



HIGH MACH

Serving the World's Premier Flight Simulation Test Center



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Air Force Academy engine used for collaborative test project

By Philip Lorenz III
Aerospace Testing Alliance

An AEDC team of engineers collaborated with officials at the Air Force Academy in Colorado Springs, Colo., over the summer to conduct a series of ground tests on one of the school's F109 turbofan engines.

The F109 was a small turbofan engine developed for the Fairchild T-46 light jet trainer aircraft by the Garrett Air Research Corp. The Air Force cancelled the T-46 program in 1986 and the few engines that had been produced were donated to universities, including the Air Force Academy.

It sounds like a routine ground test of an aircraft engine, a significant part of what engineers at AEDC do on a regular basis.

However, this test was anything, but routine.

Maurice May, AEDC's Test Systems Division program manager for instrumentation and diagnostics, said the test represented a milestone, accomplishing multiple objectives to advance cutting-edge technologies and methodologies to resolve aircraft engine operability and structural challenges on the most advanced military aircraft.

David Beale, ATA's Technology and Analysis Branch project manager for the F109 work, said, "Prior to this test project, we did not have swirl data characterizing the way the engines with these inlets function under simulated flight conditions. This data is critical in two ways. It both supports the development of methodologies

for addressing swirl in the inlet-engine integration process and the development of methodologies for evaluating engine durability."

AEDC Test Technology Branch's project also had support from Dr. Milt Davis, formerly an ATA engineer specializing in turbine engine modeling and simulation and now the aeropropulsion lead for AEDC's Air Force Analysis Branch.

Dr. Davis said the modeling and simulation part of the project was productive, but more work remains to be done to improve the model and integrate it into subsequent tests.

The modeling and simulation part of the project had two purposes. One was to validate the model being developed for evaluating the engine stability in the

presence of swirl and then secondly, to use modeling and simulation online as part of the test process, to influence the test.

Regarding engine operability work the team accomplished on the F109, May said the test had already yielded valuable data, and paves the way for future work with additional configurations – on different aircraft engines and fans.

"Because of serpentine duct designs on modern airplanes, we need to further characterize swirl effects on engine stability," he said. "The next generation of fighters or aircraft, not necessarily just fighters, would also be subjected to this as well. This database needs to be put together so that we can start characterizing turbulence,

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Annual ACC dinner a huge success



U.S. Senator Bob Corker addresses the crowd at the annual Arnold Community Council banquet Oct. 14. This year's banquet was the largest ever for the council, with almost 300 in attendance. For more photos from this year's banquet, turn to page 9. (Photo by Rick Goodfriend)

Search for energy capture, storage ideas to continue

By Patrick Ary
Aerospace Testing Alliance

For ATA General Manager Steve Pearson, it's a sign that people care about reducing energy usage at AEDC.

However, he would like to see more. "There are 36 people that took the time to think about it, and that is a very good thing," Pearson said. "Probably many more did who couldn't come up with something. But we want to keep it flowing. We want to keep people thinking about it."

Those 36 people each received a piece of the \$2,000 prize ATA offered in a contest to come up with ideas for capturing and storing waste energy. Eighteen of the submitted suggestions provided ideas for capturing waste energy, and four tackled the energy storage problem. The remaining suggestions were focused on energy conservation and alternate energy resources.

The prize was divided because while the entries all offered positive suggestions for reducing energy usage, none of the suggestions that tackled the energy recovery and storage topics showed a clear economic return on investment.

In an effort to find more of those ideas, the contest will be offered again in the near future, Pearson said.

"It didn't turn out to give us all we needed," he said. "It certainly was a good

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AAPS sponsors STEM event at Polly Crockett Festival

By Shawn Jacobs
Aerospace Testing Alliance

Volunteers from the Arnold Association of Professional Societies (AAPS) at AEDC, along with University of Tennessee Space Institute (UTSI) students, sponsored a Science, Technology, Engineering and Mathematics (STEM) booth Sept. 17 at the Polly Crockett Festival in Cowan.

Using a straw missile launcher provided by AEDC Public Affairs, more than 170 students from pre-school through high school participated in the "Build Your Own Rocket" booth, an education experience introducing them to the basics of rocket science and the scientific method for conducting experiments.

"The straw rocket exercise provides an excellent hands-on lesson in thrust, gravity and drag," said AAPS President Bob Lindeman, technical fellow for the Instrumentation, Data, Control and Automation Center of Technical Excellence and Space Threat Assessment Testbed (STAT) system engineer. "Each participant was challenged to design and build their own straw mis-

sile with the help of mentors from AEDC, ATA and UTSI representing the member organizations of the AAPS."

The objective was to select launch angle and propulsion force to hit a target 25 feet away. Each rocketeer was given three attempts and allowed to make adjustments to home in on the target.

The top 13 who got closest to the target will receive gift cards totaling \$500, courtesy of ATA. In addition, each participant was given their choice of a ruler, pilot dental floss or pencil provided by AEDC Public Affairs plus their custom-built straw rocket.

"With over 170 kids participating, this was a highly successful event," Lindeman said. "The interest expressed by the students and their interaction with the mentors was really impressive.

"The creativity in their designs and their quick grasp of the physics involved was a real eye opener. Activities like this can supplement the classroom learning



ATA's Marvin Sellers assists a student as she constructs a straw rocket in the AAPS booth at the Polly Crockett Festival. (Photo provided)

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HIGH MACH

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The center's vision: AEDC as the test center of choice, the workplace of choice for our people and a model of environmental excellence.

**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

**Core Values**

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

Military families a mix of challenges and rewards

The following essay was written by Lasheena Brunson, wife of AEDC 1st Lt. Antonio Brunson, for a Base Exchange contest. The essay won one of 10 first-place prizes.

Being married to an Air Force officer in the United States Air Force has its rewards and challenges. I must say that I love being a part of a branch that prides itself on three core values: Integrity First, Service Before Self, and Excellence in All We Do.

To watch my husband put on his uniform and serve every day is a privilege and an honor. I am proud of him and that is the greatest reward of being an Air Force wife. It's not the glam, the glitz or the glamour. It's about being a support to an Airman who has integrity, courage and conviction and most importantly takes pride in achieving the mission.

Not only are there rewards of being a military wife, but there are also challenges. My husband and I have two beautiful children, one girl and one boy. We are aware that the mission comes first. Yes, there are many who say that family should always come first. However, an Airman must always remember Service Before Self (second core value); an Airman's professional duties always take precedence over personal desires.

As a wife, sometimes this "stings," because honestly we want to come first. We want to have our husbands to ourselves. Let's not forget about the children! They want playtime, story time, and just plain "ole fun" with Dad. As a mom, how can you explain that Daddy is deployed and won't be seen for another six months? How can you explain that Dad will miss your school play?

These things are hard to explain to children. But you do the best that you can! Being a military family can cause "us" as parents to take on many roles that result in taking away quality time from each other. There is school, parent meetings, basketball practice/games, softball practice/games, TDYs, deployments, separations, 8-hour work schedules for both parents (and sometimes more), and PCS moves.

The list can go on and it has put on a tremendous amount of stress on our family. But, at the end of the day, I am proud that my husband has chosen to fight for our country's freedom. I know that as long as we have each other, we can get through anything.

Hard times will not be forever. There is a rainbow after the storm. Family time is precious and when there are challenges, it feels like you are being tossed by the winds and being drenched from the rain (the stress, the tears and pain). If only my children can see that it won't be like this always. If only I can see as a wife that if I continue to hold on, good things come to those who wait.

If only we can get a glimpse of spending precious time with one another, that glimpse I call paradise.

SecAF: Stay focused on readiness in challenging times

By Jenny Gordon
78th Air Base Wing PA

ROBINS AFB, Ga. (AFNS) – Secretary of the Air Force Michael Donley toured the base and spoke to more than 250 Airmen during an all call here Oct. 17-18.

Donley, currently in his fourth year as secretary, said it had been more than 20 years since his last visit here.

He complimented the strong community support enjoyed by the base and recognized the importance of the base to the nation.

"This is a great mission, and it's extremely important to the warfighter to have their equipment coming here for refurbishment and overhaul," he said. "It has always been to me a remarkable process: these aging airframes come in, get completely torn down and leave here almost like new aircraft. Everything you do here is critical."

He reiterated the accomplishments of Airmen here over the past year, pointing out that the Warner Robins Air Logistics Center started fiscal 2011 with 25 late aircraft, yet began fiscal 2012 with none. He also applauded the ongoing work to improve working conditions and safety.

While Airmen are doing outstanding work all across the Air Force, the service finds itself in extremely challenging times and faces a very com-

plex security environment, Donley said.

"Our Air Force is fully engaged today in four major lines of operation, with finishing the mission in Iraq and Afghanistan," he said. "We continue to fight against Al Qaeda and its global affiliates and are also supporting the NATO mission in Libya."

Donley also discussed the budget constraints facing the nation and the potential effects of those on the Air Force.

"Our Air Force last year identified \$33 billion in efficiencies across the future year's defense plan, which we were allowed to reinvest into the Air Force," he noted. "But we know going forward that efficiencies alone will not be enough."

Expected reductions in future defense spending are in line with what military leaders had anticipated, Donley said, and will extend roughly into the next 10 years.

Although implementing the reductions will be tough, Donley said the savings are achievable.

"To get these savings, we will need to accept greater risks in some areas," he said. "We're going to terminate some programs, streamline and delay others, and continue to drive efficiency in our operations."

Donley said supporting service members and their families will remain job one, which includes ensuring wages and benefits

packages are sustainable into the future.

"We are committed to making sure that the United States continues to have the world's finest Air Force for generations to come," he continued.

Balance will be important as well, whether across core functions, on readiness and modernization needs, or across active duty, Reserve, and Air National Guard components, Donley said.

"In the Air Force, we have determined that balance is key to our resourcing strategy to accommodate the uncertainty in the fiscally challenged future we face," Donley said.

Donley also told the audience that Air Force depots must not be consolidated to fewer than three.

"These are large, complex activities," he added. "Further consolidation of these large facilities would displace our skilled workforce. This would be cost prohibitive."

Although the Air Force of tomorrow will likely be smaller, Donley said expectations are that it will remain fully effective. This means that many installations will look and operate differently.

However, taking care of people and advancing Air Force capabilities, through programs like the Joint Strike Fighter, the KC-46A and the Long Range Strike family of systems, will remain priorities, Donley said.

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. Michael Brewer
AEDC Commander

Question: I visited the new Cafe 100 today and took my lunch and drink that I brought from home. While I was sitting at a table eating it, one of the staff from Services came by and told me that I wasn't allowed to eat in there unless I had purchased my meal from Cafe 100. I've been having to eat at my desk for the last few months (since we have no where else to eat) and for the first time in a while I got to get away from the phone and having customers stop by while I was eating. I can't believe this is a policy that you've approved of. I have purchased coffee from Cafe 100 and it's nice to have something back in this building, but to only be allowed to eat there by purchasing their food is unacceptable.

Response: Thank you for your comment and allowing us to clarify any misunderstanding. As a general rule, and in accordance with AFI 34-272, people are not allowed to bring in outside food and beverage products into Services Food Operations that are not produced or obtained by the operation. Since Cafe 100 only operates as a coffee bar with a limited food selections it will be permissible to bring your own and eat in the facility. In the future, if the Cafe 100 expands to serving lunch, the policy of allowing people to bring their own will be reevaluated. If you have any further questions and/or concerns regarding Cafe 100, I urge you to contact the manager, Mr. Lyle Russell, at extension 454-3367.

Question: Understanding the new guidance of taking credit hours for time worked beyond 40 hours per week, this looks like a form of compensatory time, wherein employees are compensated for hours worked beyond 40 hours per week by taking an equal amount of time off.

It would be good to know the JA's take on this in light and spirit of US Code Title 5 Part III Subpart D Chapter 55 Subchapter V Section 5543b where it states that "An agency head may not require an employee to be compensated for overtime work with an equivalent amount of compensatory time-off from the employee's tour of duty."

Response: Thank you for your inquiry regarding credit hours and compensatory time for DoD appropriated fund civilians. When an employee works in excess of their basic work requirement, there are a few methods of compensation: credit hours, compensatory time, or over-time. Your inquiry provides an opportunity to offer definitions and clarification on this subject.

1) Credit hours are hours an employee elects to work, with supervisory approval, in excess of the employees basic work requirement under a flexible work schedule. Employees are not paid basic pay or overtime pay for credit hours when they earn them. An employee may earn up to two (2) credit hours on a given day. Credit hours cannot be earned on non-duty days. For a full-time employee, only 24 credit hours may be carried over to the next pay period. Carry over hours in excess of 24 hours will be forfeited and cannot be converted to overtime.

2) Compensatory time off are hours of work that management has directed and is time off on an hour-for-hour basis in lieu of overtime pay. Compensatory time off earned must be used by the end of the 26th pay period after that in which it was earned. Compensatory time off not used within 26 pay periods shall be paid at the overtime rate at which it was earned.

It is important to know if a position is exempt or non-exempt under the Fair Labor Standards Act (FLSA). This information is available in the header of a job description or block 10 of a Leave and Earnings Statement. The AEDC Air Force appropriated fund civilians consist of 79 percent FLSA exempt.

- An FLSA exempt employee is one who is not covered by the minimum wage and overtime provisions of the FLSA.

- An FLSA non-exempt employee is one who is covered by the minimum wage and overtime provi-

See ACTION LINE, page 4

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://lpapro.arnold.af.mil/PORTALimages/Smoking area map. pdf](https://lpapro.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.

- 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.

AEDC's LDV technology pioneers meet the future

By Philip Lorenz III
Aerospace Testing Alliance

A recent gathering at AEDC's laser technology laboratory brought five of the center's pioneers on laser Doppler velocimetry together with Dr. Todd Lowe, whose company's subminiature three-component laser Doppler velocimeter (SM3 LDV) had undergone acceptance testing there.

"The people we were meeting with are pioneers, not only [with] flow measurements, but instrumentation in general," said Dr. Lowe, vice president of and lead investigator with Applied University Research, Inc., located in Blacksburg, Va. "They solved initially difficult problems using technology that was just coming along and it's an inspiration for me to be here hosting them."

ATA's Fred Heltsley, an engineering specialist in applied technology, said, "The SM3 LDV represents the very latest in laser Doppler velocimeter (LDV) flow diagnostics hardware and was developed under a Small Busi-

ness Innovation Research (SBIR) program for use in AEDC's Tunnel 16T."

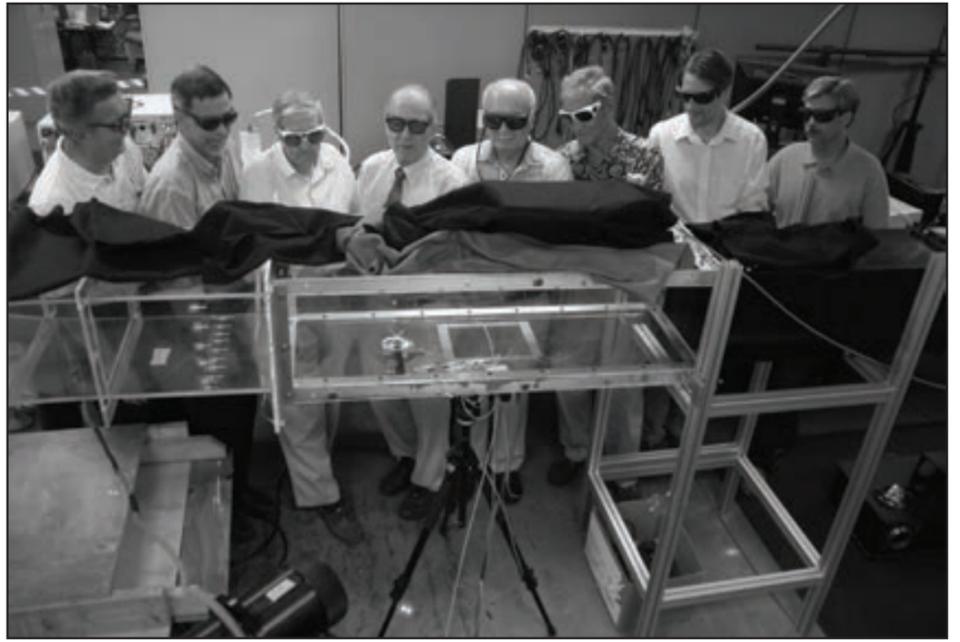
The fact that this system is capable of measuring three components of velocity sets it apart from most other LDV systems at this scale, according to Dr. Lowe.

Dr. Lowe said his team's success in developing their hardware is due in large part to the pioneering work done in the past by those he met in the lab.

"There were folks here who are aerodynamicists, computer scientists, programmers and electrical engineers," he said. "It really shows it's a multidisciplinary [effort] to get instrumentation, specifically laser instrumentation in this case, to work. It meant a lot to see these folks here and to know that they worked so closely together with all these different backgrounds and have success."

Dr. Lowe said it is clear that the group's expertise preceded and went beyond their laser-related work.

"I am certain that these folks have experience using other types



From left, AEDC's Fred Heltsley, with guests Peter Sherrouse, Henry Bevis, Don Brayton, Donnie English, Virgil Cline, Dr. Todd Lowe and Ronnie Rogers, an LDV data reduction software developer, get to look at the new SM3 LDV operating in the laser lab wind tunnel. The five AEDC LDV pioneers recently met with Dr. Lowe and Heltsley to socialize, discuss their work and learn what the future will hold in their area of expertise. (Photo by Philip Lorenz III)

of instrumentation," he said. "This could be probes such as hot wire anemometers [and] pressure probes in the wind tunnels. Then, as laser diagnostics came along, that really changed the game in the way that we measure flows."

AEDC's personnel became involved at the beginning of LDV technology development more

than 50 years ago, according to Heltsley.

"AEDC holds U.S. patents for both the first and second generation LDV data acquisition/processing systems," he said. "Counter processor technology, the first patent, was the industry standard for LDV for many years, as was the more recent Fourier

transform processor technology. A modified version of Fourier transform processing continues to be the LDV standard in industry."

Heltsley added, "The former AEDC employees included optical and electronics designers, instrument technicians, software

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Dropping in



An Airman from the 820th RED HORSE airborne flight parachutes into a drop zone from a C-130 Hercules during a training mission Oct. 4 at Nellis AFB, Nev. RED HORSE Airmen perform airdrop missions to stay current on training and certifications, enabling them to perform jump missions and operate their own drop zones. (U.S. Air Force photo/Senior Airman Brett Clashman)

Air Force is building the future force

By Mitch Gettle
Air Force Public Affairs Agency

WASHINGTON – Changes are coming to the Air Force, and officials are working with the Department of Defense to prioritize current and future resources as part of a national priority to reduce spending.

In the spring of 2010 the Defense Department began a comprehensive effort to increase efficiencies, reduce overhead costs, and eliminate redundant functions in order to improve the effectiveness of the DOD enterprise.

This effort focused on reprioritizing how DOD can use resources to more effectively support and sustain the total force and most importantly the warfighter.

According to the Secretary of the Air Force, Michael Donley, the Air Force is following that guidance.

"We have been examining the full spectrum of operations – from base-level to headquarters – to develop efficiency initiatives that streamline and right-size the organization and redirect resources where we need them most to forge a leaner, more-effective Air Force," said Donley.

Air Force leaders are also focused on shaping the force within the established budgetary

guidelines.

"We can't afford business as usual," Donley said. "We are developing new ways of doing business as we build the Air Force of the future."

The future force will reflect reductions in some areas and growth in others, he said.

"We will need to reduce overhead and consolidate wherever possible to meet budget targets," said Chief of Staff of the Air Force Gen. Norton Schwartz. "We will have to make difficult choices."

To begin shaping the workforce to meet future needs, the Air Force implemented hiring controls in May, followed by a 90-day hiring freeze in August, and Voluntary Early Retirement Authority/Voluntary Separation Incentive Program offerings in September. Mandated by the Fiscal 2012 budget, these actions are designed to accommodate the reduced growth in the civilian workforce by allowing the Air Force to consider where new positions will best support future missions and where current tasks need to be eliminated or reduced.

As the Air Force approaches the end of the 90-day hiring freeze in November, and employees approved for VERA/VSIP approach separation by Dec. 31, the Air Force will consider what

additional measures may be required to meet future needs. Air Force members should expect continued workforce shaping measures, affecting military, civilians and support contractors.

Some of the consolidation and shaping includes organizational changes at the MAJCOM and installation level.

"Air Force organizations and installations of the future may not operate the same tomorrow as they do today," said General Schwartz. "In fact, we are considering a restructure of AFMC – our largest employer of civilians – to standardize processes, streamline decision making and align missions for more effective operations. The new structure will focus on reducing overhead costs and redundant layers of management while largely protecting the command's rank and file workforce."

Given the scale of the coming reductions, functional communities are taking a look at their processes seeking opportunities to streamline operations, General Schwartz said. Additionally, Air Force leaders have been examining numerous base-level support activities, looking for better ways to support Air Force missions.

According to General Schwartz, the Air Force will establish new baselines for many

functions across the Air Force.

The Air Force will also focus on providing the essential services members need and taking more advantage of local communities and the valuable services they provide for Airmen and their families. For example, some services commonly available on installations, but are either not financially viable or not often used, may be consolidated or closed in order to redirect resources to other places where Airman and family needs are greater, he said.

The Chief Master Sergeant of the Air Force expressed confidence in the ability of Airmen to adapt to change as the Air Force evolves.

"As specifics of these challenges start to take shape, I'm confident our Airmen will exceed all of our expectations," Chief Master Sergeant of the Air Force, James Roy said. "In the end, we will remain the world's finest Air Force."

"These are challenging times, but we have a unique opportunity to shape the future of America's Air Force, and we are committed to doing everything possible to balance fiscal responsibility with our investments in our people and the nation's defense," said Schwartz. "I have no doubt our Airmen will rise to the challenges before us."

AARP offers driver safety course for military members

The AARP Driver Safety Program is offering a free classroom during November for any military personnel, active duty, retired, guard or reserve regardless of age.

Spouses are eligible to take the classroom course free of charge, provided they present a valid military spouse identification such as a dependent ID card (DD form 1172) or a membership card to organizations such as the American Legion or Veterans of Foreign Wars.

The first class is being offered Nov. 1 and 2 from 8:30 a.m.-12:30 p.m. at the American Legion in Manchester, 130 Shelton Road. For more information, contact Ray Amos at (931) 728-4375.

Blood drive returns to base next week

Blood Assurance will be at AEDC Oct. 24-28 from 10:30 a.m.-3p.m. Employees may donate at any location during work hours, subject to supervisory approval.

All blood types are needed, but there is greater need for Type O. Type O is used in trauma cases where there is no time to cross-match blood types and it is the most common type of blood transfused to newborns.

Every two seconds someone in the United States needs blood components, but only 5 percent of the population that is able to give actually donate. Locally, patients need 800 pints a day. AEDC personnel can support fellow workers, neighbors and local communities by donating blood.

All donors will receive a free T-shirt and be entered to win a \$1,000 outdoor package.

The schedule for the donations is:

Monday-ETF
Tuesday-PWT
Wednesday-A&E Building
Thursday-EAF
Friday-Main Cafeteria

To be eligible to donate you must be healthy, at least 17 years old, weigh at least 110 pounds, and not have given whole blood in the past 56 days or a double red cell in the last 112 days.

You may not give blood if you have received any notification asking you not to donate. Please bring ID or your donor card.

If you have any further questions, please call Leslie Myers RN, BSN at the Medical Aid Station's ATA Dispensary, extension 5387 or 5385.

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swirl, total pressure, temperature and distortion with the goal of suggesting and making design modifications to mitigate those effects early on. We also need to understand how those effects interact and impact engine performance.

"This is where ground testing comes in, to evaluate those effects and implement design changes when and where they're needed. Then you continue the ground testing process to evaluate those modifications. If this hasn't been satisfactorily accomplished prior to getting out to flight test, then it's real hard to make changes, from a momentary as well as a design point-of-view."

The test on the F109 engine represented an important step in an ongoing and iterative process. It was clear to the team that it is imperative to address the effects resulting from multiple variables and complex interactions of air flow through the inlet and into the engine.

"For example, one of the things that haven't been determined yet, is how does swirl combine with total pressure," May continued. "We see total pressure distortion now and we haven't put the two together or mixed temperatures into a test. There are all these other interactions that go on, too."

The engineers working on the structures-related part of the test collected and compared data from non-intrusive stress measurement system (NSMS) probes and strain gauges on the engine's fan rotor blades. They were able to make correlations between the strain gauges and the NSMS probes and looked at a comparison of multiple NSMS probe technologies and their uncertainties analyses.

"It is important to gain a perspective on the impor-

ance of this project," said Lt. Col. August J. Rolling, the Air Force Academy's propulsion discipline director and the director of the aeronautics laboratory. "Fifth generation fighters are being asked to do more with continuous engine operation than ever before.

"Such things as high angle-of-attack maneuvers, hot-gas ingestion from missile launch and serpentine inlets do bad things to flow entering the engine. Although static distortion testing has been around for decades, the testing techniques and analysis processes for such dynamic environments need to be improved and capabilities such as swirl distortion added."

May said gaining this type of information is invaluable because the turbine engine community and the acquisition community do not have the needed database. The testing the team accomplished has provided a baseline of data for future developments.

The test also represented a long-standing relationship that has been established between AEDC and the academy.

"It was a real pleasure working with all the guys from AEDC," said Jerry Stermer, Air Force Academy test facility chief technician. "The professional approach over the past several years resulted in compiling a huge amount of valuable data on flow quality. The use of our F109 engine was a perfect fit as we were able to modify the fan shroud and exhaust duct to support exactly what was needed.

"We were able to make modifications to the F109 that included NSMS probes at several locations around the fan shroud [and] a motorized cone that could be moved into the exhaust duct, causing the fan to go into a stall condition at our command. We were able to produce a real-time display

of the stall line so we knew exactly where that stall would occur before it actually happened."

Colonel Rolling said the effort over the summer was complimentary both academically and in providing a much-needed test asset and setting.

"This effort is critically important to our success from both perspectives," he said. "Looking at the curriculum, we are able to leverage this new knowledge directly into the classroom.

"From our perspective, we are customer focused, and supporting such an important customer as AEDC proves that the U.S. Air Force Academy is a great institution to bring tough research projects to, expecting world-class results."

Dr. Davis shared the colonel's view and said the ongoing collaboration with the academy may impact the students in ways no one has anticipated.

"It provides an interaction between the academy's educational program and the need for test assets that are available and a lot less expensive," he said. "When you go into a university setting, you really don't have the expenses that you have at AEDC. The other thing is by connecting with the academy, those second lieutenants who have graduated from the Academy, might be the [future] commanders of AEDC 15 to 20 years from now."

ACTION LINE from page 2

sions of the FLSA.

FLSA non-exempt employees cannot be required to be compensated as "compensatory time" for overtime. FLSA non-exempt employees may "request" compensatory time in lieu of paid overtime

With today's budgetary outlook, it's very important that we be judicious with pay and explore all options to cut expenditures and save resources. Compensatory time and/or credit hours are several options that can be utilized to compensate employees and retain our capability to meet current and future mission requirements.

Further questions regarding Air Force civilian personnel matters can be directed to Mrs. Sherri Lamas, Human Resources Specialist, at 454-4314.

Former Joint Chiefs chairman at Vandy today

Naval ROTC Vanderbilt University welcomes former Chairman of the Joint Chiefs of Staff, General Richard Myers, as keynote speaker for Vanderbilt University's 2011 National Security Symposium today at Vanderbilt University's Langford auditorium.

This year's symposium will focus on past, present and future U.S. policy in the Middle East, with an eye towards future challenges and opportunities in the region. The program begins at 2:30 p.m. and the public is invited to attend.

General Myers' appearance marks the first such visit by a former chairman of the Joint Chiefs of Staff. During his term as chairman, he served as principal military adviser to the President of the United States, the Secretary of Defense, and the National Security Council.

He led the U.S. Armed Forces during a time of great crisis, assuming his position as the nation's 15th Chairman only weeks after Sept. 11, 2001. In this role, he was instrumental in guiding the U.S. strategy for the War on Terror, heading U.S.-led international ef-



Myers

orts to topple the Taliban and deny al-Qaida's safe haven in Afghanistan, and to defeat the Saddam Hussein regime in Iraq.

General Myers also oversaw U.S. military relief efforts for the tsunami that struck the Pacific theater in December of 2004, as well as Hurricanes Katrina and Rita in 2005.

Joining General Myers will be his wife Mary Jo Myers. Over the past 10 years, Mrs. Myers has played an instrumental role

in efforts to improve the quality of life for women in Afghanistan. Additionally, she serves on the board of trustees for Fisher House and remains committed to providing the finest possible care for the nation's wounded warriors and their families.

RSVPs may be directed to karen.olayinka@vanderbilt.edu or (615) 322-2671. There is no charge for admission, but seating is limited.

ENERGY from page 1

exercise. We got some good ideas, but it didn't solve the problem we were after. So we're going to do it again."

Finding an effective way to capture and store waste energy is an issue that is being explored all over the world. Finding a way at AEDC poses a different set of problems, because the level of power consumption spikes during testing in facilities. Two of the biggest sources of the base's waste energy – heated water that's run through cooling towers and heat exhaust from engine testing – occur only during testing periods.

"The problem AEDC has is it's not a continuously running process," said Howard Frederick, an ATA electrical engineering specialist and the chair of the energy competition's evaluation committee. "You get a lot of hot water for a day and then you go several days without it. Just getting an economic return ... it takes so much money and so much investment to get the kind of equipment that could extract some of that waste energy that it would have to run full-time to ever have any hope of paying for itself. That's what we're running up against."

That doesn't mean a solution isn't out there, Frederick said – it just hasn't been found yet.

"We have fine engineers here," he said. "We have some high-tech minds that may have some good ideas for doing these things."

ATA process engineer Austin Voorhes is one of those minds. He submitted several ideas for the energy competition, ranging from storing energy in flywheels to compressing it in air

tanks that could power turbines. He said he used his previous work experience in the power industry to come up with his ideas, but he understands funding those ideas is a different ball game.

"There's an economic part there that's hard to incorporate for a lot of those big projects," Voorhes said.

Pearson believes an economic solution is out there for capturing waste energy at AEDC, even though it may have to be applied differently from facility to facility. He wants to keep it on the minds of base employees.

"If we continue to push it, somebody's going to come up with a jewel of an idea," he said. "Most of these folks go home and they're reading technical journals, and there are ideas in there. And if they can keep this little problem in the back of their head as they read these things, somebody's going to hit on the best idea to do it. We just have to get them to continuously think about it – not just for a competition."

The reason it's so important goes beyond saving money, because saving money translates into keeping jobs. This year ATA's energy program saved about \$1 million, which Pearson said translated into several jobs that may have been eliminated otherwise. He believes there are energy savings on base that would require no investment and total as much as \$5 million in savings.

"It's a different way in which we would do business," he said. "We just have to hunt for it."

A start date for the next energy competition has not yet been determined.

Go for launch

AEDC's Mike Schleider watches as a student launches his rocket at the Polly Crockett Festival in Cowan. (Photo provided)

CROCKETT from page 1

provided by our schools and go a long way in encouraging interest in math and science."

This was the second year the AAPS had a booth at the festival, which is sponsored by the Frank-

lin County Chamber of Commerce. The AAPS was formed three years ago by the AEDC commander to encourage participation in technical societies by the AEDC workforce and to encourage students to pur-

sue careers in STEM fields.

Volunteers included Air Force civilians Wayne Goff, Jerry Kitchen and Mike Schleider; Doug Brown, Josh Hartman, Bob Lindeman, James Masters, Susan Rymer, Marvin Sell-

ers, Joe Sheeley and Phil Stich with ATA; Tim Barber, Charles Haddad, Ben Klamm, James Rogers and Rayne Sung from UTSI and Tom Best, former director of engineering and technical management at AEDC.

GLC Recreation Area to close down

By Shawn Jacobs
Aerospace Testing Alliance

Continuing budget reductions will force the closure of the Gossick Leadership Center (GLC) Recreation Area, also known as the Main Recreation Area, on Northshore Road at AEDC.

The recreation area, which includes the beach,

playground, restrooms, boat dock and boat ramp, will close within the next two weeks as soon as the public can be adequately notified, according to Bill Wendle, AEDC base civil engineer.

"The closure is because we don't have the resources to maintain the beach and the facilities," Wendle explained. "Over the past five years, decreases in the

operations and maintenance funding have forced us to make hard trades, and we just can't get it done anymore. Our focus is to support and preserve the test mission at AEDC, and that's where our limited resources will be spent."

Signs will be erected to indicate the area is closed and neither the public nor base personnel will have

access to the recreation area in the future. The closure won't affect AEDC staffing levels and the GLC Building will remain open in its current capacity.

The public will continue to be able to access Woods Reservoir at other areas such as Morris Ferry Dock, the Franklin County boat ramp and the ramp on South Hap Arnold Drive.

Posanka embodies public service, volunteerism

By Shawn Jacobs
Aerospace Testing Alliance

Elaine Posanka has vivid memories of her mother reading to her as a child.

Perhaps that experience in her formative years is responsible for her love of books today.

"When I read books to my children that my mother read to me, I say sentences the same way I heard my mother say them, so I know that this activity makes an impact," said Posanka, who is the senior intelligence officer at AEDC. "It makes a bond between parents and their children and then it makes a memory that kids will pass on later."

Posanka's love of books and belief that children need to be exposed to them at an early age led her to serve on the Coffee County Imagination Library board.

The Imagination Library is a program in Tennessee that mails books every month to registered children from birth to age five. The local board is responsible for raising half of the \$50,000 a year it costs to send the books.

The Governor's Books from Birth Foundation, established by former Gov. Phil Bredesen and country music entertainer Dolly Parton funds the other half.

Posanka – who lives in Normandy with her husband, Wes Spratlin, and two children, Benji, 8, and Molly, 5 – didn't even protest too much when she was "volunteered" to be the board's fundraising chair at a time when the program is at risk of disappearing in Coffee County due to a lack of funding.

"Every single one of Tennessee's counties has this program, so every county has committed to this and does the fundraising for it," Posanka said. "Coffee County is in jeopardy this year."

"Coffee County doesn't want to be the only county in all of Tennessee to not have this program because there's a lot of affluence in Coffee County. Not only is there a lot of affluence, there's a lot of need in Coffee County as well. Kids need books."

Posanka said she has very little experience in fundraising, but she and her co-chair, Barbara Snyder, are tackling the project head-on, pleading with businesses and individuals to donate what they can.

"If I have to, I will start at one end of Jackson Street and go all the way down to the other end and then I will



Posanka

head up Carroll Street if I need to."

Volunteerism is something that comes almost natural to Posanka. She volunteered for the Air National Guard in order to earn money for graduate school, but she remains in the Guard, where she has risen to the rank of lieutenant colonel.

As AEDC's representative on the Tullahoma Chamber of Commerce, Posanka volunteered to be a staff lead for the chamber's fundraising concessions at Bonnaroo, where she helped organize and assemble staff. She was so successful, she was honored with the chamber's "Extra Miler of the Year" award. In addition, Posanka is a graduate of Coffee County Leadership and active in her church, the Unitarian Universalist Church in Tullahoma.

The bulk of Posanka's volunteer time, however, is taken up with Cub Scouts, in which her son, Benji, is a member. She holds a number of positions in scouting, locally, regionally and nationally. Posanka is a local den leader and a member of a pack committee. She's active on the Elk River District level, which includes all the Scouting units in Coffee, Franklin, Moore and Bedford counties. Posanka is the "Popcorn Kernel" for the district, which means she coordinates popcorn sales to raise money for scouting.

Posanka is an orienteering merit badge counselor for Boy Scouts, assisting scouts working on that badge and signing off on their requirements. She is on a national committee to define scouting's activities for the next 100 years and she is also the director of the Cub Scout day camp

which is held for one week each summer.

Posanka comes from a long line of civil servants and said that may explain her need to "give back."

"My father's father was a fireman and his wife was a nurse," Posanka said. "My father was military and my mother was a teacher. Her mother was a teacher and her husband was a public servant for safety in Boston."

"I was raised in that environment to be a part of something that's bigger than yourself and to give back. The only way that the world becomes a place that you would want your children to live in is when people act locally and responsibly and give what you think the world needs. You've got to find what your own strengths are and then see how you can help people."

Posanka has been deployed seven times with the Air National Guard: Desert Storm, Iraqi Freedom, Enduring Freedom, the Global War on Terrorism, Northern Watch and Southern Watch.

"It was [through] that first deployment and those first years in the service that I realized how deeply satisfying public service is," Posanka said. "Really, the volunteer work I did with the Chamber of Commerce because [then AEDC Commander] Col. Art Huber asked me to. Then I enjoyed it."

"This is another way to give back and it's giving back to my immediate community. Then, when I had children, I had to do things that would directly impact the lives of my children: Scouting, Imagination Library – again local, children, things that are close to my life."

LDV from page 3

developers, system operators and data analysts who have been involved in the AEDC LDV system development over the past decades.

"The primary electronic designer and holder of both of the aforementioned patents, Henry Kalb, is currently living and growing his roses in Florida. Another prime contributor, Les Crossway, has only recently passed away."

Dr. Lowe said he was aware of AEDC's contributions to LDV technology prior to the recent get together.

"I did not know all of the folks involved, but [had been] following some of the old literature," he said. "I've always been excited to see what's been done before."

Dr. Lowe said he owes much of the success for the recent SM3 LDV development to both the groundbreaking work done by AEDC's pioneers and people like Heltsley.

"Fred Heltsley has been involved with this [the SM3 LDV development] project from the beginning and seen that here's something that 16T (AEDC's 16-foot transonic wind tunnel) can really use."

Dr. Lowe said reading the literature that included work done by AEDC's pioneers established the foundation that led to the current technology.

"This link is so important because I'd be making a ton of mistakes if I didn't use [the] experience of these pioneers in the field to push things forward," he said. "I've done my homework. You absolutely

have to – you don't want to repeat anybody's mistakes, you don't want to make them again and you need to be doing things the best way possible."

Donald Brayton, an electrical engineer who retired from AEDC in 1995, enjoyed seeing old friends, meeting Dr. Lowe and seeing the latest laser diagnostics technology.

"Well, I had a personal patent or two on self-aligning optics which made setting up a system very simple," recalled Brayton, who first came to AEDC in 1965. "I also came up with a dual scatter principle that increased the efficiency of the systems as far as collecting radiation goes and getting a strong signal."

Brayton said he and many of his colleagues spent the first 12 years working toward the development of an LDV system. The first one was based on an early reference beam system NASA had developed.

"We were in an experimental research group, just trying to get that technology working here at the center," he said. "Then we put an active system in the one-foot transonic tunnel IT here at the base. Virgil Cline was the project engineer on the first one-foot tunnel application. We also put an active system in the four-foot transonic wind tunnel 4T here to measure the free stream velocity. Les Crossway was the project engineer for that experiment."

Brayton said an improved LDV system installed in the supersonic Tunnel A proved to be

more useful than originally anticipated.

"It turned out the Tunnel A application was more than a free stream experiment, with the possibility of looking at flow around a model in the tunnel," he said. "Our system there was forward scatter. The original systems in tunnel IT were all back scatter, which have a much weaker signal."

"During the early IT experiments no particulates were injected into the tunnel for scattering light and measuring their velocity, just natural particles that are in the air. We were able to measure boundary layers around the Tunnel A model by injecting sub-micron sized particles into the flow."

He said that later they did a lot of successful model flow and boundary layer work in both IT and Tunnel A, mainly with forward scattered light and injected particles. The forward scatter light is very intense, compared to backscatter light.

Brayton was impressed by what he saw during his visit to the laser lab.

"The component technologies of the SM3 LDV are so advanced compared to where we were," he said. "We used water cells, now they're using solid material Bragg Cell models. It's really amazing the point that technology has progressed."

For Dr. Lowe, meeting these AEDC pioneers was the highpoint of the visit.

"This was a major honor, and you can probably tell it in my voice, how excited I am," he said.



Arnold Community Council Annual Banquet 2011



Above, Arnold Community Council officers pose for a photo with AEDC Commander Col. Michael Brewer. From left, outgoing ACC president retired Maj. Gen. Mike Wiedemer, incoming ACC Vice President Steve Cope, Colonel Brewer, incoming ACC President Temple Bowling and Claude Morse, secretary. (Photos by Rick Goodfriend)



Above, AEDC Executive Director Britt Covington and Chief Technologist Dr. Ed Kraft; at left, Colonel Brewer and his wife Debbie talk with Claude Morse; below, 2010 AEDC Annual Award winner 1st. Lt. Will Parker and his wife, Kelsey.



Colonel Brewer presents outgoing ACC president retired Maj. Gen. Mike Wiedemer with a signed copy of the AEDC book "Beyond the Speed of Sound."



At left, ATA Support Services Department Director Pat Eagan, far left, talks with Coffee County Mayor David Pennington. Below, U.S. Sen. Bob Corker talks with new ACC President Temple Bowling.



Freeze holiday weight gain with AFMC program

WRIGHT-PATTERSON AFB, Ohio – Looking for a way to maintain your weight and heart health during the hustle and bustle of the upcoming holiday season? Then don't miss the opportunity to enroll in the Air Force Materiel Command Freeze the Gain Holiday Challenge. Online enrollment at www.afmcwellness.com is open from now through Nov. 11.

Freeze the Gain (FTG) is a holiday weight maintenance program that aims for participants to maintain – not gain – weight during the 10-week period of the challenge, which runs from Nov. 14 through Jan. 3, 2012.

Participants who weigh-out, gaining no more than two pounds of their starting weight, will receive a completion award. A food and activity log book will be distributed to participants at the official weigh-in to help with tracking, and aid in maintaining your weight.

A study at the National Institutes of Health found that most

weight is gained during the six-week interval between Thanksgiving and Christmas. Although the weight gain during this time may seem lower than expected, it was also determined that the same gained weight is not lost in the following spring or summer months.

Each participant will need to enroll online, complete an official weigh-in, attend two Freeze the Gain official classes -- Stress Management and Lose Your Excuse, and finally weigh-out.

To enter, FTG participants must be enrolled online at the Wellness Support Center at www.afmcwellness.com. Online enrollment is open from Oct. 11 through Nov. 11. Official weigh-ins take place Nov. 2 through Nov. 11.

Steps to complete online enrollment

In addition to the official weigh-in, participants must enroll online to take part in Freeze the Gain. Weigh-in information



cannot be entered until you have completed online enrollment. If you don't already have access to the Wellness Support Center at www.afmcwellness.com, you must take the Health Risk Appraisal (HRA). Completing the HRA is not required for active-duty participants. Note that completing the HRA does not enroll you in the Freeze the Gain holiday challenge.

The following steps will guide

you through the FTG registration process:

First select your status from the following options:

- First-time visitors to the Wellness Support Center website who do not have an account, begin at Step 1;

- Civilians with an existing Wellness Support Center account who need to re-take the HRA can log-in and begin at Step 4;
- Active-duty members and

civilians with current completed HRAs can log in and begin at Step 5 below.

Step 1: Go to www.afmcwellness.com

Step 2: Click on the 'civilian wellness' or 'active-duty' wellness links

Step 3: Create your new account by selecting your own login ID and password

Active-duty members can create an account and access the site without taking the HRA and proceed to Step 5

Step 4: Click on 'Take the assessment now' and answer all of the questions

Step 5: From the Home Page, under programs, click the 'FTG Enroll Here' link

Step 6: Click 'Yes, Enroll Here' on the bottom of the page

See a Health and Wellness Center staff member to officially weigh-in. Once the online enrollment and official weigh-in is complete, participation will be official.

Dempsey: New energy technologies already helping DOD

By Cheryl Pellerin
American Forces Press Service

WASHINGTON (AFNS) – Saving energy saves lives, and new technologies championed by Defense Department officials already are making a difference at the Pentagon and on the battlefield, the chairman of the Joint Chiefs of Staff said here Oct. 18.

Army Gen. Martin E. Dempsey spoke at an energy security event held at the Pentagon to recognize October as National Energy Awareness Month.

"Fundamentally, we know that saving energy saves lives," Dempsey said. "In Afghanistan, fewer supply convoys will directly relate to fewer casualties, and it's not just about defensive operations."

Pentagon officials are putting energy efficiency and new technologies to work for the entire Defense Department.

These improvements include solar panels, microgrid systems and high-capacity batteries, the chairman said.

"We've designed more fuel-efficient ground combat vehicles, installed hybrid systems on some naval ships and invested in fuel cells to provide backup power to military installations. I know the Army's running a pilot on three installations right now to get at a net-zero baseline for energy consumption," Dempsey said.

"I'll do everything I can as chairman," he added, "to support these innovations and to get the right emerging technologies into our troops' hands as soon as possible."

This critical job is best done not by individual services, but in a joint effort, Dempsey said, "and I'm counting on the people in this room to get it done."

The chairman said he is com-

mitted to goals set forth in the department's first Operational Energy Strategy, released June 14 to promote a more strategic use of energy to reduce warfighter risks, save money for taxpayers and help shift more resources to other defense priorities.

The goals "include reducing energy demand at all levels of our forces while increasing the resilience and operational effectiveness of our equipment and our soldiers," Dempsey said.

Improving the department's energy security directly translates to improving national security, he added.

"It will be essential to keeping our military the most effective – the finest – fighting force in the world. And it is inherent to our responsibilities as good stewards of our nation's resources," the chairman said.

"Without improving our energy security, we are not merely

standing still as a military or as a nation, we are falling behind," Dempsey added.

The department's energy culture has changed dramatically since he was a young Army armor officer, the chairman said.

"Today, Americans are more energy-conscious in our homes and at work, and so too are we in our military," Dempsey said. "But we can and must do even better – particularly in pushing progress out to the field, to the flightline and into the fleet."

Today's warfighters require more energy than at any time in the past, he said, and that requirement is not likely to decline.

During World War II, supporting one soldier on the battlefield took a gallon of fuel per day. Today, Dempsey said, "we use over 22 gallons per day per soldier, and we are also more expeditionary than ever."

Energy spans every activity of the Defense Department, he said.

"In the air, jet fuel equates to on-station and loiter time. At sea, marine fuel consumption rates impact operating and transit speeds," the chairman said. On the ground, he added, energy requirements often drive how long soldiers can stay out on patrol and how many resupply convoys are put at risk to support them.

For example, he said, for a 72-hour mission, today's 30-man infantry platoon carries 400 pounds of batteries to power night vision devices, GPS devices, communication gear and flashlights.

"Now that platoon is also more capable than ever, ... but we need to lighten the energy load of each warfighter and the physical weight and resupply that it entails," Dempsey said.

Energy advances are unique in the opportunities they afford, he noted.

AFSOC projects lead to energy-saving discoveries

By Ashley M. Wright

Air Force Special Operations Command Public Affairs

HURLBURT FIELD, Fla. (AFNS) – In the midst of Energy Awareness Month, Air Force Special Operations Command members are working to decrease the Air Force's \$8 billion a year cost for electricity and fuel via several renewable energy projects.

Project Renewable Energy Demonstration, or Project RED, consists of a variety of wind turbines, solar collectors and an algae lab in addition to a revolutionary plasma waste-to-energy system.

"We are learning every day," said George Omley, the AFSOC environmental chief. "We are comparing the various systems to find out which is the most efficient and the most cost effective."

Project RED keeps five small-scale solar collector systems, officials said. Each is metered independent from each other to determine output per square foot per dollar. The cost effective winner was the solar collector system that tracks the sun during the day.

"Even though it cost more, it paid more out," Omley said. "As the wind blows, it puts out a little bit of power, but compared to the solar panels, it does not compete."

The combination of the wind turbines and the solar panels are producing 10 times more power than needed, he said.

"It is a surprising success," Omley said. "We are charging this electric vehicle with the sun to give us free mileage and running our algae lab (while) us-

ing only 10 percent of the power. The other 90 percent is running backwards on the grid."

The algae lab itself is still in the early stages, officials said. In theory, carbon dioxide from the plasma waste-to-energy system and the water treatment system here would create the algae once combined with water and sunlight. The oils would separate and be used to produce biodiesel fuel.

"In this case, the thinking was if we could find a company that was interested in producing biodiesel from our algae and nutrients, then we would get either a payment in kind or a fraction of the biodiesel," Omley said. "The jury is still out."

The largest part of the project is the Transportable Plasma Waste-to-Energy System, which in April began converting 4,200 tons of garbage per year to usable energy and producing intangible benefits by reducing the command's overall carbon footprint, officials said. The system uses the intense heat of plasma to convert domestic waste into a synthetic gas that provides energy to the system.

"This is history in the making," said Terry Yonkers, the Assistant Secretary of the Air Force for Installations, Environment and Logistics, who was on hand for the April ribbon-cutting ceremony. "This is the first waste-to-energy project of this technology to go into an air base. It has been a long time in the making."

Intangible benefits from the system include keeping nearly 8.3 tons of daily domestic trash from Hurlburt out of landfills for future generations, reducing gas emissions by 83,000 tons per year and eliminating toxic materials while producing energy, officials said. The system is designed to hold more than 11 tons of trash per day.

"The plasma system has proven the gasification system works," Omley said.

Several improvements are in the works for the system such as a more productive flaring tower flame arrester, the officials said.

"There are things that we are learning every day and (we are) making improvements every day," Omley said. "The system has been operating the generator at about 25 to 30 percent of the time and that is increasing. Ideally that would go up to 100 percent. Once it goes up to 100 percent, it should be energy neutral."

The system can be transported to bases and deployed locations around the globe to shrink the ecological footprint of the U.S. military by reducing the need to burn waste. While other similar land based systems exist, none in the U.S. are using this design, Omley said. As a system of this size has never been built, testing is ongoing to see exactly how much energy will be created. The Hurlburt system is five times larger than its predecessor located in Montreal, Canada, which was created by Pyrogenesis that also assisted with this project.

The system cost ap-



George Omley explains the concept behind the algae lab Sept. 23 at Hurlburt Field, Fla., during the Project Renewable Energy Demonstration. Still in the beginning stages, the algae will be grown from carbon dioxide waste, sunlight and water to produce biodiesel fuel. Omley is the Air Force Special Operations Command's environmental chief. (U.S. Air Force photo/Ashley M. Wright)

proximately \$7.4 million to build, officials said. The funding for the technology originated from the U.S. Foreign Comparative Testing Office, Air Force Smart Operations for the 21st Century, the Canadian government, the Air Force Surgeon General's Office at the Pentagon and Gulf Power.

Since 2003, the Air Force has reduced energy use by nearly 15 percent, water consumption by 11 percent, and more than six percent of all electricity is obtained from renewable sources. The Air Force energy strategy for meeting these goals is to reduce demand, increase supply and change the culture.

AMC officials save energy in the office, on the road

By Thomas G. Kistler
Air Mobility Command PA

SCOTT AFB, Ill. (AFNS) – With an annual energy bill of more than \$100 million, not including aircraft fuel, Air Mobility Command (AMC) officials are exploring ways to save energy and the money spent on it. While the most obvious energy savings might come from the flying mission, AMC is working just as hard to save energy on the ground.

One ongoing effort to save energy in the workplace is the use of smart power strips. According to Steve Kalmer, the energy and utilities engineering program manager for AMC, these devices automatically cut power to designated peripherals when the controlling outlet senses a change. For example, when a computer monitor turns off due to inactivity, the task lighting, computer speakers, radio and other peripherals would also turn off if they were plugged into a smart power strip.

Jeanine Dunn, the AMC productivity programs and Productivity Enhancing Capital Investment (PECI) program manager here, said AMC is purchasing \$449,325 worth of smart power strips using PECI funds. PECI officials calculate the lifecycle savings from using smart power strips to be \$990,000 for a 2.2 to 1 return on investment. The smart power strips will be distributed to all AMC installations at no cost to each base.

Other energy saving initiatives in AMC include occupancy sensors and dimmer switches for lights, officials said.

While smart power strips and occupancy sensors save electricity in buildings, AMC officials are also saving energy on the road.

“All diesel powered vehicles (in AMC) are capable of using B20 biodiesel,” said Michael D. Stebbins, a vehicle management specialist in AMC’s Logistics Directorate. “Approximately 1,300 vehicles, or 33 percent of the general purpose fleet, can use E85 gasoline. We also have 48 hybrid electric vehicles within the command.”

Stebbins said Joint Base McGuire-Dix-Lakehurst, N.J., has been chosen as one of the locations for a Department of Defense study on the use of plug-in electric vehicles.

The PECI program’s mission is “to provide expedited funding for capital acquisition projects which provide measurable benefits and real savings to the Air Force.”

Each year, PECI invests an average of \$10-\$11 million that will net an average life cycle savings of approximately \$112 million, officials said. These investments have funded a wide variety of productivity improvements – from technology upgrades that increase administrative speed to major equipment purchases that increase base capabilities.

While the details of each PECI project may vary, they all have two key elements in common: measurable benefits and real savings.

AFRL’s \$35 “snubber” ring could save millions

By Laura Dempsey
Air Force Research Laboratory

WRIGHT-PATTERSON AFB, Ohio – An innovative solution from the Air Force Research Laboratory is expected to save the Air Force upwards of \$40 million.

The \$35 “snubber” developed by the Propulsion Directorate is a vibration damper that will prevent cracks in the J-seal on the F119 engine’s inlet case, a spoked, ring-like device that helps control the air going into the engine.

Previously, if cracks were discovered, the engine would need to be pulled and the end of the crack drilled to stop it from growing.

If any problems arose during drilling, the \$362,000 inlet case had to be discarded.

The Aeronautical Systems Center F-22 Division

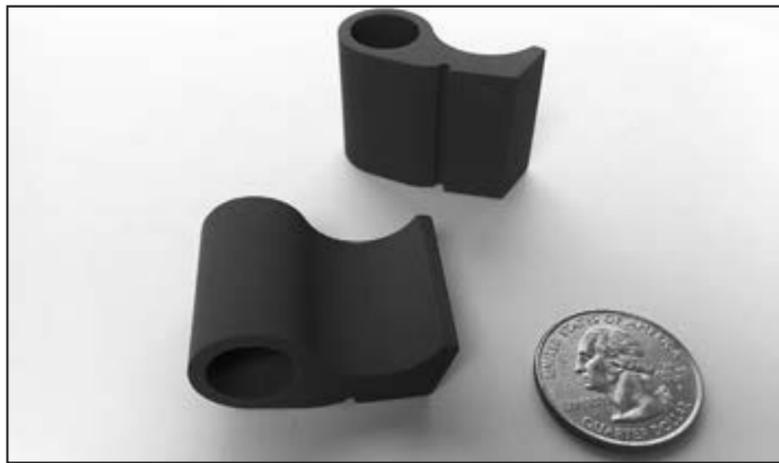
contacted the Propulsion Directorate just across the street at Wright-Patterson and asked it to study the problem.

The directorate responded with the snubber in a mere six months.

“In the turbine engine world, we have a lot of interaction with the program offices for numerous engines,” said Dr. Charles Cross, chief of the Propulsion Directorate’s Turbine Engine Structures Branch.

“We have programs set up to do information exchanges so that we know what problems are coming down the pike, and we can see if we have anything that we can apply to them.”

The little orange snubber looks like an exotic pencil eraser and fits in the gap opposite where the J-seal is welded to the



(U.S. Air Force Photo)

inlet case. Seven \$35 snubbers are fit on each engine, meaning outfitting each F-22 costs \$245.

“On the F119, we hope this will eliminate a huge maintenance driver at a very, very low cost,” said Stephen Brinkman, F119 Fan and Compressor WBS manager for the F-22 Division. “You would not believe how expensive

these parts are. And that’s the beauty of it – it’s such a simple, cheap fix.”

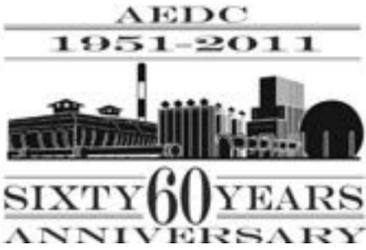
The snubbers began being used in April 2011, and about 3,000 flight hours have been logged.

They were designed to last half the life of the engine, but because they’re so cheap, new ones will be installed whenever the engine is pulled.

“It’s a pretty big deal for us,” said Brian Runyon, principal investigator, on transitioning this solution so quickly to the field. “For most of us this is a once-in-a-lifetime opportunity.”

In the long term, the plan is to show that the old cracks don’t grow once the snubbers are installed, and further stop drilling won’t be required.

AEDC Fellow reflects on beginnings, friends made during his career



By James C. Uselton
AEDC Fellow

I had the privilege of observing and being a part of a broad spectrum of AEDC's history starting with being a first-year Boy Scout on Jackson Street when President Harry Truman went by in a motorcade parade to dedicate AEDC in June 1951 through today as a member of the board of directors of ATA.

I first worked at AEDC in the summer of 1958 as a University of Tennessee (UT) co-op student in PWT plant operations. I had seven work quarters at AEDC and graduated with my Bachelor of Science degree in mechanical engineering from UT in June 1962.

I enjoyed working in the Propulsion Wind Tunnel plant operations and gained valuable experience. But I have told many people that the most valuable aspect of my co-op experience was that I learned plant operations. However it wasn't my primary interest. I learned that my real interest was in the main mission of AEDC, the research and development testing. Thus I was overjoyed when I was offered the opportunity to become a first-level project engineer in the von Kármán Gas Dynamics Facility (VKF).

We had a tremendous test load and there was significant pressure to train young project engineers like me to be ready for their own tests as quickly as they were able to handle the responsibility. I was assigned the first test project of my own in 10 months. I guess today looking back maybe I should have been more humble and a bit apprehensive, but then I was just totally overjoyed. It felt so good to be contributing to our country's aerospace work, and I must admit I felt so important and valuable. It was a powerful adrenaline rush. I loved the responsibility. I have looked back many times and realized how fortunate I was to start my career in such a way.

I had to grow fast. Soon having four or five projects of my own in different phases was a norm. I had to learn both on the technical side and the management side. Going through the project cycle so often and so many times grows one in a hurry. I have been fortunate in my career to hold many significant management positions. I credit my early years as a project engineer in VKF at AEDC for providing the foundation of management experiences that enabled me to perform in management later

in my career.

As a young project engineer, I had to learn to manage a multi-disciplined team of people, plan and schedule and execute that plan against a budget and be held accountable. Problems occur and you have to resolve them. Conflicts occur and you have to manage them. It was just a great and enjoyable way to start a career.

Also, to have the opportunity to attend the University of Tennessee Space Institute on a part-time basis and continue my education was a tremendous boost. I was able to gain my Master of Science degree and take many more advanced courses before obtaining management positions that changed my education path. It proved invaluable to my career. What a way to start! I have always been grateful.

I learned so much from the people I worked with and for at AEDC. I had the privilege of working with many excellent performers in our company, in the Air Force and in the civil service workforce. We have had an excellent legacy of outstanding commanders and key Air Force leaders throughout the history of AEDC. Many of the civil service leaders are heroes at AEDC and made major contributions. I am not capable of doing justice to giving a dialogue of all those excellent contributors and will leave that to others.

I would like to give a bit of inside history on one of Sverdrup & Parcel's (S&P) early heroes at AEDC – Bob Williams, Arnold Research Organization's (ARO) first general manager at AEDC. Bob was an engineer manager for S&P in St. Louis. He was a well thought of young executive in the relatively small S&P at the time.

S&P was the engineer designer of AEDC and much of the early construction was coming to a close and operations were on the horizon. The Air Force approached then-retired Maj. Gen. Leif Sverdrup, Chairman and CEO of S&P, about forming an operations company to perform a management and operations contract at AEDC. General Sverdrup called the board of the relatively small privately held corporation together to discuss the opportunity.

A key aspect of the decision revolved around the factor that if S&P accepted the management and operations contract it would be precluded from performing further engineering design contracts that would continue to arise at AEDC because of a conflict of interest. Engineering design work across a broad spectrum of disciplines was "the work" of S&P at the time so it was a serious question.

Sverdrup asked the board to think on it overnight and present their views the next morning. Several board members including Bob were in a car pool and on the way home they discussed the opportunity at AEDC. They decided that it was not in the best

interest of S&P to accept the opportunity for the management and operations contract at AEDC.

The senior members of the group suggested Bob contact the other members not present in the car and tell them of their conclusion and get their agreement. Bob was gently pushed in the role of spokesman for the group by the senior members since they did not want the responsibility of pushing the position with General Sverdrup the next morning.

When Sverdrup called the meeting to order, Bob stood up and indicated that all the board members, except the general, had discussed the opportunity at length and had done a thorough analysis of the pros and cons of accepting the opportunity. Bob gave an excellent rationale for graciously declining the opportunity and sat down.

Sverdrup paused for a significant period of time. The general told Bob that he and the group had done an excellent job of the analysis. Bob, who told me this story years later, said that he was sitting there feeling so proud and glad that he had accepted the daunting role of spokesperson for the group.

Then Sverdrup said that even though he respected their position, that not only was S&P going to accept the Air Force's offer of the management and operations contract, but Bob was going to Tullahoma to be in charge of the contract.

In my opinion, not only did this turn out to be a great decision for S&P, but also for AEDC. For S&P, it launched the company into an entirely different market in which, some 30 years later in the 1980s, the company would establish itself as a market leader.

For AEDC, Bob set a standard that ARO would hire the best and brightest for AEDC



Uselton

in this new venture. He believed strongly that AEDC was the premier place to have an aerospace career and that AEDC's mission demanded that we assemble the best workforce of its kind in the world.

I remember vividly years later as a young engineer at AEDC observing Bob as he walked around the facilities at AEDC. He not only knew most everyone by name but also their families – often inquiring about this or that child or spouse. He lived the "outstanding work force requirement," embraced it and established it as a standard that still exists today.

Later Bob and I became good friends. He enjoyed following my career and he was very proud that an AEDC guy became president of the Sverdrup Corporation.

He enjoyed saying that years ago he came from St Louis to Tullahoma and now we had sent a Tullahoma guy to St Louis. Not only was it my privilege and joy to be associated with AEDC my entire career continuing today, but it was my good fortune.

(Read more memories from AEDC workers on the AEDC 60th Anniversary website at www.arnold.af.mil.)



Bob Williams, left, walks with Col. Lee Gossick and retiring commander Maj. Gen. W. L. Rogers at the dedication ceremony for J-4 in 1964. Williams, who was the managing director of ARO Inc. at the time, was one of the "early heroes" at AEDC, according to friend and AEDC Fellow James Uselton. (File photo)

Flu shots still available for employees

By Shawn Jacobs
Aerospace Testing Alliance

This year, the flu vaccine will be made available to Air Force Materiel Command's (AFMC) civilian workforce in addition to active-duty personnel and their family members.

Arnold AFB has always provided the vaccine to DOD employees.

However, not all installations have made that benefit available to the government's civilian workforce, according to Tech. Sgt. Naomi Bullock, non-commissioned officer in charge (NCOIC) of Public Health at AEDC.

Given the negative impact of the flu on workforce health and workplace productivity, AFMC Commander Gen. Donald Hoffman approved the purchase of vaccine for use in immunizing the command's civilian workforce during the 2011-2012 influenza season.

"Certainly this makes sense in terms of productivity lost to sick days," said AFMC Executive Director Dr. Steve Butler. "But it's also our goal to provide flu prevention to our many civilians serving alongside our military personnel. Rather than offer the vac-

cine to civilians 'if there's any left,' we wanted it to be available to them early in the flu season."

As the initial year for the AFMC Civilian Workforce Influenza Vaccine Program, line funds have been allocated to purchase a predetermined quantity of flu vaccine. Therefore, the vaccine program will run on a first-come, first-served basis for the civilian workforce.

In keeping with General Hoffman's intent, medical treatment facilities within AFMC are making arrangements to offer civilian workers their flu vaccine in parallel with military members.

Locally, the flu vaccine will be available free of charge at the Arnold Medical Aid Station for all military members and their families, TRICARE beneficiaries and DOD civilians.

"If there is an ATA employee who is also a military retiree, they are also eligible to get the vaccine free of charge through the Medical Aid Station side," Sergeant Bullock said.

While vaccination is optional for civilians and military dependents, it is mandatory for active-duty personnel.

"In order to ensure that

all active-duty military meet mandatory vaccination requirements, military personnel and their family members are eligible to get their flu vaccine," Sergeant Bullock said.

Military service members, TRICARE beneficiaries and government civilian employees were able to receive the vaccine on a walk-in basis Oct. 3 through Oct. 14. Vaccine will still be available after Oct. 14 until supplies run out. After that date, however, appointments will need to be scheduled by calling 454-5351.

"If you are bringing a child 17 or under, please call to schedule an appointment," Sergeant Bullock said. "All others may come during the walk-in hours."

In addition, flu shots are available for ATA employees and subcontractors at the CORE Occupational Health Dispensary.

"You may make appointments by calling 454-5385 or 454-4567," Jessica McNeese, nurse practitioner for the Occupational Health Clinic, said. "Please do not leave a message as this will not schedule an appointment."

The cost for ATA and subcontractor employees is \$15. Patients are asked

to bring exact change or to make checks payable to ATA.

The flu is a contagious respiratory illness caused by influenza viruses. In the United States, flu activity typically peaks in January or February. However, seasonal flu activity can begin as early as October and continue to occur as late as May.

The Centers for Disease Control and Prevention recommends a yearly flu vaccine for everyone 6 months of age and older as the first and most important step in protecting against this serious disease. However, some people – such as adults 65 years of age and older, children younger than 5 years old, pregnant women, and people with certain chronic health conditions – are at high risk for serious flu complications, so vaccination is especially important for them.

The following tips will also help people stay healthy:

- Wash your hands often
- Avoid close contact with those who are ill
- Stay home when you are sick
- Practice other good health habits (get plenty of sleep, drink plenty of fluids)

Eglin AFB pool heats up with solar energy

By Samuel King Jr.
Team Eglin Public Affairs

EGLIN AIR FORCE BASE, Fla. – Just in time for Energy Awareness Month, Eglin's base pool has gone green.

A newly installed solar-powered system used to heat the pool's water is in place and actively keeping any chill off the water.

The system is an array of 164 black UV polypropylene panels. Each panel has approximately 104 tubes that water runs through. When the pool water circulates through the panels, it absorbs the heat from the sun the panels collect. The heated water then returns to the pool. Every two minutes, 1,323 gallons of water cycle through the solar collectors absorbing the heat.

The old method of heating the pool was a gas-powered boiler, which will still be used in the coldest months of December through February.

The goal of the \$177,175 project is to reduce gas consumption and up-keep on the existing

boiler, according to Pablo Cruz, of the 96th Civil Engineer Group.

The three-month construction project by Compass Solar Energy of Pensacola will be completed and turned over to Eglin within the week, according to Sean Gardner, of Compass Solar Energy.

"This is the largest solar collector we've ever installed," he said.

The self-sustaining system will maintain the pool temperature of 75 to 80 degrees in cooler months and 85 to 95 degrees in warmer months from March to December and can be adjusted by raising or lowering a thermostat-style knob, according to Cruz. The panels will be drained during the cold months to prevent freezing. The structure supporting the panels can also withstand 140 mile-per-hour winds of three second gusts.

The solar heating system is projected to save the base \$24,281 per year and is expected to pay for itself in approximately seven years.

Lightning I to Lightning II – different plane, different pilots, same spirit

By Kate Blais

95th Air Base Wing Public Affairs

EDWARDS AFB, Calif. – The lasting legacy of the aircraft and their pilots was unmistakable when four World War II pilots spoke about their flying experiences before a backdrop of both the P-38 Lockheed Lightning and F-35 Lightning II in the Joint Strike Fighter complex Oct. 3, 2011.

Bill Behrns, Frank Hurlbut, Bert Torrey and Sandy Willford, all P-38 pilots during World War II, shared their stories and feelings about the first Lockheed Lightning, a plane that Hurlbut called the “finest fighter that they ever made.”

Lt. Col. George Griffiths, 418th Flight Test Squadron commander, welcomed the veterans and spoke about the significance of this event.

“Gentlemen, it’s an honor,” said Griffiths. “We thought what an event it would be to have these guys come out to Edwards and tell their story to the people who are developing the next generation of the Lightning airplane.”

The four veterans fielded questions from Sherm Mullin, retired president of Lockheed Martin Corp. Skunk Works. When asked to speak about their first experiences with the P-38, each veteran shared detailed memories.

“Well, it started off in 1939, when I was 14 years old, and I had seen a movie called, ‘I Wanted Wings,’” recalled Willford. “At the same time, I got to ride in a blimp and in those days very few people had been up above the ground in an aircraft, so it was exciting as all ‘heck’ to get up there. Then to top it all off, I saw a news reel in 1939 of a P-38 taking off ... and it was the most gorgeous thing I thought I’d ever seen, so I decided that’s what I wanted to do. I wanted to be an Army cadet, I wanted to be a pilot and I wanted to fly the P-38.”

The day before he turned 18, Willford joined the U.S. Army Air Corps.

“I was able to fly P-38s and it was the most wonderful thing that ever happened to me. It really was,” said Willford.

Behrns also recalled a specific aeronautical experience that inspired him to fly when he was 20 years old. At an air show in Modesto, Calif., Behrns was deeply affected by the aerobatics and maneuvers of the planes.

“I couldn’t help it; I spoke right out loud and said, ‘That’s what I’m going to do,’” said Behrns. “I guess I never had a goal before that, but I got one then. The next day I went in and I signed up for the Army Air Corps. But the doctor turned me down because I was too skinny, so I had to wait to get drafted. And on Dec. 7, 1941, my day off [from work], I turned on the radio and listened to the news about Pearl Harbor and then my dad handed me an envelope, and it was my orders to report to the draft.

“I had P-38 written on my brain,” he continued. “And I couldn’t think of flying anything else.”

According to the P-38 National Association, the aircraft was capable of a wide range of functions including, long-range, high- and low-altitude bomber escort; air-to-air combat; dive bombing; skip bombing; night fighter; and photographic and visual reconnaissance.

“Flying combat in North Africa, we were really fortunate to have the P-38,” said Hurlbut. “I never flew against an enemy pilot that I couldn’t out-turn if he stayed with me.”

Although the design of the P-38 Lightning I and the F-35 Lightning II are vastly different, both aircraft were built to provide the warfighter with the greatest capabili-



A panel of World War II veterans and former P-38 Lightning pilots speak about their experiences flying the aircraft during World War II. The Oct. 3, 2011, panel discussion brought together pilots of the first Lightning with the next generation of those doing Developmental Test and Evaluation on the new F-35 Lightning II. (U.S. Air Force photo/Paul Weatherman)

ties to accomplish their mission.

“The similarities between the two airplanes are not in looks, but in the philosophy of how America builds fighter planes,” said David Nelson, F-35 test pilot. “The P-38 represented the best in creative thinking and the leading edge of the technology of the day. Generations later, these exact same abilities live on in the F-35 Lightning II. The F-35’s features of stealth, long-range sensors, a powerful propulsion system and precision weapons have evolved well beyond where the P-38 left off.”

But it’s not just the air power capability that links the P-38 Lightning with the F-35 Lightning II.

“The fighting spirit is exactly the same,” said Nelson. “They were pilots who loved flying, yes. But more than that, there was some spark of the love of freedom and the hatred of tyranny in their hearts that would not allow them to sit safely in the U.S. while a war raged that they could help stop.

“It warms my heart to the core to know that fighter pilots with that same heart still stand watch.”

Arnold Golf Course
454-7076

Check us out on Facebook! Arnold AFB Services Golf Course

Mulligan's Coffee Bar & Grill's new hours will start Nov. 1. The grill will be open 10:30 a.m.-2 p.m. Monday through Friday and 8 a.m.-2 p.m. Saturday and Sunday. Call ahead orders for dine-in or carry out, 454-FOOD (3663).

Winter hours begin Nov. 1 Pro Shop & Driving Range 8 a.m.-dusk. Driving Range open 24 hours with prepurchased key card.

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 at 6 p.m. Nov. 6. 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.

Arnold Lakeside Center has planned a Day Trip to Chattanooga to visit Look-out Mountain, Ruby Falls and the Incline Railway Nov. 19. Meet at the ALC at 9 a.m. and return at approximately 6 p.m. Cost is \$55 for adults and \$35 for ages 3-11. Deadline to sign up is Nov. 9. Cost if signed up Nov. 9-16 will be \$60 for adults and \$40 for children. There must be at least five to take the trip and maximum participation is 15. Remember to bring money for lunch and souvenirs. Call 454-3303 for more information or to sign up.

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. The schedule for November is: **Nov. 3** – No movie due to special event. **Nov. 10** – “Cowboys and Aliens,” rated PG-13 starring Daniel Craig and Harrison Ford. A spaceship arrives in Arizona, 1873, to take over the Earth, starting with the Wild West region. A posse of cowboys and natives are all that stand in their way. **Nov. 17** – “Spy Kids: All the Time in the World,” rated PG starring Jessica Alba, Jeremy Piven and Joel McHale. A retired spy is called back into action, and to bond with her new step-children, she invites them along for the adventure to stop the evil Timekeeper from taking over the world. **Nov. 24** – No movie due to Thanksgiving holiday.

Wednesday Lunch is available for dine in or carry out 11 a.m.-1 p.m. Call ahead to 454-5555 to place orders. No delivery available. For better service, you may call on any day and preorder. Regular menu items available during lunch include specialty burgers, chicken tenders and salads. Call to see what other specials are available each week or check Sharepoint.

Friday night dining room specials available from 4-9 p.m. **Nov. 4:** Meatball sub with fries, \$7.95 member, \$8.95 non-member. First Friday Jam 6 p.m. **Nov. 11:** Prime rib for two, \$29.95 member, \$31.95 nonmember. **Nov 18:** Black Angus ribeye with bacon-wrapped scallops, \$18.95 member, \$19.95 nonmember. **Nov 25:** Closed. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Saturday availability and specials: **Nov. 5:** Fried chicken, \$10.95 member, \$11.95 nonmember. **Nov. 12:** Bacon-wrapped Prosciutto-stuffed Chicken Breast, \$12.95 member, \$13.95 non. **Nov. 19:** Pork chop with baked sweet potato, \$13.95 member, \$14.95 nonmember. **Nov. 26:** Closed. The dining room is open on Saturdays from 5-9 p.m. unless otherwise specified. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Sign up now for three months of free club membership and win instant cash (gift card). Everyone who joins any Air Force club between now and Dec 31 will automatically receive three months free dues, be enrolled in the free cash back rewards program and will win \$5-\$100 instantly upon application.

Members Only Texas Hold 'em Winners

Oct. 1 wrapped up the 2011 ALC Texas Hold 'Em Members Only Tournament Championship.

Players battled it out for seven weeks to earn a seat at the final table and a chance to take home the coveted championship bragging rights.

This year's winner is ATA's Danny Haddon who defeated DOD's Mark Anderson with a pair of nines, ace high in the final hand. The champion was awarded a \$200 Visa gift card and an AFMC poker set engraved with “2011 Champion” on the case.

Second place was awarded a Magnavox Blu-ray/DVD player and third place, awarded to ATA's Ed Broxson, was a \$40 Services Gift Card and a small poker set.

Throughout the seven weeks of play, players were awarded points based on their finishing ranking and won Services Bucks. This year Cindy Crowe finished with 28 points to claim the Overall Point Winner title and was awarded a commemorative Texas Hold 'Em motorcycle figurine. The tournament was open to all AF Club members. (Not a club member? Call 454-3350 or stop by the ALC to find out how to become one.) Thank you to all players for competing and congratulations to all of our winners.



1st place (above): Danny Haddon
3rd place (below): Ed Broxson



2nd place (above): Mark Anderson
Overall Point Winner (below):
Cindy Crowe



Children's Christmas Party returns Dec. 4

The annual Children's Christmas Party will be held 1-5 p.m. Dec. 4 at the Arnold Lakeside Center (ALC) for ages 12 and under.

This event is free and open to all AEDC employees (active duty military, civil service, contractors), National Guard, Reserves, retirees and their immediate families. The annual Tree Lighting Ceremony will be held in conjunction with this event and will begin when Santa arrives to help flip the switch.

Santa is scheduled to arrive at 2 p.m. along with some of his friends. Santa and Mrs. Claus along with their elves will be in the Winter Wonderland tent to visit with the children at 2:30 p.m. Some of Santa's elves will also be in the Winter Wonderland tent to give out goodies to children age twelve and under. It is important to sign up so the elves bring enough.

There will be other activities as well as hamburgers and hot dogs served throughout the afternoon.



A special Santa Hotline, 454-SNTA (7682), has been set up for children to leave a message for Santa. This number may also be used by parents to register children for the event. Simply press 1 to leave a message or 2 to sign up. Be sure to give your name and specify how many children and how many adults will be attending.

Outdoor Recreation Deck the Doors contest to replace Christmas Card Lane

It's time to get the Christmas season going. This year Outdoor Recreation is taking a different twist on holiday decorating.

Instead of the giant cards in Christmas Card Lane there will be a Deck the Doors contest.

Squadrons, offices or groups must call to indicate they are participating by Nov. 28. Remember to give your building number and location of the door.

Doors used for this event must remain functional if they were prior to decoration.

Decorations on the door will be the only part judged. Any additional work on walls, etc. will not be judged with the door.

Doors must be decorated by close of business Dec. 8. On Dec. 9 Outdoor Recreation staff will take pictures of every door that has entered.

Select judges will be given the pictures to make their selections for first, second and third place.

The winners will be announced at the DOD Holiday Party.

ALC Date Night Movie Nov. 12

Arnold Lakeside Center will have a date night movie night on Nov. 12 featuring the movie “Crazy Stupid Love” starring Steve Carell, Ryan Gosling and Julianne Moore showing at 7 p.m.

A special date night two for \$24 (\$25 nonmembers) menu will be served in the ballroom at 6 p.m. The menu includes choice of one appetizer: spinach and artichoke dip with corn chips, cheese sticks with marinara dipping sauce, fried mushrooms with sour cream dipping sauce, onion rings with sabi sauce or two house salads; choice of two entrees: grilled house sirloin, prosciutto stuffed chicken breast or fried pangasius filet; choice of two sides for each entrée: rice pilaf, mashed potatoes, baked potato with butter and sour cream, steamed broccoli or green beans almondine; and choice of one dessert to share with two spoons: carrot cake, bacon ice cream sundae, five-layer chocolate cake or pecan pie.

The Four Seasons dining room will open at 5 p.m. and offer the special of the night, Bacon-wrapped Prosciutto-stuffed chicken breast for \$12.95 for members and \$13.95 for nonmembers, or you may order from the pizza menu. Reservations are requested at 454-3350 but are not required.

Café 100 now open in A&E Building

Arnold Lakeside Center presents Café 100 now open 6:30 a.m.-1:30 p.m. in the A&E Building.

Café 100 is proud to serve Starbucks beverages as well as juice, vitamin water, iced tea and sodas. There are some food items such as pig in a blanket, bagels, croissants, muffins and fruit.

The grand opening event is scheduled for Oct. 31 with prizes and specials throughout the day.



ODR Woods Reservoir Fall Color Tour Nov. 5

Outdoor Recreation has planned a water tour of the lake to see the fall colors on Nov. 5. Come with us and enjoy the views that nature offers right in your back yard. Cost is \$5 per person and the tour will last approximately an hour. Meet at the Outdoor Recreation building at 2 p.m. Call 454-6084 to sign up by Nov. 1. Remember to wear or bring weather-appropriate clothing.



Horizon is a Services Division publication designed to inform our customers of events and specials in Services Division activities. All program dates, times and prices are subject to change. Services Division mailing address is at 100 Kindel Drive, Suite C321, Arnold AFB, Tenn. 37389-3321

Services information written and provided by Tanya Heggard

This Services supplement is published by The Tullahoma News, a private firm in no way connected with the U.S. Air Force, under exclusive written contract with Aerospace Testing Alliance (ATA). This supplement is an authorized publication for members of the U.S. military services. Contents of this supplement are not necessarily the views of, or endorsed by, the U.S. Government, the Department of Defense, the Department of the Air Force or ATA. Services Division is an exclusive area available to all AEDC personnel, active duty, retired military, National Guard, Reserve military and others as approved by the commander. Services activities include Wingo Inn (lodging), Arnold Lakeside Center, Outdoor Recreation (Marina, FamCamp, Crockett Cove, Dogwood Ridge), Golf Course, Family Member/Youth Programs and Fitness Center. Those mentioned above are eligible to use any Services activity during regular operating hours unless it is specified as a “members only” event. Membership remains a personal choice, however, only members are entitled to discounts and other benefits associated with membership.

Services Division Phone Numbers

Area code 931 DSN 340
 Services Chief – 454-7779
 Services Deputy – 454-5915
 Community Services Flight Chief – 454-4062
 Complex Manager – 454-3367
 Arnold Lakeside Center (ALC) – 454-3350
 Arnold Lakeside Center catering – 454-3350
 Hap's Pizza – 454-5555

Membership Information – 454-3367
 Information Tickets, Tours – 454-3303
 Fitness Center (FC) – 454-6440
 Outdoor Recreation (ODR) – 454-6084
 FamCamp – 454-6084
 Marina – 454-6084
 Recycling – 454-6068
 Family Child Care – 454-3277

Family Member/Youth Programs (FamY) – 454-3277
 Human Resources – 454-5481
 Marketing & Sponsorship – 454-3128
 Barber Shop – 454-6987
 Wingo Inn – 454-3051
 Golf Course (GC) – 455-7076 or 454-GOLF(4653)
 Mulligan's Coffee Bar & Grill – 454-FOOD(3663)
 Gossick Leadership Center – 454-4003

November 2011

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
ODR Arts & Crafts Gallery entries now being accepted New Hours begin at Mulligan's Coffee Bar & Grill Nov. 1		1	2	3	4	5
		ALC AEDC Woman's Club luncheon, 9:30 a.m. FC Volleyball rosters due FC Cycling Class 11 a.m. FC Karate 3 p.m. FC Zumba 4:15 p.m.	FC Boot Camp 6 a.m. ALC Lunch, 11 a.m. – 1 p.m., call ahead 454-5555 FC Pilates 11 a.m. FC Flag Football 6 p.m.	FC Cycling Class 11 a.m. FC Karate 3 p.m. FC Zumba 4:15 p.m. ALC No movie due to special event	FC Boot Camp 6 a.m. FC Piloga 11 a.m. ALC Meatball Sub w/ fries \$7.95 member, \$8.95 non, 4-9 p.m. ALC First Friday Jam 6 p.m.	ODR Paintball 9:30 a.m.-3:30 p.m., age 10+, \$35, 454-6084 ODR Woods Reservoir Fall Color Tour, 2 p.m., \$5, sign up by Nov. 1, 454-6084 ALC Fried Chicken, \$10.95 member, \$11.95 non, 5-9 p.m.
6	7	8	9	10	11	12
	FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m. FC Intramural Women's League Volleyball begins 5:30 p.m. FC Flag Football 6 p.m.	FC Cycling Class 11 a.m. FC Karate 3 p.m. FC Zumba 4:15 p.m. FC Intramural Open League Volleyball begins 5:30 p.m.	FC Boot Camp 6 a.m. ALC Lunch, 11 a.m. – 1 p.m., call ahead 454-5555 FC Pilates 11 a.m. FC Flag Football 6 p.m.	FC Lunch & Learn: Healthy Eating, A&E A123, sign up by Nov. 9, 454-6440 FC Cycling Class 11am FC Karate 3 p.m. FC Zumba 4:15 p.m. ALC Dinner & Movie Night "Cowboys and Aliens" PG-13 dinner 5-8 p.m. movie 6:30 p.m.	FC Open 8 a.m. – 4 p.m. No Classes. FamY Day for Kids: Child ID Safety Program, 10 a.m. – 2 p.m., Commissary ALC Prime Rib for Two, \$29.95 member, \$30.95 non, 4-9 p.m.	ODR Paintball 9:30 a.m.-3:30 p.m., age 10+, \$35, 454-6084 FamY Day for Kids: Child ID Safety Program, 10 a.m. – 2 p.m., Commissary ALC Bacon Wrapped Prosciutto Stuffed Chicken Breast, \$12.95 member, \$13.95 non, 5-9 p.m. ALC Date Night Movie, special menu \$24 mbr, \$25 non, dinner special or pizza also available, sign up by Nov. 9
13	14	15	16	17	18	19
	FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m.	FC Cycling Class 11am FC Karate 3 p.m. FC Zumba 4:15 p.m.	FC Boot Camp 6 a.m. ALC Lunch, 11 a.m. – 1 p.m., call ahead 454-5555 FC Pilates 11 a.m.	FC Cycling Class 11 a.m. FC Karate 3 p.m. FC Zumba 4:15 p.m. ALC Dinner & Movie Night "Spy Kids: All the Time in the World" PG dinner 5-8 p.m. movie 6:30 p.m.	FC Boot Camp 6 a.m. FC Piloga 11 a.m. ALC Black Angus Ribeye with Bacon Wrapped Scallops, \$18.95 members, \$19.95 non, 4-9 p.m.	ALC Day Trip to Chattanooga, 9 a.m., \$55, 454-3303 ODR Paintball 9:30 a.m., age 10+, \$35, 454-6084 ODR Turkey Shoot, 10 a.m., \$20/4 shots, sign up by Nov. 16, 454-6084 ALC Pork Chop with Baked Sweet Potato, \$13.95 mbr, \$14.95 non, 5-9 p.m.
20	21	22	23	24	25	26
	FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m.	FC Cycle Class 11 a.m. FC Karate 3 p.m. FC Zumba 4:15 p.m.	FC Boot Camp 6 a.m. ALC Lunch, 11 a.m. – 1 p.m., call ahead 454-5555 FC Pilates 11 a.m. FAMY Open 12 - 4 p.m.	FC, ODR, GC, FAMY Closed ALC Thanksgiving Day Lunch Buffet, 11 a.m. – 1:30 p.m., \$19.95 members, \$21.95 non, \$9.95 age 4-10, RSVP by Nov. 18 454-3350 ALC No movie due to holiday	FC Open 8 a.m. - 4 p.m., No classes FAMY Open 12 - 4 p.m., ALC Closed	ODR Paintball 9:30 a.m.-3:30 p.m., age 10+, \$35, 454-6084 ALC Closed
27	28	29	30			
	ODR Deadline to sign up for Deck the Doors Contest, 454-6084 FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m.	FC Cycling Class 11 a.m. FC Karate 3 p.m. FC Zumba 4:15 p.m.	FC Boot Camp 6 a.m. ALC Lunch, 11 a.m. – 1 p.m., call ahead 454-5555 FC Pilates 11 a.m.			

Hours of operation

Arnold Lakeside Center: Special function luncheons available. Call 454-3350 for arrangements. Catering/Management offices Tuesday-Friday 10 a.m.-3 p.m.; Lunch: limited menu Wednesdays, 11 a.m.-1 p.m., call 454-5555 to place orders; 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. **Closed Nov 25-26.**

Family Member/Youth Programs: Tuesday through Friday 10 a.m.-5 p.m., Saturday 12-5 p.m. **Open 12-4 p.m. Nov. 23 and 25, Closed Nov. 24.**

Outdoor Rec: Main Office, Check In, Marina and Auto Shop Tuesday through Sunday 8 a.m.-6 p.m. Winter Hours begin Nov. 1. Main Office, Check In and Auto Shop Tuesday through Saturday 10 a.m.-5 p.m. Marina by appointment only. **Closed Nov. 24.**

Fitness Center: Monday-Friday 5 a.m.-9 p.m.; Saturday 8 a.m.-4 p.m. **Open 8 a.m.-4 p.m. Nov. 11 (no classes), Closed Nov. 24, Open 8 a.m.-4 p.m. Nov. 25 (no classes).**

Arnold Golf Course: Pro Shop & Driving Range 7 a.m.-dusk. Winter hours begin Nov. 1 Pro Shop & Driving Range 8 a.m.-dusk. Driving Range open 24 hours with prepurchased key card. Mulligan's Grill – 7 a.m.-2 p.m. daily; as of Nov. 1 Monday through Friday 10:30 a.m.-2 p.m., Saturday and Sunday 8 a.m.-2 p.m. **Closed Nov. 24**

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.

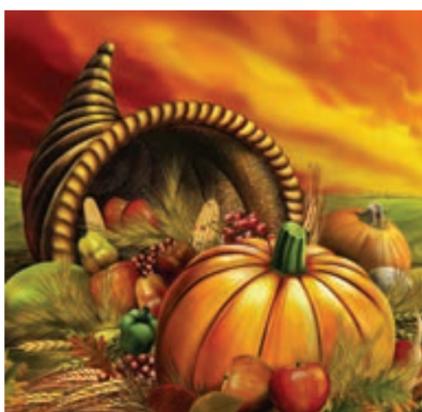
Barber Shop: by appointment Monday through Friday 8 a.m.-4 p.m. **Closed Nov 24-25.**

BX/Commissary customer eligibility

AEDC government civilian and AEDC contractor employees have access to the following limited items at the base exchange (BX): consumable items including toiletries and over-the-counter pharmaceuticals, food items such as candy, chips, little meal items, hot dogs and soft drinks. Alcohol and cigarettes are not included as consumable items. However, only active duty and retired uniformed services personnel and their dependents are eligible to use the base commissary next to the BX. The commissary hours of operation: Tuesday, Wednesday and Friday 9 a.m.-5:30 p.m., Thursday 9 a.m.-6:30 p.m. and Saturday 8 a.m.-4:30 p.m. The BX hours of operation: Tuesday through Friday 9 a.m.-5:30 p.m., and Saturday 8 a.m.-4:30 p.m. For more information contact the BX manager at (931) 454-7153 or Jeff Lillard, Commissary manager, at (931) 454-3545.

AAFES Dividends

Dividends generated from the Army and Air Force Exchange Service (AAFES) overall earnings are a major contributor to Services nonappropriated fund (NAF) construction and renovation projects as well as equipment purchases. Services would like to thank all AAFES customers for their support. Dividends received for September 2011 totaled \$5,415.25.



*Happy Thanksgiving to
you and yours!*

Briefs from H1

"We want all personnel to consider club membership and understand the benefits of club membership, and our 'It Pays to Club' membership campaign gives them the opportunity to try their club free for the first three months," said Mr. Fred McKenney, Chief of the Air Force Food and Beverage Division.

During the period everyone interested in AF Club membership should look for the membership promotional materials in their local club and other Services activities, said Mr. McKenney. "Pick up an application, fill it out, and experience the benefits of membership!"

The membership card provides numerous benefits. The Military Free Cash rewards program is an outstanding benefit to members. When you use your club membership card in any on-base Force Support activity, you earn 2 percent cash back on every eligible purchase including AAFES (to include gas) and Commissary. Additionally you earn 1 percent cash back on eligible purchases everywhere else including all off-base purchases. In addition to being able to redeem points for cash back and gift cards, you now can also redeem for travel, to include airline tickets, hotel, and car rental – super flexibility – and it is all free as a benefit of club membership!

Air Force Clubs offer members numerous free and inexpensive activities including discounts on every meal to include special functions, an annual \$25,000 scholarship program, Texas Hold 'Em, Air Force Hoops, and other members-only programs. Your Club is a great place for entertainment and meeting new friends in a fun and safe environment. Join now – the first three months are free on us!

Barber Shop open 8 a.m.-4 p.m. Monday through Friday. Haircuts are \$8 and are by appointment. Call 454-6987.

**Family Member/
Youth Programs
(FamY)
454-3277**

Check us out on Facebook! Arnold AFB Services Youth Programs

Youth Programs and Security Forces have joined together to help spread the importance of being alert and being safe. Youth Programs will provide a **Child Identification Program** booth 10 a.m.-2 p.m. Nov. 11-12 in front of the Commissary. The Child Identification Program provides an easy-to-use fingerprint identification system and, most importantly, provides valuable and timely safety information for families. The identification kit contains one

fingerprint card and ink for fingerprinting plus an easy-to-use format to include a description of the child and their photograph. Research has shown that when children are missing, it is helpful for parents and police to have fingerprints, vital statistics and a current photo on hand. It is recommended by law enforcement agencies that parents update information on their children at least annually. This program is available free to all base employees as well as National Guard, Reserves and retired military and their dependants. The most important objective of this program is to prepare children to play and live safe.

Instructional Classes (Music, Spanish & Fencing) coming in 2012!

If you or your children would be interested in any of the following classes please contact Youth Programs now. If there is enough interest, classes would begin the first of the year (Jan. or Feb.). Plans are underway to offer a variety of music lessons to include piano, acoustic guitar, electric guitar, electric bass, drums/percussion and even voice. Also available are Spanish lessons teaching basic knowledge, grammar and vocabulary in a classroom style setting. Group lessons for beginner fencing, often called "physical chess" will also be available. Modern fencing allows participants of all ages and attributes to meet on a more equal footing than almost any other sport. With its origins in armed combat, honor and intrigue, this isn't what you see in the movies, but a contact sport and true martial art. As a martial art, fencing teaches respect for one's opponents and mental, physical and emotional control. Students begin with the fundamentals of Olympic-style foil fencing: attack, defense and proper "etiquette" – progressing to concepts of distance, timing and strategy. Emphasis is on developing a usable and solid foundation through body-awareness exercises, group/paired practice, drills, demonstrations and explanations. Music and Spanish lessons are open to all ages and Fencing is for ages 9 and older. Call today! The more involved, the better the rates will be for these classes.

**Fitness Center
454-6440**

Check us out on Facebook! Arnold AFB Services Fitness Center

Intramural Volleyball rosters are due Nov. 1. Women's League will be on Mondays beginning Nov. 7. Open League will be on Tuesdays and Thursdays beginning Nov. 8. Games are played at 5:30, 6:30 and 7:30 p.m. Call to sign up as team or individual.

A Lunch & Learn will be held Nov. 10 beginning at 11 a.m. in the Arnold Room, A&E Building A123. Guest speaker Dietitian Christie Holt will talk about healthy eating. This will last about 30 minutes followed by a question and answer session. Drinks and snacks will be provided. Please call to sign up by Nov. 9. Class is limited to 20 people.

Flag Football continues through Nov. 9 with games on Mondays and Wednesdays. Games are played at Arnold Village field at 6, 7 and 8 p.m.

Group Class Schedule (for eligible users only):

Boot Camp Monday, Wednesday and Friday 6-7 a.m. on the basketball court

Yoga Monday 11 a.m.-12 p.m. on the basketball court

Cycling Monday, Tuesday and Thursday 11a.m.-12p.m. upstairs

Zumba Tuesday and Thursday 4:15-5:15 p.m. upstairs

Karate Tuesday and Thursday 3-5 p.m. on the basketball court

Pilates Wednesday 11 a.m.-12 p.m. on the basketball court

Piloga Friday 11 a.m.-12 p.m. on the basketball court

**Outdoor Rec (ODR)
454-6084**

Check us out on Facebook! Arnold AFB Services Outdoor Recreation

Winter Hours begin Nov. 1 Main Office, Check In and Auto Shop Tuesday through Saturday 10 a.m.-5 p.m. Marina by appointment only.

Outdoor Recreation is having the 1st Annual **Turkey Shoot** Nov. 19 beginning at 10 a.m. for ages 12 and up. Participants will shoot at targets from a distance of 25 yards. Maximum of four shots per round. The closest to the bullseye will win the prize. Participants can bring their own bows but they must have a max pull weight of 45 pounds. Arrows will be provided. Shots will be \$20 per four shots and each participant may purchase as many shots as desired. The competition will take place in the open field next to the Outdoor Recreation building. First prize will be a whole turkey and second place will be a whole ham. Sign up by Nov. 16.

The **USAF Arts & Crafts Gallery** program is now underway. Enter your craft, photography and digital art images to Outdoor Recreation by Dec. 30. Entries will be submitted to HQ AFMC for approval and uploaded to the Air Force Gallery. There are three age divisions (youth 6-12, youth 13-17 and adult) and each category allows three entries per person. There are specified criteria to fol-

low for submission and an entry application to be completed. Call for complete details. All approved submissions will be available for viewing on airforce-gallery.com in March/April 2012.

You wanted it, you got it! Engage in a masterful collection of **paintball** battles and objectives. As of September paintball is now 9:30 a.m.-3:30 p.m. every Saturday. We have added a few new forts to the course. Anyone age 10 and older may play but ages 10-17 must have a parent permission form. Interested participants need to call and sign up at least a day ahead of time to ensure equipment availability. Once the day comes everyone will meet at the paintball field. Cost is \$35 per person with equipment provided and includes 500 paintballs and a tank of air. It is \$20 per person for those with their own equipment and that also comes with 500 paintballs. All paintballs used must be purchased from ODR for \$13 per bag of 500 or \$45 for a box of 2000. So if you're looking for some fun-filled, scenario paintball we will see you on Saturday.

Reservation Policy: FamCamp and Crockett Cove reservations may be made 45 days in advance for active duty and reserve military, 40 days for retired military, and 30 days for all other qualified personnel. Boat reservations may be made 15 days in advance for active duty and 10 days for other eligible individuals. All reservations are made through Outdoor Recreation by stopping by or calling 454-6084.

Tired of paying high prices for vehicle maintenance? Come by and visit the **auto shop** located at Outdoor Recreation. Our auto shop is equipped with a vehicle lift, air compressor, parts washer and a variety of tools for anyone to perform regular vehicle maintenance jobs. The fee is a low \$2 per hour. For additional fee our staff can repair, mount, balance and rotate tires. Anyone wanting that done must call ahead for an appointment. Tire repairs requiring a plug are only \$5 per plug. Mountings are \$3 per tire and \$2 for balancing.

It's party time! Need an **inflatable bounce house or slide** for your child's next birthday party? Look no farther than Outdoor Recreation with our low prices. We have an assortment of inflatables for almost everyone's needs. We have a huge backyard obstacle challenge measuring 40'L x 10'W x 13'H, and a double lane jump slide for only \$200 per day. We also have a giant basketball hoop

for \$75 per day and a Rocket Bounce House for \$100 per day. If you need a water slide then our 18' Double Drop Wet/Dry slide will be great for any event and is only \$200 per day. Please contact Outdoor Recreation at 454-6084 to make your reservation today!

Trying to decide where to hold your family reunion or party? We have a few **locations with pavilions to rent** that you can choose from. There are two pavilions at Crockett Cove and one at the Arnold Lakeside Beach. Usage is for authorized personnel only. Rental fee is \$25 per day with a \$50 refundable cleaning deposit that will be charged upon reservation. Once the pavilion is confirmed to be clean the \$50 will be refunded. Reservations may be made 30 days in advance at the Outdoor Recreation building or by calling 454-6084.

Do you like to cruise on the lake? Want to take your child to that secret fishing spot or teach them how to ski? Give Outdoor Recreation a call. We have **boat rentals** for everyone's needs. We can rent you three ski boats or the Stardeck for just \$20 per hour. We also have two pontoon boats that rent for \$15 per hour and \$30 per hour. The \$30 an hour will rent you the newest pontoon boat we have, S.S. Stuart! Whatever your boating needs might be, give ODR the chance to help you meet that need. Give us a call at 454-6084.

Hands-On Boat Certification Class is now mandatory for renting boats from the marina. Watch the video 8 a.m.-4:30 p.m. anytime during the week. After watching the video and taking the test sign up for the hands-on portion which is available Saturday and Sunday at 8:30 a.m., 9:30 a.m., 10:30 a.m., 11:30 a.m. and 12:30 p.m. This

Services is an exclusive area available to all AEDC personnel, active duty, retired military, National Guard, Reserve military and others as approved by the commander. Services activities include Wingo Inn (lodging), Arnold Lakeside Center, Outdoor Rec (Marina, FamCamp, Crockett Cove, Dogwood Ridge), Family Member/Youth Programs, Golf Course and Fitness Center.

Those mentioned above are eligible to use any Services activity during regular operating hours unless it is specified as a "members only" event. Membership is a personal choice. However, only members are entitled to discounts and other benefits associated with membership.

class costs \$20 and certification is valid for two years. Call to sign up or for more information.

**Wingo Inn
454-3051**

Check us out on Facebook! Arnold AFB Services 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

The **Gossick Leadership Center (GLC)** may be used for events such as meetings, conferences, luncheons, dinners, etc. and is booked through the Services Conference Center Manager (CCM) up to one year in advance. Requests must be made in writing by email to arnold.glc@arnold.af.mil. All event coordinators are required to sign an agreement. Official unit functions are authorized at no charge and are defined as bona fide official meetings or training held as part of the normal duty day. Unofficial and private functions may be held for authorized users at a fee. Community mem-

bers may host events with the approval of the Services Director for a fee. Outside food and beverages are not allowed. First consideration must be given to Arnold Lakeside Center. In the event they cannot accommodate, an outside source may be utilized with CCM approval. For more information contact the CCM at 931-454-4003.

**AEDC Woman's Club
393-2552**

November is a special month for the AEDC Woman's Club as it is the "Secret Shopper's" month. Three ladies volunteer to see which one can acquire the most items for the money they are provided. Each member gets to vote on which lady they think has the loveliest items. Then they are available to the highest bidder. Also, we will be decorating a Christmas ornament so bring a plain ornament with you. If you can't find one some will be provided. Make reservations by Oct. 26 by contacting Liz Jolliffe at 393-2552 or JAJolliffe@aol.com, Jane Ricci at 962-1378 or dickanjane@comcast.net or Lucie Miller at 723-2054 or lj-rdmiller@charter.net.

This is a private organization which is not part of the Department of Defense or any of its components and it has no governmental status.

Fitness Center Cool 100 Walk/Run goes through Jan. 2012



The Fitness Center is doing a Cool 100 Walk/Run Incentive Program where participants log their miles using the honor system. Participants may use the track located behind the A&E building, the trail behind the Fitness Center, a treadmill in the Fitness Center facilities or at home. These miles are to be turned in during the fall and winter months either daily or weekly. Participants who complete 100 miles before Feb. 1 will receive a T-shirt. Call 454-6440 to sign up and remember to give your shirt size.

The Services insert to the High Mach is designed to inform our customers of events and specials in Services activities. All program dates, times and prices are subject to change.