton has been an Information International Associates (IIa) Inc. graphics illustrator for the Arnold Engineering Development Complex since 2007, and a Tullahoma resident. Megan had been taking nursing courses at a technical school in Winchester, Tenn.

To donate, send contributions to the attention of "Erika Megan Sharpton" at American City Bank, 340 W. Lincoln St., Tullahoma, TN 37388 or stop by any of the American City Bank branches in Tullahoma, Manchester or Decherd.



For additional information, call American City Bank's main branch manager Michelle Martin at (931) 455-0026.

To provide information related to this case, please call Franklin Co Sheriff's Dept at (931) 967-2331 and 800-TBI-LOST. Her family and friends are hoping for answers.

## Discussing CyberPatriot involvement at local schools



Representatives from AEDC, the local chapter of the Air Force Association and Coffee County High School met at Coffee County High School July 24 to discuss the school's participation in the Air Force Association's (AFA) CyberPatriot program. Pictured from left are Lt. Col. P.J. Bailey, head of AF Junior ROTC at Coffee County High School; Claude Morse, President of the H.H. Arnold Memorial Chapter of the Air Force Association; Michael Glennon, AEDC technical director of engineering and technical management; Jere Matty, AEDC STEM coordinator; and Master Sgt. James Loveland, Non-commissioned officer-in-charge of the Coffee County High School Junior AFROTC. CyberPatriot is a national high school cyber defense competition designed to give hands-on exposure to the foundations of cyber security. More information on CyberPatriot can be found at [www.uscyberpatriot.org](http://www.uscyberpatriot.org). (Photo provided)

## AF chief of staff reflects on time as service chief, career

By Master Sgt. Cecilio Ricardo  
Air Force Public Affairs Agency

WASHINGTON (AFNS) – Air Force Chief of Staff Gen. Norton Schwartz met with media July 24 in the Pentagon to share his thoughts about his nearly 40 years of military service in the Air Force and four years as the Air Force's senior uniformed leader.

"When former Secretary of Defense Robert Gates spoke at my Chief of Staff welcoming ceremony in August of 2008, he quipped that he and I had something in common, that both of us were planning to retire," Schwartz said. "Indeed when he asked me to continue to serve, those earlier retirement plans were put on hold. Today, however, I do plan to retire and am preparing to hang up my blue uniform for the final time."

As the Air Force Chief of Staff, Schwartz has led approximately 680,000 active-duty, National Guard, Reserve and civilian forces serving in the United States and around the world. As a member of the Joint Chiefs of Staff, he functions as a military advisor to the Secretary of Defense, National Security Council and the president.

Schwartz rose through the ranks as a special operations pilot who also succeeded in staff and joint assignments.

He took the job as chief "at a particularly turbulent time in our Air Force," said Brig. Gen. Les A. Kodlick in his introduction of Schwartz to the media. However, Schwartz, together with Secretary of the Air Force Michael Donley,



Air Force Chief of Staff Gen. Norton Schwartz responds to questions in the Pentagon July 24 during a media availability to discuss Air Force accomplishments during his time as Chief of Staff. (U.S. Air Force photo/James Varhegyi)

has had "a profound impact on the Air Force.

"Quite frankly they have made the Air Force a better service and fighting force," Kodlick said.

During his tenure, Schwartz introduced the phrase "All In" when he spoke to Airmen around the world about how the Air Force is a crucial part of the joint service team committed to winning today's fight. In addition, he implemented a series of programs designed to improve the quality of life, care and services for Airmen and their families.

Despite the strides since 2008, Schwartz said he is leaving the position during another challenging period as the Air Force

contends with fewer available resources, and an increasingly complex geopolitical and security environment.

Nonetheless, Schwartz said he remains confident the Air Force will continue to thrive because of America's Airmen.

"[Airmen] are talented," he said. "They are dedicated and they will handle today's challenges and tomorrow's contingencies in the manner that has earned America's and the Joint team's trust over the years.

"Our Airmen have reinvigorated the nuclear enterprise, institutionalized remotely piloted aircraft capabilities into our service, strengthened our support and our

care for one another and for our families, clearly demonstrated our committed to the joint fight and established a program of record for the long-range strike family of systems."

A retirement ceremony for the general will be held Aug. 10 at Joint Base Andrews.

He concluded comments about his 40-year career of service saying, "As Suzie and I now prepare to enjoy life after this career of service, we feel truly privileged to have found a home in the United States Air Force, the greatest Air Force in the world. I will always be proud – always be proud to consider myself an American Airman."

## 2013 TRICARE Prime fees announced

EDWARDS AIR FORCE BASE, Calif. – The fiscal year 2013 TRICARE Prime enrollment fees for uniformed service retirees and their families go into effect Oct. 1.

The Prime enrollment fees for 2013 are \$269.28 for retirees, and \$538.56 for retirees and their family members.

Survivors of active duty deceased sponsors and uniformed services medically retired service members and their dependents are exempt from annual fee increases. Their enrollment fee is frozen at the rate in effect when they were classified and enrolled in TRICARE Prime. Their fee remains frozen as long as there is no break in their TRICARE Prime enrollment.

As always, active duty service members and their families have access to TRICARE Prime with no enrollment fee.

The 2013 fees are based on the cost of living adjustment retirees received in 2012. The adjustment was applied to the \$260 (individual) and \$520 (family) 2012 Prime enrollment fees. Because of this, most retirees who were enrolled in Prime prior to Oct. 1, 2011, will see a more significant increase since their enrollment fee remained at the 2011-levels of \$230 and \$460 per year.

Beneficiaries can opt to pay their enrollment fee monthly, quarterly or annually. Before deciding to pay annually, beneficiaries should keep in mind that in most cases enrollment fees are non-refundable, and Congressional changes to fees in the 2013 budget could occur. For this reason, it's recommended that beneficiaries pay their enrollment fee monthly or quarterly. To learn more about TRICARE Prime enrollment fees, please visit [www.tricare.mil/costs](http://www.tricare.mil/costs).

(Information provided by TRI-CARE Public Affairs)

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minimum of 10 days. For large events, 15 days are required.

All visitors for these events must now be vetted whether coming onto the mission area or the housing area.

The size of the crowd will dictate whether additional security measures are warranted to accommodate these events.

As Arnold Police work with the Air Force to clarify additional requirements contained in the new guidelines, more information about further requirements will be forthcoming.

Do your part –  
Please recycle this  
paper after reading!

# F-35 maintenance training spawns USMC's first air FTD

By Dan Hawkins  
82nd Training Wing

EGLIN AIR FORCE BASE, Fla. -- It's no surprise much of the military these days operates in a joint environment. With the introduction of the Department of Defense's newest fifth-generation fighter jet, the F-35 Lightning II joint strike fighter, the joint effort is at the forefront of the aircraft's maintenance training needs through the efforts of the 372nd Training Squadron Field Training Detachment (FTD) 19.

Although based in the Florida panhandle at Eglin, the detachment is part of Air Education and Training Command's 82nd Training Wing, headquartered at Sheppard Air Force Base, Texas.

One of the unique features of the detachment is the stand up of the U.S. Marine Corps' first-ever aircraft maintenance field training detachment by combining F-35 maintenance training operations with the Air Force and the Navy.

Utilizing the FTD will allow the USMC to train the initial core group of F-35 maintenance cadre to staff the creation of new F-35 maintenance squadrons throughout the Corps.

"We (USMC) decided that the Air Force model for maintenance training was the right way to do business," said USMC Capt. John Park, 372nd TRS commander. "The Marine Corps, when we go to a platform, we stay there for our whole careers ... so this is new to us. Having Marines move to the F-35 from the F-18 Hornet or AV-8B Harrier is unheard of, so it's a big change in our training process."

With crew chief, egress and environmental, avionics and airframes training, the 372nd TRS ensures Air Force and Marine Corps trainees are fully-qualified to work on the DOD's new-est weapons system.

"We have 10 Marines here right now as instructors," Park said. "Right now we are focused on

training and transitioning experienced Airmen and Marines to the F-35 from other airframes, getting the maintenance foundation set so they leave us to head to the field fully task-qualified."

All the Marine instructors came to Eglin from the F-35 testing unit at Naval Air Station Patuxent River, Md., where they gained three years experience on the jet. The Navy is currently scheduled to start its own maintenance program over the next few months, with 10 instructors set to join the detachment.

Classes at the FTD range in duration from 45 to 90 days, depending on the specialty.

Although trainees are transitioning to the F-35 from other airframes, the long-term plan is to send Marines through the initial training pipeline to build up the overall military specialty manning numbers.

Being able to train in-residence at Eglin, as opposed to out in the fleet



Students learn about F-35 Lightning II landing gear from USMC Staff Sgt. Christopher Johnson (right) during training at Eglin Air Force Base, Fla., Jul. 19. The USMC is standing up their first-ever field training detachment with the 372nd Training Squadron Detachment 19 at Eglin, part of the 982nd Training Group at Sheppard Air Force Base, Texas. (U.S. Air Force photo/Dan Hawkins)

in an on-the-job training environment, speeds up the Marines' overall learning curve.

"We are trying to take a learning process that usually takes three to five years of on-the-job training in the Marines Corps and turn it into a 90-day or less class," said USMC Staff Sgt. Chris Johnson, power line (crew chief) instructor. "It's incredible what we can do with the best people and training in the world."

Maintaining one of the most advanced weapons systems the military has ever seen is a source of pride for the instructors.

"My dad calls me probably every day and asks about the F-35," said Air Force Staff Sgt. Jeff Kakaley, F-35 crew chief instructor. "I tell him I'm proud to work on it and he's proud to have a son who works on the F-35 too."

"Being around this aircraft on a daily basis,

both here and at Pax River (NAS), has been awesome," said Johnson. "There's nothing I'd rather do."

The 372nd TRS, part of the 982nd Training Group at Sheppard Air Force Base, Texas, has 28 detachments around the globe.

The 982nd TRG conducts hands-on aircraft, munitions and communications-electronics training at 46 locations worldwide, including Europe, Alaska and the Pacific theater.

## 7V from page 1

as used in most visible projection systems, has been installed in the 7V Chamber and visible and near-infrared (NIR) projection of pertinent mission scenes will be demonstrated at cryogenic temperatures."

Dr. Lowry added, "The SFLC is a critical component of a new target simulation and background radiation projection system for our 7V Space Chamber."

This new capability is essential to evaluating all critical aspects of a sensor mission for both surveillance-type sensors and seekers, using high-fidelity static and dynamic target simulation with single or multiple targets.

Dr. Lowry said the goal of the test is to validate these systems that will add new capabilities in AEDC's 7V for the MDA and future customers.

Jim Burns, AEDC's space chambers lead and

project manager for the test, said the validation of the collimator and DMD in 7V is the latest step in an ongoing effort undertaken since fiscal year 2009 to improve the chamber's capabilities.

"We had to design the overall system and the mounting structure, all of those things," he said. "We had to get that fabricated and installed into the chamber. A lot of it was fabricated by our Model Shop or by folks here on base. We have outsourced some of the optical components, but a lot of the fundamental structure was built in-house."

"Much of the design and integration can be attributed to the late Les Crosswy (former AEDC employee) and his meticulous engineering. This system is really a credit to his memory."

Burns also spoke about some of the challenges the project has presented.

"First of all you've got

to make sure that installing this new system hasn't done anything to degrade our current system," he said. "Then we have to make sure that all the mechanisms function."

Burns compared the view projected through the facility's current collimator to what someone would see if they looked at the sky through a soda straw.

"You would see just a very tiny scene; your field of view would be very tight," he said. "By changing the focal length, the system will give us a wider field of view."

"The current field of view of our scene projector is around 0.1 degrees, which is very narrow. This new collimator will increase our view up to a full degree, which is a significant increase. A lot of our customers are looking for even wider fields of view," he said. "There are some missions now where they want to see, for example, the whole Earth."

Another important part of the test in 7V is a piggy-back effort that is a Small Business Innovation Research (SBIR) project for Orbital Sciences Corp., Huntsville, Ala.

Dr. Tommy Cantey, a research scientist for the company, is the lead for the SBIR portion of the test at AEDC's 7V.

Excited about the test, Cantey explained the test in layman's terms.

"Scenic projection is very much sort of analogous to, especially in our case, using the overhead projectors that people do PowerPoint presentations and give lectures with," he said. "We're taking that technology and instead of pointing it at a screen or someone's eye, we're actually pointing it at a sensor under test."

The sensors tested in facilities like 7V are electro-mechanical devices for detecting a missile by the

electromagnetic signals emitted by the missile itself or its plume.

The system being tested in 7V projects such a realistic image onto a generic sensor that it is incapable of distinguishing between real and simulated sources.

"The test article [scene projection system] that we're testing is a large array of micro mirrors, about a quarter of the diameter of a human hair," he said. "There are about a million mirrors and all of these tip and tilt using the control electronics that we're able to modulate, or turn on and off."

"The light is projected onto something, [to] illuminate them with a flashlight or some sort of uniform light source—it could be an infrared source like a hot plate. What gets projected out is this nice, two-dimensional image. The sensor under test thinks that it is looking at the real world."

He added, "We've had great success with this and this is just another barrier that's getting removed to making this more suitable for other applications."

Cantey said his company has had a very solid and long-standing professional relationship with AEDC, and he has always enjoyed collaborating with people like Burns, Lowry and others in Arnold's Space and Missiles Ground Test Complex.

"I am very happy to work with AEDC," he said. "I can't say enough about working with those guys, they've been very nice and very supportive."



Scan the code for the 7V fact sheet!

# Gen. Breedlove becomes 35th USAFE commander

By Master Sgt. Brian Bahret  
U.S. Air Forces in Europe Public Affairs

**RAMSTEIN AIR BASE, Germany** – Gen. Philip M. Breedlove took command of U.S. Air Forces in Europe from Gen. Mark A. Welsh III today in a change of command ceremony here.

Presiding over the ceremony, Air Force Chief of Staff Gen. Norton Schwartz praised Welsh's past accomplishments and Breedlove's future potential as the commander of USAFE, Allied Air Command Ramstein, and U.S. Air Forces Africa.

"These two men are quintessential Air Force leaders – innovative, forward looking and strategically oriented," Schwartz said. "They are both Airmen's Airmen – one an incumbent commander and the other eager and incoming. Both are exactly the kind that we need to serve at the helm of the United States Air Forces in Europe as the command conducts its very important mission."

USAFE is an Air Force major command and is

the air component for two Department of Defense unified commands – U.S. European Command and U.S. Africa Command. As the air component, USAFE directs air operations in a theater spanning three continents, covering more than 19 million square miles, containing 105 independent states and possessing more than a quarter of the world's population and more than a quarter of the world's gross domestic product.

Schwartz said Breedlove, who is USAFE's 35th commander, played an instrumental role in leading the Air Force during his tenure as the Air Force's Vice Chief of Staff.

A command pilot with more than 3,500 hours, Breedlove has served in six command positions since earning his commission in June 1977.

"You have demonstrated your effectiveness as a commander and a leader," Schwartz said. "You have gained the experience and the genuine credibility to

back it all up."

Breedlove's experience will prove invaluable during his tenure as USAFE commander, Schwartz said.

"We look forward to your incredible leadership – to your mission first, people always approach which emphasizes empowerment and inspires success, all the while demanding performance," he said.

Breedlove has served nearly a third of his 33 year career in USAFE with assignments in Spain, Italy and Germany and said he and his wife welcome the new assignment.

"Cindy and I feel like we are coming home," he said. "I'm glad to be back."

Additionally, Breedlove acknowledged USAFE's NATO partners and the past relationships they developed.

"I'm really excited to be a part of this team," he said to the more than 700 service members and allied partners attending the ceremony. "I look forward to working with you as we continue to shape NATO airpower to support our joint force."



**Air Force Chief of Staff Gen. Norton Schwartz gives Gen. Philip Breedlove the command of U.S. Air Forces in Europe during a change of command ceremony at Ramstein Air Base, Germany, July 31. During the ceremony, outgoing USAFE commander Gen. Mark A. Welsh III relinquished command after providing command and control for air, space and missile defense of activities in an area of operations covering almost one-fifth of the globe, which includes 51 countries in Europe, Asia, the Middle East, and the Arctic and Atlantic oceans. (U.S. Air Force photo/Senior Airman Chris Willis)**

He said since departing Ramstein in 2009 as the 3rd Air Force commander, he watched the growth of the command and its partners.

"You all have done so much since I left," said Breedlove. "I watched you with pride. You were amazing and your reputation for excellence now is worldwide. I'm so proud to be back as a part of the leadership of this team."

Welsh and Breedlove share a camaraderie that

began when they were stationed together as young lieutenants in the late 1970s at Williams Air Force Base, Ariz.

"He brings a passion to this work and a commitment to teamwork that you are going to admire," said Welsh, who, if confirmed will take over as Air Force chief of staff from Schwartz who is scheduled to retire in August.

Under Welsh's leadership, USAFE has flourished in the range of its

achievement and the scope of its impact, said General Schwartz who presented Welsh with the Defense Distinguished Service Medal first oak leaf cluster.

Schwartz said Welsh's experience at each level of command has provided a foundation for success as USAFE commander, and to the command's invaluable support to Operations Enduring Freedom, New Dawn, Nomad Shadow,

See **USAFE**, page 7

## PROCESS from page 1

said, "Our entire team threw the idea around, but I decided to follow through and design something that might work."

Lister designed a hand-operated hydraulic press to compress and support the segments just like they would be when installed into the HTL heater. This would allow the segments and modules to be hydrostatically tested at equal to or higher pressures than

those used during operation.

Another advantage of the hydro press is that it allows for a whole module of segments to be tested at the same time rather than the current process of testing them individually. Furthermore, the hydro press has the capability to pull a vacuum on the modules while the water passages are being hydrostatically tested, a capability that

previously did not exist.

"Using the hydro press will reduce the time it takes to hydrostatically test segments, reduce the number of leaks found after installations, reduce the need for heater tear down and ultimately save money," Lister said.

Lister began design of the hydro press in January of this year with a projected completion date of late August.

"This whole process has been a great learning experience for me," Lister said. "It is exciting seeing my design materialize, but it took a lot more people than me to make all this happen. I sought inputs from many people, so it really is a group effort. I just put everyone's ideas into action."

Kevin Thompson, lead engineer for the HTL facility said, "The ability

to check segments at operating pressures will not only aid in the acceptance of new segments, but will also allow us to better evaluate used segments during routine maintenance. Nathan's positive attitude and easy-going personality make him a pleasure to work with and his technical abilities and work ethic are outstanding."

Lister was a co-op with

ATA in the HTL area in 2007 and was later hired in 2009 after graduating from Tennessee Technological University with a bachelor of science degree in mechanical engineering. Lister currently resides in Murfreesboro, Tenn., and plans to complete his master's degree in mechanical engineering from the University of Tennessee Space Institute (UTSI) in 2013.



**HOUSING** from page 1

replaced with 22 new homes. Forest City has also taken over housing management duties at Shaw AFB in Charleston, S.C., and Keesler AFB, Miss.

Fourteen homes at Arnold have been completed. The remaining eight homes are part of phase two, which is expected to begin this fall and be completed in spring 2013.

The new homes were constructed with military families in mind, according to John Hoyt, Forest City's vice president of development.

"Through years of experience and tribulations, we've understood what our military families need compared to what the typical economy has," Hoyt said. "One thing we've learned is our military families really want the garages. They want a two-car garage – not a carport – and they need lots of storage. So we built houses with larger bedrooms. We built these houses to the

maximum size the Air Force has recommended. They give a range, and we built to that maximum range that they allow."

But one of the best parts though for everyone involved is the project was finished well ahead of time; it originally was scheduled to be completed at the end of October. Hoyt attributed the quick turnaround to working with Hensel Phelps Construction.

"The biggest thing is we're not sacrificing any kind of quality," Hoyt said. "It's one thing to get it done fast, but it's another thing to get it done right. And I think we're enjoying the benefits of getting it done both fast and right."

Privatizing housing at Arnold works out as a better deal for all parties involved, according to Arnold AFB Housing Manager Mark Anderson.

"The biggest thing is, the private sector builds homes for a living," An-

derson said. "That's what they do, and they do it for a profit. So they have a lot better capability of delivering homes quicker, on-time, on-schedule and on-budget than the Air Force does."

Forest City manages about 14,000 military housing units across the country, Hoyt said. The end result for Arnold AFB is market-standard housing at a lower construction cost than the Air Force would be able to provide on its own.

"It's really rewarding for us because not only are we lessening the burden as taxpayers, but we're also increasing our investment," he said.

Master Sgt. Whitney Smith, AEDC's transportation superintendent, is moving into a home with his three children and the family dog. He said the three-bedroom home he's leasing has plenty of space, as well as a few extras he's never had in military housing.

"In 21 years of my career



**In place of homes that were constructed in 1965, 14 new houses have been built at Arnold AFB by Forest City Military Communities, LLC. The new homes feature lots of storage space and garages.** (Photo by Jacqueline Cowan)

I cannot ever say that all the base housing units that I've ever been in had a garage, and that's a big gigantic bonus for me," he said. "Just to be able to get my cars and toys out of the elements ... if I was going to buy this, it would be a selling point."

Benko's family still had items packed away in boxes

from their last home when they moved to Arnold. Now those will finally get to come out in a home with about 1,000 more square feet of space to live.

"The kitchen has more cabinet space from what I currently have, which is nice," Benko said. "And I really like the big island part

that comes out that you can put two barstools at."

Anderson said the families seemed happy with their new homes.

"It's been a long time getting to this day," Anderson said. "I'm pretty excited, myself, and pretty happy with the way they turned out."

**USAFE** from page 10

Odyssey Dawn, and its NATO partners.

Giving credit to Betty Welsh for her efforts, Schwartz said the two Welsh's will make significant contributions to the Air Force's future.

"All of these experiences have not only developed a highly regarded and highly effective, yet humble and grounded leadership team, they also serve as exemplars of judgment, performance and results which give us deep confidence in their abilities and offer an entirely optimistic outlook for the future of our Air Force should the Senate confirm his nomination as CSAF," Schwartz said.

**AFRL experiment will create artificial ionosphere**

By Michael P. Kleiman  
377th Air Base Wing Public Affairs

**KIRTLAND AIR FORCE BASE, N.M.**

– On successive days in September, a pair of two-stage sounding rockets will lift off from the U.S. Army's Ronald Reagan Ballistic Missile Defense Test Site, Kwajalein Atoll, Republic of the Marshall Islands, with each launch vehicle carrying a canister of samarium powder to its appointed trajectory over the Pacific Ocean.

Within minutes after departing the island, the dust payload will exit one rocket at 118 miles high and the other will be de-

posited 81 miles up.

After being jettisoned into the ionosphere, located in the upper atmosphere from 50 to 400 miles above the Earth's surface, the particles will form a plasma cloud, from which scientists of the Air Force Research Laboratory's Space Vehicles Directorate will obtain data from employing transmitters at two atolls and receivers at five separate isles.

"The two transmitters will send radio waves into the cloud, which will act like a miniature iono-

sphere. We should get a bounce of the signal off the cloud, depending on how dense it is.

The cloud will create an artificial ionosphere and the signal will bounce off of both the real and artificial ionospheres," said Dr. Todd Pedersen, senior research physicist, AFRL's Space Vehicles Directorate. "During the Metal Oxide Space Cloud (MOSC) experiment, we will measure where the cloud is and how dense it is. We will also be studying the effects of naturally occurring disturbances in the ionosphere with multiple-directions looks (east-west and north-south

passes). The ionosphere is not always a nice smooth line – there are often disturbances."

Ionospheric turbulence can cause scintillation, which disrupts ground and satellite communication. Information generated from the \$3 million MOSC trial will be applied to models for scientists to study the possibility of remediating the detrimental impacts of disturbances in the ionosphere on radio wave propagation.

"Our primary goal of the MOSC mission is to diagnose the cloud, but the long-term ambition is to examine whether we can artificially induce

such a cloud to potentially prevent these naturally occurring disturbances from developing. What happens

is that in the equatorial region you have a seasonal effect on communication – disturbances that develop in the ionosphere in the nighttime hours that can cause scintillation," said Ron Caton, research physicist, and principle investigator on the MOSC experiment, AFRL's Space Vehicles Directorate. "For example, you have someone on the ground trying to communicate with a satellite and the signal is being

See AFRL, page 8

# Milestones



**Anthony Taylor**  
40 years



**Tommie Heard**  
40 years



**Era Jackson**  
35 years

## 40 YEARS

Michael Bennett, ATA  
Gene Stratton, ATA  
Thomas Larry, ATA  
James Brooks Jr., ATA

## 30 YEARS

David Uselton, ATA  
Billy Robertson, ATA  
Sherry Wiser, ATA  
William Hane, ATA  
Clara Sanders, ATA

## 25 YEARS

Everett Fulmer, ATA  
Larry Stanford, ATA  
Ross Rains, ATA

## 20 YEARS

Ashley Dement, ATA

## 15 YEARS

Shane Henley, ATA  
Jimmy Harmon, ATA  
Jon Wallace, ATA  
William Isbell, ATA

## 10 YEARS

Joseph Norris, ATA  
Ricky Hattaway, Premiere

## 5 YEARS

Walter Berridge, ATA  
Kevin Holst, ATA  
Jennifer Johnson, ATA  
John Leonard, ATA  
Kimberly Smith, ATA  
Don Counts, ATA  
Robert Hale, ATA  
Samuel Gilbert, ATA

## INBOUND MILITARY

Col. Raymond Toth  
Col. Heather Buono  
2nd Lt. Joseph Achenbach  
2nd Lt. Stuart Coston  
2nd Lt. Benjamin Hoff  
2nd Lt. Julie Sung  
Capt. Sarah Kress

## OUTBOUND MILITARY

Brig. Gen. Michael Brewer  
Capt. Brandon Herndon

## RETIREMENTS

Janice McMahan, ATA  
Connie Shetters, AF  
Chris Abbott, AF

## NEW HIRES

Jesse Labello, AF

Robert Stevens, AF  
Terry Archey, ATA  
Mark Clement, ATA  
Christopher Harter, ATA

## PROMOTIONS

John Knox, ATA  
Jennifer Johnson, ATA  
Kayla Fann, ATA  
Tamalena Breiding, ATA  
Dylana Seay, ATA  
Dexter King Jr., ATA  
Biff Butler, ATA  
Denice Herbert, ATA  
Eric Womack, ATA  
Kevin Holst, ATA  
Brandon Wiley, ATA  
Albertine Mihigo, ATA  
Joo David Reynolds, ATA  
Charles Bradley, ATA  
Steven Ardry, ATA  
Christopher Rogers, ATA  
Cherise Dockrey, ATA  
Brian Pittman, ATA  
Elizabeth Karbe, ATA  
Scott Howard, ATA  
Der'Ivan Kelly, ATA  
Michael Turri, ATA  
John Lamb, ATA  
Derrick Garner, ATA  
Cory Robertson, ATA  
Michael Frederick, ATA  
Monica Turner, ATA



## Airmen invited to share their stories with recruits

**JOINT BASE SAN ANTONIO-RANDOLPH (AFNS)** – Each year, thousands of men and women join the U.S. Air Force. Now, those Airmen have the opportunity to tell their stories in their own videos known as “Airmen Stories.”

The videos will give potential Air Force recruits a chance to hear Airmen share their personal stories firsthand, unscripted and unrehearsed, according to Brig. Gen. Balan Ayyar, Air Force Recruiting Service commander.

Airmen are free to talk about what they like about the Air Force, what they’ve learned about themselves and how the Air Force has helped them meet their goals.

Airmen Stories may be featured on such social media as the AFRS Facebook page, the Airmen Stories YouTube page or other venues.

For more information, visit the Airmen Stories Web page at [www.rs.af.mil/airmenstories](http://www.rs.af.mil/airmenstories).

(Courtesy of Air Force Recruiting Service.)

# Innovative simulator solution enhances training, saves millions

By Nathan Simmons

Air Education and Training Command Public Affairs

**JOINT BASE SAN ANTONIO-RANDOLPH, Texas (AFNS)** – A significant milestone for remotely piloted aircraft (RPA) was ushered in July 10, with the first student sortie in an innovative T-6 Texan II simulator.

The new setup has dramatically increased the ability to train remotely piloted aircraft pilots, and the ingenuity behind the new simulator saves the Air Force millions of dollars.

Completing the same training using traditional T-6 simulators, which cost about \$3 million each, would have cost upward of \$27 million total, which doesn’t count the price of a new building it would require to house them.

Training RPA pilots is increasingly critical to mission success, as they are relied on heavily by our armed forces.

“RPAs are the most requested asset in the combat theater,” said Maj. Gen. Timothy Zadalis, AETC Director of Intelligence, Operations and Nuclear Integration. “This capability continues to save lives and provide support down range.”

When Air Force Chief of Staff Gen. Norton Schwartz solidified the RPA career field in May

2010, overloading the training system with new aviators became a significant challenge.

Robert Englehart, Deputy Chief of Air Education and Training Command’s RPA Training Branch, said that with the increase in demand for RPA pilots came the need to expand the capability to train them, but expanding wasn’t as simple as it sounds.

“We had to be creative in our solution to this problem, as the increase in need for RPA pilots was paired with shrinking defense budgets,” Englehart said. “By staying with the T-6, AETC is able to use courseware and support materials the Air Force has already paid for. AETC really stepped up and found a low-cost solution relatively quickly.”

“These simulators use high-end desktop computers with powerful graphics cards to display the T-6 cockpit and instrument displays,” said Lt. Col. Scott Cerone, 558th Flying Training Squadron commander. “Real-world surroundings are projected from three high-powered projectors to give the pilots a 180-degree view of the world outside their cockpits.”

Another major payoff

results from the significantly lower cost of replacing these components compared to those in the traditional simulator.

Significant savings are also found in the time and cost of training, as roughly \$515,000 is spent to train a traditional pilot versus around \$33,000 to train an RPA pilot.

Traditional pilots undergo 48 weeks of training, whereas RPA pilots train in a rigorous 22 week program before they are sent to their units to train on specific aircraft.

Undergraduate RPA training (URT) is composed of three courses.

The first course is an initial flight screening in which RPA pilots learn the basics of commanding an aircraft.

They then come to the 558th Flying Training Squadron at Randolph AFB, the single source of all Air Force URT for the RPA instrument qualification course.

They then move on to an RPA fundamentals course, in which they get grounding in combat operations on a simplified MQ-9 Reaper simulator.

In the first two courses, pilots learn to use the radio, work with air traffic control, learn instrument procedures, situational awareness, Airmanship and all the pilot-in-com-



A student pilot enrolled in Undergraduate Remotely Piloted Aircraft Training at the 558th Flying Training Squadron, Joint Base San Antonio-Randolph, Texas, prepare to taxi prior to takeoff in a new T-6 Texan II simulator July 10. The new setup has dramatically increased the ability to train RPA pilots, and the ingenuity behind the new simulator saves the Air Force millions of dollars. (U.S. Air Force photo/Staff Sgt. Clinton Atkins)

mand skills they need to fly.

When traditional pilots graduate from training, they spend some time as a co-pilot or wingman, where they are able to learn under the mentorship of a more experienced aviator.

RPA pilots do not get this experience, and thus

are expected to demonstrate their pilot-in-command skills very quickly.

This tiered approach to training was beta tested in 2009 before Schwartz formalized the program in 2010.

In the 2009-2010 time frame, the Air Force produced roughly 45 RPA pilots. In fiscal year 2013,

the 558th FTS plans to produce around 165.

“Dubbed ‘the eyes in the sky,’ these machines and the pilots who operate them are essential, constantly watching our troops on the ground every minute of every day and providing reconnaissance and strike support when needed,” Zadalis said.

## AFRL from page 7

disturbed as it passes through the ionosphere, similar to watching light scatter through water.”

Although research for the MOSC experiment has spanned the past decade, on-site preparation for the mission began in earnest in June 2011, after a Mission Initiation Conference at NASA Wallops Flight Facility, Wallops Island, Va. With launch of both rockets tentatively scheduled for September 2012, the mission team is planning for placement of ground sensors, imagers and receivers, which has involved visits to four different atolls in the Marshall Islands. Caton recent-

ly traveled from Kwajalein to Rongelap, Likiep and Wothe Atolls on a 69-foot boat, with each leg of the trip taking approximately 18-20 hours.

“After being on the boat for so many hours, the team would get out to conduct the site survey in a short time, and then it was back on the water for the multi-hour trip to the next atoll,” Caton said. “On the first night out, it got pretty rough, with 7- to 10-foot swells. I slept on the deck floor. It was definitely an interesting experience.”

Mission partners include the Air Force Space and Missile Systems Center’s Space Test Program

and the NASA Wallops Flight Facility. The former is funding the two sounding rockets and the latter is providing them.

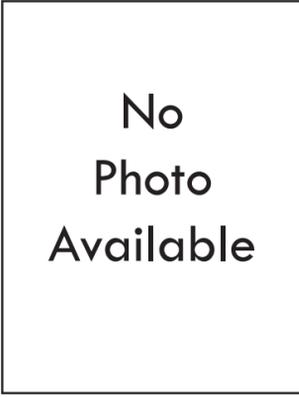
“If the MOSC experiment is successful, the next step would be to investigate our ability to introduce such a cloud in the proper location to short out the electric fields that lead to these disturbances that occur naturally,” said Caton. “If we can artificially create this layer under the appropriate conditions, we have taken a huge step toward actively mitigating potential scintillation activity and ultimately enhancing warfighter communication.”

# AEDC quarterly award winners announced



**2nd Lt. Sam Stephens**  
Company Grade Officer

Stephens was recognized for leading planning for an F-16 engine test and spearheading a new surge concept for sea-level accelerated mission testing, expanding AEDC capabilities.



**Master Sgt. Lars Mirandamuller**  
Senior Non-commissioned Officer-in-Charge

Mirandamuller was recognized for leading the complex laboratories through the Universal Compliance Inspection with zero discrepancies and four noteworthy items.



**Tech Sgt. Brian Fair**  
Non-commissioned Officer-in-Charge

Fair was recognized for serving as chief of the Medical Aid Station during the chief's absence and ensuring medical services remained top-notch.



**2nd Lt. William Edge**  
Honor Guard Member

Edge was recognized for volunteering for every honor guard event and serving flawlessly for two retirement ceremonies, the Special Olympics and the change of command ceremony.



**Jennifer A. Clark**  
Civilian of the Quarter  
Clerical/Technical Support

Clark, secretary, was recognized for maintaining a 100 percent accountability rate within the Investments Branch and ensuring branch safety.



**Vincent N. Chapman**  
Civilian of the Quarter  
Administrative

Chapman, backshops lead/senior manager, was recognized for elevating the shops and labs performance to unprecedented levels during the complex's Unit Compliance Inspection.



**Cameron W. Liner**  
Civilian of the Quarter  
Scientist/Engineer

Liner, electronics engineer, was recognized for demonstrating outstanding planning and technical knowledge to ensure successful completion of the A-10 TF34 engine test program in SL-1.

## Gregory wins People's Choice Award

Joel Gregory, an ATA computer programmer in the Test Assets and Support Department, is the William M. Dunne People's Choice Award winner.

Gregory was recognized for his outstanding work and support in the AEDC machine shop.

Gregory analyzes drawings and requirements before programming the computer-numerically controlled (CNC) machines that send information to mills, lathes and other Model Shop machines.

He has saved hundreds of man-hours by developing innovative methods of machining models and parts, thereby reducing customer costs.

Gregory also meets with

customers, craftsmen, supervisors and designers and looks for the best way to resolve what at first may appear to be an unsolvable issue. He is considered the go-to person by designers, test area customers and machine shop craftsmen.

Gregory's work on the B-52 and G-Range models fabricated by the machine shop were considered outstanding. He worked with designers and craftsmen to utilize different approaches of machining, which reducing machining costs and helped meet very tight schedules.

Gregory also was recognized for greeting all of his customers with a small and a "get it done" attitude.



**Gregory**



**Dave Everett**  
AEDC Safety Achievement Award



**APTU Light-Off Reliability Team**  
Technical Achievement Award

## 2012 Air Force Marathon looking for more volunteers

**WRIGHT-PATTERSON AFB, Ohio** – The Air Force Marathon requires 2,100 volunteers to put on the event and officials say there are still spots open.

"We really need volunteers for the expo," said Jeanette Monaghan, volunteer coordinator of the marathon. "Typically,

everyone associates the event with race day, but there are many more events beforehand."

Volunteers help not only on race day, but also with the Sports & Fitness Expo held on Thursday, Sept. 13, and Friday, Sept. 14.

Volunteers also help with race-day preparations, hydration

stations during the race, clean-up and in many other capacities.

"Volunteers really keep the marathon running smoothly," said Monaghan, "We have so many jobs and duties that we can't do without them."

Local groups can register to volunteer together and even runners can volunteer as part of

the expo.

Monaghan encourages people considering volunteering to register earlier because shifts fill up quickly.

People can register at [www.usafmarathon.com](http://www.usafmarathon.com) and the deadline is Aug. 31.

The Air Force Marathon brought in \$12.7 million to the

area last year and has sold out at 15,000 runners for 2012. The expo will be held at Wright State University's Nutter Center.

The Air Force Marathon is scheduled for September 15, 2012.

The expo will be held at the Nutter Center the Thursday and Friday.

# ATA

## Team Member of the Quarter

The ATA Team Member of the Quarter is Colin Loudermilk.

Loudermilk, a mechanical systems engineer in the Test Assets and Support Department, was recognized for leading the refurbishment of several ETF Plant hydraulic systems during the TEDAC outage, in addition to maintenance work on the other systems he is responsible for.

Loudermilk was also recognized for changing his work hours to whatever was required by the second shift craft supervisor to ensure the hydraulic refurbishment work was accomplished, and for his technical leadership that allowed cross-crafting a large portion of the pipefitter work with operating engineers.



**Loudermilk**

## Craft Team Member of the Quarter

The ATA Craft Team Member of the Quarter is Charles E. Henderson.

Henderson, a firefighter at AEDC for the last 24 years, was recognized for spearheading a revamp of the AEDC Fire Department's vehicle control program to include tracking and scanning the inspection data of a 15-vehicle fleet, training on multiple specialized vehicle operations and development of a "deferred for maintenance" database that helped minimize vehicle downtime.

Henderson was also recognized for ensuring the accuracy, completeness and content of electronic vehicle database management for critical fire department vehicle equipment and vital additional duty programs is maintained.



**Henderson**



**Angela Holder**  
Team Member  
Test Assets and Support

Holder, secretary, was recognized for her attitude, work ethic and willingness to help in any situation.



**Mark Duke**  
Team Member  
Project and Design  
Engineering

Duke, project manager, was recognized for going above and beyond work duties to catch a significant inspection error on a project.



**Vyrene Crowder**  
Team Member  
Mission Support

Crowder, secretary, was recognized for her integral part in the smooth reorganization transition of ATA.



**Bryan T. Webb**  
Team Member  
Integrated Test and  
Evaluation

Webb, test engineer, was recognized for his efforts in coordinating fabrication of parts for the 2012 Mid-Pressure Arc Heater RBA test program.



**Donald Mark Smith**  
Team Member  
Integrated Test and  
Evaluation

Smith, project manager, was recognized for maintaining a satisfied arc heaters customer base through professional and technical excellence.



**Biff Butler**  
Team Member  
Information Technology and  
Systems

Butler, technical specialist, was recognized for his work in bringing the 4T test cell back into production after being out of service more than a year.



**Marshall Alexander**  
Team Member  
Information Technology and  
Systems

Alexander, instrumentation engineer, was recognized for successfully supporting a complicated, multi-balance program in 16T.



**Dwight Freeze**  
Craft Team Member  
Test Assets and Support

Freeze, pipefitter journeyman, was recognized for setting an example for his peers through his work ethic, attention to detail and pursuit of safety.



**Troy D. Caldwell**  
Craft Team Member  
Test Assets and Support

Caldwell, boilermaker working foreman, was recognized for setting a great safety example for his crew and delivering a quality product.



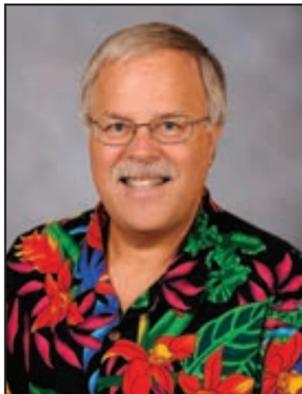
**Richard Crabtree**  
Craft Team Member  
Mission Support

Crabtree, refrigeration journeyman, was recognized for organizing and executing the current preventive maintenance system instituted last quarter.



**John T. Anderkin**  
Craft Team Member  
Integrated Test and  
Evaluation

Anderkin, instrumentation technician, was recognized for ensuring all test instruments, channels and associated equipment are working to the highest degree of accuracy.



**Marvin E. Sellers**  
Customer Service - External  
Integrated Test and  
Evaluation

Sellers, senior engineer, was recognized for working extended hours to develop a fix to a customer test article that allowed the test to proceed with no delays.



**Danna L. Pemberton**  
Customer Service - Internal  
Information Technology and  
Systems

Pemberton, technical specialist, was recognized for developing a process to log information for the Arnold Operations Center and a means of notifications based on particular situations that occur.



**Elise Sherrell**  
Customer Service - Internal  
Mission Support

Sherrell, document control officer, was recognized for implementing a controlled unclassified information handbook, training and automated information release process.

*Great Job!*



## Air Force running goes digital

By Airman 1st Class Alexander W. Riedel

Air Force News Service

**FORT GEORGE G. MEADE, Md. (AFNS)** – Beginning Sept. 1, Air Force medical officials will take new strides to get Airmen running safely.

The Air Force Telehealth Office will conduct a six-month study to investigate the outcome and efficiency of online running instruction.

The study will examine the effectiveness of a newly developed set of computer-based training modules that is currently in the final stages of testing and expected to be available to Airmen soon, officials said.

One year ago, after encountering a change in Soldier's clothing habits, Army leadership banned the use of "toe shoes" during in-uniform physical training sessions.

While the Air Force does not officially endorse any particular running technique or running shoe, officials said they recognize that wearing of minimalist shoes, with a flat, flexible soles that lack traditional cushioning, has increased among Airmen. To prevent injuries among those who make the transition to minimalist footwear on their own accord, the education program will offer basic instructions so that service members can transition safely and effectively.

Delivered in three distinct parts, the Web-based training will have one Airman-oriented module, one "train the trainer" module and one that will "educate the educator." Each module will offer information tailored to the needs of their respective target groups.

Running injuries are an important issue in the Air

Force, said Lt. Col. Mark Cucuzzella, an Air Force Reserve physician and coach of the Air Force running team. Second only to basketball, running is one of the leading causes of injury while on duty. The direct costs of medical treatment for running injuries, and indirect costs such as missed work days and decreased job performance, are considerable.

"While running seems like a natural thing, many people do not know much about proper running technique," Cucuzzella said.

Air Force officials here considered running training since the re-establishment of the run portion of the Air Force physical fitness test; however, the need for injury prevention among the new "minimalists" may have accelerated that development. Proper transitioning to this form of running, therefore, is at the heart of the modules.

"Humans ran in bare feet since the beginning of time," said Lt. Col. Antonio Eppolito, the chief of Air Force Telemedicine. "The paradox is that while there are many indicators that minimalist running can benefit Airmen in the long term, they run the risk of experiencing injuries by transitioning too quickly."

These injuries can be prevented, said retired Lt. Col. Dan Kulund, the former chief of health promotions at the Air Force Medical Support Agency.

"Aircraft maintenance, or AMX, maintains aircraft with preventive care. We took that idea and formed 'RMX' or runner maintenance," said Kulund. "We want to apply preventive

care rather than wait for problems to develop."

Because many runners have experienced injury or discomfort during training, Cucuzzella recommends approaching the Web-based training gradually. Each person needs to approach the training from their starting point – from experienced runners to novice, he said.

"During running you experience approximately three times your body weight upon impact," Kulund said. "So if there are any deficiencies in the mechanics, they are exaggerated. What we try to do is to optimize the approach to running for each Airman and enable them to either validate their technique or discover problems."

To understand where some of these problems lie, the training aims to educate runners about basic ergonomics of the foot and physics of running.

"The arches of our feet collapse when we run, sort of like a 'spring' – that is normal," Cucuzzella said, stressing the importance of landing with a mid-foot strike. The spring-like motion of feet and knees, combined with smaller, quicker steps absorbs the energy of the impact.

"What happened in our culture is that we now wear shoes that brace the foot and changes movement pattern and foot structure very early in foot development," Cucuzzella said. "It's like an aircraft during landing: If everything is locked out, then all the impact energy is going to be absorbed by areas of the body that are not designed to do so."

This changes running form and prevents many runners from running softly without impact protection



**A pair of discarded shoes sits as Airmen line up to practice running drills and newly learned techniques during a running clinic at Moody Air Force Base, Ga., May 30. Airmen were encouraged to take their shoes off, which forces a gentler, mid-foot strike instead of a heel strike.** (U.S. Air Force photo/Airman 1st Class Jarrod Grammel)

from soft-soled shoes. The development of large shoes may have seemed like a good idea to prevent harsh impacts, said Cucuzzella. The increased padding was supposed to enable runners to extend their stride, but ultimately reduces the body's natural spring-like movement.

However, the development of running shoes has followed a pendulum motion, said Kulund. While

sportive running started natural, with old-fashioned racing flats that offered little support and allowed natural foot movement, shoe companies started adding little nuances that ended up with bulky shoes that have been in use until recently.

"It's just a matter of the pendulum swinging back," Kulund said.

Now many runners want to know why running with "less shoe" is more effective

and some even are apprehensive.

"The burden of proof should be on the athletic shoe manufacturers," said Eppolito. "There has not been a single study that proves that cushioned running shoes significantly improve performance or prevent injury in runners."

But buying different shoes may not be necessary

See **RUNNING**, page 13

**RUNNING** from page 12

right away. Kulund developed the basic aerobic training tool as a memory aid to train Airmen in natural running, before changing footwear.

"If Airmen wear a shoe with a lower heel, they automatically improve their running form," said Kulund. "But not every Airman will necessarily want to change shoes right away. The BATT helps them find a natural form even when not wearing lower-heeled shoes."

The feedback from Airmen using the BATT method has been positive, said Kulund, who hopes that once they memorize the technique, Airmen pass the figurative "baton" and

inspire others to improve their running.

Some Airmen are already espousing the benefits of the training.

Before the development of the online training, the three experts travelled to bases across the nation to conduct running clinics -- helping Airmen, face-to-face, understand the basics of proper running.

"Doctor Cucuzzella had a unique perspective because he was both a medical professional and himself a long distance runner," said Tech. Sgt. Carl Lund, a language analyst with the 29th Intelligence Squadron at Ft. George G. Meade, Md., who attended a training ses-

sion with Cucuzzella. "We took our shoes off and went through some activities of posture and movement. Running without shoes was a new concept."

Lund said he was initially surprised, but once Cucuzzella explained the physics of minimal running, it made sense to him. He now thinks differently about his running technique.

"It's definitely something that I'm cognizant of now," Lund said. "It's hard to get out of bad habits, but I think I made progress toward better technique."

Lund has purchased different shoes after the class, but he said he doesn't use them much yet. "It's defi-

nately a different style of running and you have to acclimate to it," Lund said.

While the training aims to improve Airmen's running and prevent injuries, the efforts also intend to educate the professional health staff on minimalist running.

"Minimalistic running has actually been well established," Eppolito said. "It's been around for a long time, but has only now regained popularity in the last few years. That may make it seem like a faddish occurrence. The fact is that sports medicine has a lot of research on the subject."

Medical professionals tend to follow conventional

wisdom, Cucuzzella said. But when properly trained, they too can learn how to better advise their patients in preventing, rather than treating, injuries.

"We have the science and proof on the side of exercise physiology that this is the proper way to train and to become healthy, fit and a better endurance runner," said Cucuzzella. "It's not about running faster, but about going back to a natural movement pattern that was lost."

To ensure that both Airmen and health professionals get the most out of this training, data gathering on its effectiveness is a priority for the near future, said

Cucuzzella.

"Ideally we would like to see Airmen improving by simply learning from the CBT," Cucuzzella said. "But if that doesn't work, we will need to find out how else we can standardize the training process."

While it is still unclear whether the CBT will have the desired effect, Cucuzzella is optimistic.

"We hope that it can help people," the lieutenant colonel said. "It's a lot of new information. But like any skill, if Airmen have patience, practice and become their own coaches, they're going to intuitively feel what works and are going to feel better while running safer."

## Arnold Golf Course 454-7076

**Check us out on Facebook! Arnold AFB Services Golf Course**

Arnold Golf Course will host the **Club Championship** for course members Aug. 25 and 26 with an 8 a.m. shotgun start both days. Play will be individual stroke for 36 holes. Entry fee is \$40 and includes lunch on Sunday. Cart is not included. Sign up in the Pro Shop by Aug. 23.

**Tuesday-Thursday Special:** \$10 green fee for unlimited golf. Cart fee not included.

**Sausage and biscuits available in the Pro Shop** Monday through Friday. If you have an early golf outing during the week grab a quick breakfast before you start. These sausage and biscuits are from the Mulligan's Coffee Bar & Grill menu prepared in advance and placed in the warmer in the Pro Shop for your convenience. The biscuits are \$2 each and coffee is also available. The grill opens at 10:30 a.m. during the week and serves a full breakfast on Saturday and Sunday starting at 8 a.m. The Pro Shop will have the sausage and biscuits available starting at 7 a.m. Monday through Friday but limited quantities will be available, so get them while they last.

## Arnold Lakeside Center 454-3350

**Check us out on Facebook! Arnold AFB Services Arnold Lakeside Center and Arnold AFB Services Information, Tickets and Travel**

**First Friday Jam** will be Aug. 3 beginning at 6 p.m. Come to play, listen, dance and enjoy. Join in with the band to play an instrument or sing. Or take over and do your own performance.

**Weekend dining room specials (all include two sides and salad bar):**

All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

### Friday 4-9 p.m.

**Aug. 3:** Chicken parmesan sandwich, \$5.95 member, \$7.95 nonmember.

**Aug. 10:** Shrimp and catfish, \$10.95 member, \$12.95 nonmember.

**Aug. 17:** Casino Night buffet, London broil, stuffed chicken, garlic mashed potatoes, rice, balsamic grilled vegetables, green beans salad, rolls and assorted desserts, \$19 members, \$21 nonmember, reservations required

**Aug. 24:** Prime rib for two, \$29.95 member, \$31.95 nonmember.

**Aug. 31:** Monterey chicken, \$10.95 member, \$12.95 nonmember.

**Saturday 5-9 p.m. Express Menu only every Saturday.**

**August Movie Schedule**

Movie nights are Thursdays with movie start time of 6:30 p.m. and dinner available from the Express or Pizza menus from 5-8 p.m.

**Aug. 9-** "The Three Stooges," rated PG (1 hr.

32 min.) starring Sean Hayes, Chris Diamantopoulos and Will Sasso.

While trying to save their childhood orphanage, Moe, Larry, and Curly inadvertently stumble into a murder plot and wind up starring in a reality TV show.

**Aug. 16** - "Think Like a Man," rated PG-13 (2 hr. 2 min.) starring Chris Brown, Gabrielle Union and Kevin Hart.

Four friends conspire to turn the tables on their women when they discover the ladies have been using Steve Harvey's relationship advice against them.

**Aug. 23** - "Battleship," rated PG-13 (2 hr. 11 min.) starring Alexander Skarsgard, Brooklyn Decker and Liam Neeson.

A fleet of ships is forced to do battle with an armada of unknown origins in order to discover and thwart their destructive goals.

**Aug. 30** - "The Avengers," rated PG-13 (2 hr. 23 min.) starring Robert Downey Jr., Chris Evans and Scarlett Johansson.

Nick Fury of S.H.I.E.L.D. brings together a team of super humans to form The Avengers to help save the Earth from Loki and his army.

Services is hosting **Tops in Blue** for a 7 p.m. public performance Aug. 13 at Motlow State Community College gym. Doors will open at 6:30 p.m. and seating is first come first available. No tickets are required for this show. "Listen" is Tops In Blue's celebration of giving audiences the best in family entertainment. The 2012 tour invites the audience to listen to the music of life through the sounds we hear every day. It features the dynamic rhythms of The Doobie Brothers, Earth, Wind & Fire, Whitney Houston and Maroon 5. This year's tour also showcases the great country music of Darius Rucker, Carrie Underwood, Lady Antebellum and The Zac Brown Band. Of course, no Tops In Blue show would be complete without the great patriotic music that honors our nation and its heroes. Add the high energy precision choreography and dazzling visual impact Tops In Blue is known for and every member of the audience will be singing along and dancing in their seats.

The ever-popular **Casino Night** returns Aug. 17 to Arnold Lakeside Center for ages 18 and older. A dinner buffet will be served from 6-9 p.m. and includes London broil, stuffed chicken, garlic mashed potatoes, rice, balsamic grilled vegetables, green beans salad, rolls and assorted desserts. Gaming will be from 7-10 p.m. and includes craps, roulette, blackjack and wheel of fortune. Participants are given play money to try their hand at these games to increase their dollars, which will then be used at a prize auction beginning at 10:15 p.m. Reservations are required for the buffet by Aug. 6. Cost for the buffet is \$19 for members and \$21 for nonmembers. Call 454-3350 for reservations or more information.

Arnold Lakeside Center will be taking a trip to Nashville for a **mid-day cruise on the General Jackson** Aug. 18. The General Jackson is the world's grandest showboat that offers delicious

meals and world-class entertainment while cruising the majestic Cumberland River in Nashville. Meet at the ALC at 9:30 a.m. The cruise will begin boarding at 11:15 a.m., departing at noon and returning at 2:30 p.m. Steve Hall & Shotgun Red return for another season aboard the General Jackson Showboat! This popular duo will bring their jaw-droppin', gut-bustin' show to the stage, offering one of the most animated and entertainingly interactive shows to cruise the Cumberland River, complete with a mouth-watering, Southern-style buffet prepared by the boat's own sous chef. This trip is for all ages and cost is \$70 for adults and \$50 for ages 2-13. Sign up deadline is Aug. 10. Cost will be \$75 if signed up Aug. 10-13. There must be at least six to take the trip and maximum participation is 15. Remember to bring money for souvenirs. Call 454-3303 for more information and to sign up.

**Last Friday Trivia Contest** is 6:30 p.m. Aug. 31. Teams can have up to four people. No cell phones are permitted during the event. Anyone using a phone while a question is underway will be disqualified. Questions in random categories will be given and points accumulated. Prizes for top finishers.

**Luau and Fishing Derby is coming Sept. 22** to the ALC beach. Mark your calendars for this fun filled event complete with Outdoor Rec inflatables. Fishing will begin at 2 p.m., inflatables and games starting at 4 p.m., luau at 5:30 p.m. and dinner at 6 p.m. Fishing is for ages 5-15 and everyone is invited to come for the fun and luau. Watch for more details coming soon.

## Family Member/Youth Programs (FaMY) 454-3277

**Check us out on Facebook! Arnold AFB Services Youth Programs**

Welcome back Pretty Discoveries for a **jewelry fair** Aug. 10 in the A&E building, Café 100, from 8 a.m.-2 p.m. All jewelry prices are below \$20 and there will be door prize drawings for free jewelry. Pretty Discoveries also carries belts and handbags.

## Fitness Center 454-6440

**Check us out on Facebook! Arnold AFB Services Fitness Center**

**Battlefield Day** is set for Aug. 15 beginning at 11 a.m. This event will be a field day at the running track behind the A&E building consisting of a four-person 400-meter relay (1 lap each), 60-meter sprint, tire hammer and toss and tug of war. The tire hammer and toss consists of hitting a tractor tire 20 full swings then flipping it as many times as possible in 30 seconds. Services prizes will be given to the winners in each event. T-shirts will be given to the first 30 to sign up. Call 454-6440 for more details or to sign up.

## Hours of operation

**Arnold Lakeside Center:** Catering/Management offices by appointment. Cashier Monday through Friday 7 a.m.-3:30 p.m. Dinner: Arnold Express Menu or Hap's Pizza only Thursday 5-8 p.m., dinner or Arnold Express Menus and Hap's Pizza Friday 4-9 p.m. and Saturday 5-9 p.m.; Main Bar Thursday 5-8 p.m., Friday 3:30-10 p.m. and Saturday 5-10 p.m.; Social Hour Friday 4-6 p.m., Movie Night Thursday 6:30 p.m.

**Information, Tickets & Travel (ITT):** Tuesday through Friday 10 a.m.-3 p.m.

**Café 100:** Monday through Friday 6:30 a.m.-1:30 p.m.

**Barber Shop: by appointment** - Monday, Tuesday, Thursday & Friday 8 a.m.-4 p.m.

**GLC:** Monday through Friday 7 a.m.-3:30 p.m. May vary depending on bookings.

**Family Member/Youth Programs:** Tuesday through Friday 10 a.m.-5 p.m., Saturday 12-5 p.m.

**Outdoor Rec:** Tuesday through Sunday 8 a.m.-6 p.m. FamCamp Store: Friday through Sunday 12-4 p.m.

**Fitness Center:** Monday-Friday 5 a.m.-9 p.m.; Saturday 8 a.m.-4 p.m.

**Arnold Golf Course:** Pro Shop & Driving Range 7 a.m.-dusk. Driving Range open 24 hours with prepurchased key card. Mulligan's Coffee Bar & Grill Monday through Friday 10:30 a.m.-2 p.m., Saturday and Sunday 8 a.m.-2 p.m.

**Recycling:** Monday through Friday 7 a.m.-4 p.m.

**Wingo Inn:** Monday through Friday 7 a.m.-6 p.m., Saturday and Sunday 8 a.m.-4 p.m.

**Nonappropriated Funds Human Resources:** Monday through Friday 7:30 a.m.-4 p.m.

## Outdoor Rec (ODR) 454-6084

**Check us out on Facebook! Arnold AFB Services Outdoor Recreation**

**Paintball is suspended for August due to summer heat. Look for it to return in September.**

**FamCamp boat tours offered.** FamCamp guests have added incentive to stay on select weekends to be able to go on lake tours. What better way to spend a couple of hours on a Sunday than on a lake tour of Woods Reservoir? For only \$5 per person, take a two-hour ride around the 3,980-acre lake. While on the tour enjoy the scenery and wildlife as you hear stories of the lake and local area. Boat tours are available Aug. 5 and 19 at 10 a.m.

**FamCamp outdoor movie nights.** FamCamp

guests will be able to enjoy an outdoor movie for free beginning at 7:30 p.m. Aug. 11 and 25. Bring your chairs or blankets to the open grass area behind the upper bathhouse. Aug. 11 will be a throwback classic showing "Top Gun," starring Tom Cruise, Kelly McGillis and Val Kilmer. The macho students of an elite U.S. flying school for advanced fighter pilots compete to be best in the class and win the Top Gun award. Maverick struggles to be the best often times stepping on the toes of his fellow students, all while romancing the civilian instructor. Aug. 25 will showcase the new comedy fantasy "Dark Shadows," starring Johnny Depp and Michelle Pfeiffer. An imprisoned vampire, Barnabas Collins, is set free and returns to his ancestral home, where his dysfunctional descendants are in need of his protection.

**Archery Basics Class** will be Aug. 11, 25 and

Sept. 8 for ages 10 and older. The class costs \$3 and will begin at 9 a.m. Deadline to sign up is three days before each class. There must be at least three to take the course and no more than 15. This class will teach the basics of archery to include how to hold a bow properly, how to shoot with correct technique and also learn some history. Bows, arrows and targets will be provided, but you may bring your own equipment if you have it. Outdoor Rec will be showcasing their new bows and arrows at the Aug. 11 class.

**Basics of Lake Kayaking Class** will be held 9 a.m.-1 p.m. Aug. 18 and Sept. 1. This class will give you basics needed for kayaking on our brand new sit-a-top kayaks. Learn how to sit properly in the kayak, how to do proper strokes, self- and assisted-rescue procedures, turning

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# Through Airmen's eyes: Airman walks on water

By Senior Airman Bryan Swink  
379th Air Expeditionary Wing Public Affairs

**SOUTHWEST ASIA (AFNS)** – (This feature is part of the “Through Airmen’s Eyes” series on AF.mil. These stories focus on a single Airman, highlighting their Air Force story.)

The human body is made up of approximately 60 percent water. With that knowledge, as temperatures rise in Southwest Asia, it is crucial for service members to know that their bottled water consumption is safe to drink.

That is where Senior Airman Ryan Smith comes in.

Smith, the 379th Expeditionary Medical Group bioenvironmental program manager, ensures all water consumed by service members is bacteria free, processed safely and adheres to Air Force Central standards. He conducts bacteriological tests on every batch of water received.

With more than 1.3 mil-

lion bottles of water consumed at this installation every month, the importance of having safe drinking water is mission critical.

“I’ve been here for two months and we haven’t had a single abnormality in the water,” said Smith, stationed at Shaw Air Force Base, S.C. “Every test has come back clear and free of any bacteria.”

Smith explained that his process begins with pulling four bottles at random from every production date. He said he could receive anywhere from up to 60 pallets of bottled water from every production date.

After bottles are randomly pulled, they are taken back to the lab to get tested. Each bottle is labeled and identified by which lot it originated from. With gloves on to prevent contaminating any samples, Smith begins the testing.

He mixes a packet of agar with the water samples

to cultivate the growth of any possible bacteria living within the water. The sample is placed into an incubation chamber for 24 hours, and heat is applied to further cultivate potential growth of bacteria.

If a sample tests positive for bacteria or E. coli, the water color will turn from a clear transparency to various tints of yellow.

“Senior Airman Smith runs the most important program on this base,” said Capt. Stephanie Harley, the 379th EMDG bioenvironmental engineering element chief. “Without safe drinking water, the base couldn’t operate. His efforts have a direct impact on executing the Air Task Orders.”

Imagine the impact on the mission if a batch of water contained bacteria or did not meet Air Force standards. Serious illness and significant loss of production would follow.

After each lot of water has been cleared and deemed safe for consump-



Senior Airman Ryan Smith pulls a random bottle of water from a pallet of water with a specific production date. Smith pulls and tests random bottles from every shipment of water to ensure all water is free of any form of bacteria. More than 1.3 million bottles of water are consumed at this installation every month. Smith is the 379th Expeditionary Medical Group Bioenvironmental program manager. (U.S. Air Force photo/Senior Airman Bryan Swink)

tion, Smith marks the pallet of water with a large, yellow ‘C’.

Smith’s job requires him to be focused and pay attention to detail. With millions of bottles of water being consumed every month,

there is no room for error.

He doesn’t just test for bacteria within drinking water. He also conducts pH and chlorine testing and lead and copper surveillance sampling of all water sources. Random

samples are taken from all faucets, restroom trailers, dining facilities and various other locations across the base. Additionally, he tests the water at the swimming pools as well. The water here is guaranteed safe.

## Safety clarifies use of electronic devices for pedestrians on roadways

By Staff Sgt. Mike Meares  
Joint Base Pearl Harbor-Hickam Public Affairs

**JOINT BASE PEARL HARBOR-HICKAM, Hawaii** – If the game is to prevent mishaps and preserve combat capabilities, then Air Force safety Airmen are all in.

The Air Force Safety Center released a letter of interpretation Jan. 18 prohibiting the use of listening and entertainment devices, including single ear pieces and external speakers, when on a roadway.

The bottom line: the use of portable headphones, earphones, cellular phones, iPods or other

listening and entertainment devices, other than hearing aids, are prohibited while walking, jogging, running, bicycling, skating or skateboarding on roadways for the sake of ensuring good situational awareness resulting in a lower possibility of a mishap.

“Safety needs to be involved in everyone’s daily activities, to ensure we are meeting mission requirements,” said Tech. Sgt. Scott Yonushonis, 15th Wing ground safety. “Without safe and health Airmen, we will not be able to complete our mis-

sion.”

The AFSEC preserves and enhances combat capability through resource preservation for both Airmen and equipment by attempting to eliminate mishaps. The center develops, implements, executes and evaluates Air Force aviation, ground, weapons, space and system mishap prevention and nuclear surety programs and policy. The center oversees mishap investigations, evaluates corrective actions, ensures implementation and maintains the mishap database Air Force-wide. It also conducts research to promote safety awareness

and mishap prevention and develops and directs safety and risk management education and media programs.

“It is not possible to prevent all mishaps, so that is why we do (operational risk management),” said Yonushonis. “The Air Force hasn’t had a spike in incidents due to electronic devices, but there have been studies done that show you lose your situational awareness when you are using these type of devices.”

The intent of the requirement is to prevent pedestrian-vehicle mishaps and applies only to roadways. The roadway

is defined by the AFSEC as a strip of land dedicate for the conveyance of vehicles, including the shoulder and median when present, as well as parking lots.

The wearing of portable headphones, earphones, cellular hands-free devices, iPods, or other listening devices while running, jogging, walking,

bicycling, skating, or skateboarding in roadways and streets which may impair recognition of emergency signals, alarms, announcements, and the approach of emergency vehicles are prohibited. Pedestrians may, however, wear listening devices on athletic field track, beach areas, sidewalks, and approved jogging or walking trails.

## Red Flag 12-4



An Air Force F-15C Eagle from the 493rd Fighter Squadron, Royal Air Force Lakenheath, England, participates in the Red Flag 12-4 exercise July 20, 2012, at Nellis Air Force Base, Nev. Red Flag provides valuable training in planning and executing a wide variety of combat missions. (U.S. Air Force photo/Staff Sgt. Christopher Hubenthal)

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methods, proper entry into the kayak and more. This training will help familiarize you with kayaking and give you the necessary tools to be safe and have fun. Make sure you wear appropriate clothing and bring sunblock, because we will be getting in the lake during this class. Participants may bring their own kayak if you have one. The class is scheduled for two hours (depending on the amount of participants and questions) and then we will take a tour of the lake. This class is for ages 12 and up and cost is \$10 per person. There must be at least three to hold the class and maximum class size is 10. Call to sign up two days prior to event.

**Wingo Inn**  
454-3051

Check us out on Facebook! Wingo Inn

Reservations for Wingo Inn can be made 120 days in advance. Room rates start at \$39 per night. Please call 454-3051 for reservations.

**Gossick Leadership Center**  
454-4003

Check us out on Facebook! Arnold AFB Services Gossick Leadership Center

