

AEDC workload may reach historic highs in some facilities

By Kathy Gattis
AEDC Public Affairs

AEDC could see record-breaking increases in testing for some of its facilities over the next several years as a result of Air Force plans to recapitalize large portions of its aircraft fleet.

Col. Timothy West, who oversees the AEDC Test Operations Division, predicts challenging times ahead – but a good kind of challenge.

“Our FY17 [Fiscal Year 2017] wind tunnel workload projections are more than double this year’s user occupancy hours, with additional growth projected in subsequent years,” he said. “That means the workload in the tunnel could reach a historical high, exceeding levels seen during the Apollo era.

“The top priority for each of the CTFs [Combined Test Forces] will be getting all the work done – including the needed maintenance – in a safe, effective and technically rigorous manner. This will be the graduation exercise of the CTF construct and its newest members, NAS [National Aerospace Solutions] and Quantitech. AEDC will have to think and operate differently, and the fresh perspective these companies bring will be key in helping us identify new ways to maximize our test efficiency and minimize the downtime between tests.”

See **WORKLOAD**, page 3



AEDC Team Member David Anderson inspects 1/20-scale models of the F-15E Strike Eagle aircraft and sting-mounted Small Diameter Bomb II, during a break in ongoing store separation tests for new weapons development phase trials in the 4T wind tunnel of the Propulsion Wind Tunnel facility. (U.S. Air Force photo/Rick Goodfriend)

B-52 testing conducted at AEDC continues to pay off



AEDC set a record for the largest aircraft model used in conducting store separation tests of the aircraft with a 10-percent scale model of the B-52 Stratofortress. The testing was requested by the B-52 Program Office of the Air Force’s Global Strike Command to validate separation of multiple weapons that previously had not been released from the B-52 weapons bay. Results from the test data and subsequent analysis gave the program office confidence to increase the B-52’s guided-weapon capacity. Pictured from left is J.T. Thompson, captive trajectory system project engineer, with Gary Cunningham, lead outside machinist, in the AEDC Propulsion Wind Tunnel 16-foot wind tunnel between store separation test runs in 2011. (U.S. Air Force photo/Rick Goodfriend)

By Deidre Ortiz
AEDC Public Affairs

Testing performed at AEDC proves critical to validate safe separation of new munitions from the B-52 Stratofortress, which has recently flight-demonstrated a joint direct attack munitions drop from the internal bay for the first time.

“The B-52 Stratofortress continues to deliver strategic capabilities to project power and secure the peace into the 21st century,” said Rick Bishop, Flight Systems Test manager at AEDC.

The first flight of the B-52 was April 15, 1952, with the plane officially entering service in 1955.

In the last few years, upgrades have been made to the bomb bay rotary launchers allowing the deployment of a number of new “smart” munitions, and AEDC has played an important role by providing testing and analysis support for safe store separation in the 16-foot propulsion wind tunnel.

To support the required wind tunnel testing, AEDC engineers, designers and

craftsmen employed concurrent design and build techniques to quickly fabricate the 10-percent scale model of the B-52 Stratofortress that was used to conduct the tests.

Pete Macaluso, Air Force test manager, explained the creation of the wind tunnel model provided the Air Force with a capability it did not have before.

“The large-scale wind tunnel model enabled testing from the pylons and the weapon bay, which increased the amount of data we could provide,” he said. “In the past, the Air Force relied heavily on computer models, and that increased the amount of time required to perform store separation analysis which led to flight certifications.

“One wind tunnel test provided over 157,000 data points for the customer in the span of two months. It was extremely encouraging to see that amount of data being provided to the customer, and to note it matched the results of the historical data the customer had on hand.”

See **B-52**, page 3

AEDC contributions to Viking ensures Mars first landing

NASA Viking 40 year anniversary

By Raquel March
AEDC Public Affairs

The NASA Viking Lander 1 successfully reached the surface of Mars July 20, 1976, due to the testing AEDC conducted on the launch vehicle and the entry vehicle parachute system.

The Titan III/Centaur launch vehicle for the lander was tested in the Propulsion Wind Tunnel in the mid-1960s and the entry vehicle system was tested in PWT and the von Kármán Gas

Dynamics Facility from 1969 through 1973.

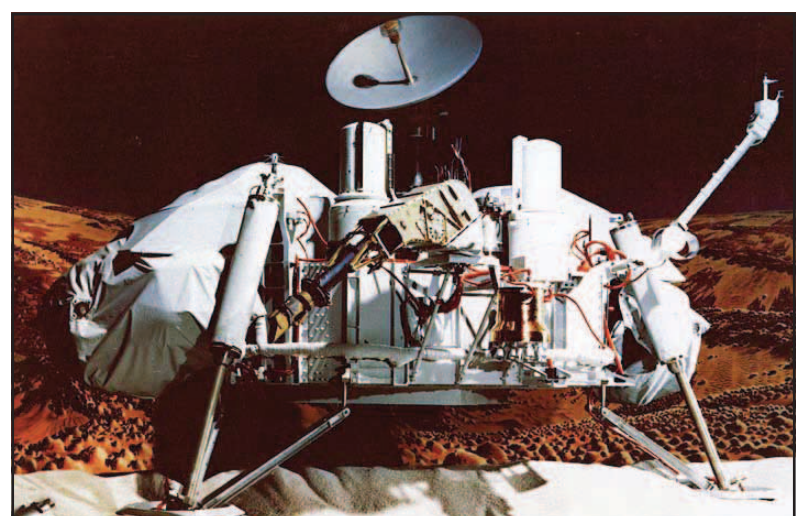
Viking testing at AEDC focused on how the systems would endure the type of atmosphere and environment surrounding Mars.

Viking 1 collected samples and conducted biology experiments on Mars to search for signs of living organisms. The distance for Viking to travel to Mars was 500 million miles, which was a trip that took 11 months.

The lander collected data from Mars for more than six years according to a Viking mission overview by NASA in 2015.

The overview also reported, “The landers [Viking 1 and Viking 2] accumulated 4,500 up-close images of the Martian surface. The accompanying orbiters provided more than 50,000 images, mapping 97 percent of the planet.”

See **VIKING**, page 4



The Viking 1 Lander depicted here was the first NASA system to land on Mars June 20, 1976. AEDC conducted tests for the entry vehicle parachute system. (NASA image)

In This Issue....

AEDC White Oak tours offer rare look at Hypervelocity Wind Tunnel 9
...Page 2

Café 100 serving new menu items: Focused on customer flow
...Page 3

AEDC STEM Aviation Program attendance soars
...Page 4

HIGH MACH



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- Sustainability. We plan and act for the long term benefit of our communities and our environment.

AEDC White Oak tours offer rare look at Hypervelocity Wind Tunnel 9

By Robert Mitchell
AEDC Hypervelocity Tunnel 9

A tight work schedule did not keep the dedicated professionals on the leading edge of science and technology at AEDC White Oak from recent opportunities to share some of their work with the outside world.

In two separate tours held within days of each other, the staff at AEDC Hypervelocity Wind Tunnel 9 came together to give invited guests a historical presentation, a site walk around, a tunnel visit, light refreshments and souvenirs.

Members of the American Institute of Aeronautics and Astronautics Ground Test Technical Committee and families of the AEDC White Oak staff learned about the AEDC mission, and had the rare opportunity for a behind-scenes look at one of the most unique test facilities in the world.

Dan Marren, Tunnel 9 site director, who briefed site visitors at the start of the tour, recalled that as a young engineer working for the Navy, he was not allowed to discuss his work with his family. In fact, he told family members at the briefing that his own family once thought he flew the space shuttle and found it coincidental that he was often unavail-



AEDC White Oak Site Director Dan Marren talks about Hypervelocity Wind Tunnel 9 and AEDC with stakeholders from the American Institute of Aeronautics and Astronautics Ground Test Technical Committee during a site visit. GTTC guests, in town for the Aviation 2016 Forum in Washington, D.C., were invited to tour AEDC White Oak in Silver Spring, Md. (U.S. Air Force photo/Robert W. Mitchell)

able whenever the space shuttle was in orbit.

Indeed that spin worked to his OPSEC advantage back then, but with the family tour, he wanted AEDC White Oak families to see how critically important their own family members are to a very significant and pretty cool mission.

The technical GTTC tour, geared toward industry stakeholders, was vastly different from the family-oriented tour which focused more on general information, Marren noted.



Site Director Dan Marren, pictured left, speaks to a group in the AEDC Hypervelocity Tunnel 9 control room. Family members of Tunnel 9 staff were recently invited to tour Tunnel 9 at White Oak in Silver Spring, Md., during the site's annual Family Day. (U.S. Air Force photo/Robert W. Mitchell)

Zika Virus: Travel precautions and mosquito-bite prevention

By AEDC Safety

Zika is a viral disease transmitted to people primarily through the bite of an infected Aedes mosquito, the same species that spreads dengue and chikungunya viruses.

The virus, named after the Zika forest in Uganda where it was first discovered in 1947, is common in Africa and Asia. The number of western-hemisphere countries reporting active Zika virus transmission has steadily grown since May 2015 when the Pan American Health Organization confirmed the first Zika virus infection in Brazil.

Transmission

Aedes mosquito species typically lay eggs in and

near standing water. They are aggressive daytime biters and tend to live indoors and outdoors near people. The mosquitoes become infected when they feed on a person infected with the virus. Infected mosquitoes spread the virus to other people through bites.

Zika can also be transmitted from a pregnant mother to her baby during pregnancy or around the time of birth. It has not been determined how often this occurs; this mode of transmission is being investigated. There have not been any reports of infants getting Zika virus through breastfeeding.

There has been one report of possible spread of the virus through blood transfusion and one report of possible spread through sexual

contact, according to a January 2016 update from the Centers for Disease Control and Prevention.

In addition to Brazil and a number of South American countries, other areas reporting active transmission in early 2016 include parts of Central America, Mexico, some Caribbean islands, the Pacific island of Samoa and Cape Verde off the west coast of Africa.

The World Health Organization has predicted the virus will spread to all countries across the Americas except for Canada and Chile, where the Aedes mosquito is not found. Some experts predict Zika will likely follow the same spread pattern as dengue fever in the U.S., reaching Puerto Rico first, followed by outbreaks in

Florida, Gulf Coast states and possibly Hawaii.

Zika infection is not new to the U.S. According to a Jan. 26, 2016, Scientific American article, more than two dozen cases have been confirmed in the U.S. since 2007.

Zika and Pregnancy

Zika infection is linked to a birth defect called microcephaly, when the baby's head and brain are smaller than average, and other poor outcomes such as seizures, developmental delays and feeding problems. Microcephaly is rare, and it has other causes including infection of the fetus with rubella or German measles, fetal-alcohol poisoning, severe maternal malnutrition, diabetes and genetic abnormalities.

A regional Zika outbreak in Brazil was recently traced to a significant increase in babies born with birth defects, generating an international response and calls in some affected western hemisphere countries for women of child-bearing age to delay pregnancy.

The CDC's Interim Guidelines for the Evaluation and Testing of Infants with Possible Congenital Zika Virus Infection – United States were published Jan. 26, 2016, in the Morbidity and Mortality Weekly Report. The guidelines include recommendations for review of fetal ultrasounds, maternal testing for Zika virus infection and Zika virus testing for 1) infants with

See ZIKA, page 6

Smoking Policy

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

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

Smoking, including the use of electronic cigarettes and smokeless tobacco, is prohibited in any area, at times when official business is being conducted with government clients, test customers, outside visitors and dignitaries, and where official business is being conducted including conference rooms, auditorium settings, business meetings, or in any other area where Air Force regulations specifically prohibit use. Containers of tobacco waste product, including selaeo containers, must be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), the use of said products will abide by the same rules for tobacco products stated above and governed by AFI 40-102, Tobacco Use in the Air Force.

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

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

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

Action Line

Team AEDC

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

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

Col. Rodney Todaro
AEDC Commander

Café 100 serving new menu items

Focused on customer flow

By Raquel March
AEDC Public Affairs

Café 100, under the management of the AEDC Services Office, recently added a Hot Line that includes new entrée style menu items. Barbara Stewart, the director of the Services Office, expressed that the addition was made to meet the customers' needs.

"In order to help the flow of customers, we decided to start the hot line service to provide a quick and easy meal for our customers to pick up and eat within their 30-minute lunch period," she said. "While the menu itself is limited to what we can make with the equipment we have, we are doing our best to provide a selection that is variable and that our customers want and enjoy."

The improvement in service, as stated by Stewart, offers customers a "meat and three" option which is a meat and up to three side items. The menu includes set items for each day of the week, such as the Monday menu item is lasagna, Tuesday is chicken enchilada, Wednesday is barbeque pulled pork, Thursday is meatloaf and Friday is baked tilapia. Special entrees are introduced for limited times.

Since the start of the Hot Line, customers have been asked to voice their opinions on options.

"In order to see if the offerings we had were acceptable, we started asking our customers to use the ICE (Interactive Customer Evaluation) website," Stewart said. "This allows our customers a quick and easy way to give us online feedback about what we offer and what they'd like to see. There are times we can't meet their requests, because we don't have a full kitchen in the Café, so we are limited in what we can do and what we can offer."

The plan to offer the new menu items developed in 2015. Stewart said it took some time to acquire extra staff to offer a hot line and to continue offering the grill line which serves hot and cold sandwiches, wraps, pizza, salad, Starbucks® coffee and breakfast items.

While the staff continues to increase the level of service at the Café, Stewart is looking toward the future of Café 100.

"The Café has not increased prices since it began serving grill items in 2012, but the cost of those items has continued to rise to a point where the Café is beginning to operate at a loss," she said. "So, customers will see a price increase in August. While the increases will be small, we know some customers will not be happy about the changes. We aren't



Amber Bunch, far left, serves customers at Café 100, a Services Office food service facility located at the AEDC Administrative and Engineering building. The Café services AEDC team members and visitors, and offers a Grill Line shown here as well as a new Hot Line with prepared entrées. (U.S. Air Force photo/Holly Peterson)

happy we have to make the increases, but we have done everything we can to reduce expenses on our end."

The Café will also change some of the food options.

Stewart said, "For instance, if you want more than the standard condiments on a sandwich (tomato, lettuce, onion and pickle) there will be a charge for the extra toppings."

Café prices are charged to the customer under similar guidelines as the Services Arnold Lakeside Center. If a patron is a Services Club Member, they can receive a 10 percent discount on their meal. They may show their card to the cashier to receive the discount.

"If someone eats in the Café each day, and pays an average of \$7 for their meal, they will have received back approxi-



Stefan Fudge, left, and Anna Ballard, second from left, serve a customer at the Café 100 new Hot Line. The new line offers prepared entrées which provides faster service to accommodate AEDC team members' lunch breaks. (U.S. Air Force photo/Holly Peterson)

mately \$14 in discounts," Stewart said. "So, depending on their club category – i.e., enlisted, officer, or civilian – they can earn back either more

than their [membership] dues or almost their entire dues payment."

Café 100 continues to offer services for office parties, breakfasts and

luncheons if they are provided with at least a week of advance notice.

For more information about Café 100, call 454-7426 or 454-5885.

AFMC successfully transitions to Acquisition Workforce Personnel Demonstration Project

By Stacey Geiger
Air Force Materiel
Public Affairs

WRIGHT-PATERSON AIR FORCE BASE, Ohio – Some 12,500 Air Force Materiel Command civilian employees have transitioned to the Acquisition Workforce Demonstration Project, or AcqDemo, pay system, effective June 12.

Under AcqDemo, employees no longer carry their general schedule, or GS, designation and numbered grade. Instead, they have been placed in one of three broadbands comparable to their previous grade and salary.

"AcqDemo is enabling us to do what is most important for us to accomplish our mission, and that is hiring, developing and caring for

our civilian workforce," said Gen. Ellen M. Pawlikowski, AFMC commander. "I am personally committed because it is critically important to the success of this command."

AcqDemo allows greater managerial control over personnel processes and functions and expands opportunities for employees through a more responsive and flex-

ible personnel system. The new pay system retains, recognizes and rewards employees for their contribution rather than performance, and also supports their personal and professional growth.

To sync up with the AcqDemo appraisal cycle of Oct. 1 to Sept. 30, the current appraisal cycle for transitioned employees has been modified to three months and will

end on Sept. 30. During the beginning of each appraisal cycle, employees and their supervisors will complete an employee contribution plan to project an employee's impact on the organization's mission. At the end of each appraisal cycle, employees will complete their self-assessments to measure their contributions and also create new contribution plans for

the following cycle. Pay pools will be conducted from October through December and, where applicable, employee raises and award pay-out in January.

AcqDemo covers mainly non-bargaining, supervisory and professional series employees. The command will continue to explore expanding AcqDemo to all AFMC civilians.

WORKLOAD from page 1

West said AEDC is relying on several initiatives proposed by NAS to succeed. NAS became the largest contractor at the Complex on July 1, employing close to 1,400 people. NAS and Quantitech are the testing contractors and the final two of the six contracts implemented.

"I am confident that our new contractor partners will continue to build upon

the Sverdrup/Jacobs/ATA legacy to make AEDC even more mission effective than we are today."

The potential rise in testing at AEDC came as no surprise to the Complex's Flight Systems CTF, and West says the team will be ready to ground test the nation's top aerospace systems.

"Even as the F-35 prepares to replace the F-16,

F-18 and various other fighter aircraft, the Air Force is considering what it should do to replace the F-22," West said.

He notes the aging Minuteman III Intercontinental Ballistic Missile (ICBM) system is being replaced by a new ICBM currently called the "Ground Based Strategic Deterrent." The airborne leg of the strategic triad is also expanding to include

the new B-21 Long Range Strategic Bomber as well as a nuclear-capable Long Range Standoff missile to replace the aging AGM-88 Air Launched Cruise Missile. The CTF will have to balance those requirements with a \$110 million Service Life Extension Program (SLEP) that will require a variety of facility outages.

Although forecasts in the Aeropropulsion CTF are

not projected to break any records at this point, the engine test workload remains healthy. West foresees additional growth in this area as some of the same programs they are testing in the wind tunnels will need engine testing as well. The Aeropropulsion facilities will also receive a larger \$190 million SLEP in the same timeframe.

If that wasn't impressive

enough, several hypersonic facilities will also receive major upgrades in this timeframe.

"AEDC is projecting to receive an additional \$350 million investment to create a true 'fly the mission' capability for scramjet-based systems. All of this and the \$300 million SLEP investment should keep AEDC facilities healthy for another 65 years."

B-52 from page 1

The testing was requested by the B-52 Program Office of the Air Force's Global Strike Command to validate separation of multiple weapons that previously had not been released from the B-52 weapons bay. Results from the test data and subsequent analysis gave the

program office confidence to increase the B-52's guided-weapon capacity.

It was anticipated that added capability would enable the Joint Direct Attack Munitions, Joint Air-to-Surface Standoff Missile, Miniature Air Launched Decoy and the MALD Jammer to be car-

ried internally.

"In addition to designing and building a new 10-percent model of the aircraft, AEDC conducted two test programs to evaluate separation characteristics of the munitions currently undergoing flight testing," Bishop said.

According to a release

from Edwards Air Force Base, Calif., the B-52 Joint Direct Attack Munition Internal Weapons Bay Upgrade program recently completed developmental test at Edwards where it successfully demonstrated employment of JDAM munitions from the new Conventional

Rotary Launcher. Crews flying from Edwards are testing the new internal rotary launcher to carry MIL-STD-1760 weapons, which previously had to be carried on external pylons because the Common Strategic Rotary Launcher in use in the B-52 could only carry gravity-release

nuclear weapons, nuclear Air-Launched Cruise Missile, and the Conventional Air-Launched Cruise Missile.

With the successful demonstration of JDAM separations, test crews will be evaluating the use of JASSM and MALD variants.

AEDC STEM Aviation Program attendance soars



Mackenzie Holder (seated in front), a Coffee County Middle School student participating in the AEDC STEM Aviation Program, gives the “thumbs up” before beginning her glider flight for the program graduation July 8, in Eagleville, Tenn. Holder is accompanied by a volunteer with the Eagleville Soaring Club. The Aviation Program uses the Fly to Learn software, a 10-lesson curriculum using virtual airplanes to teach middle school students science concepts such as energy and forces. (Courtesy photo)

By Raquel March
AEDC Public Affairs

With participation of more than 60 students, the AEDC Science, Technology, Engineering and Mathematics (STEM) Aviation Program had a record number of attendance during the last

school year and during the recent graduation aviation flights with the Eagleville Soaring Club.

The aviation program began with 15 students from Westwood Middle School and has been offered for four consecutive years.

Graduates of the avia-

tion program, ranging from sixth through ninth grade, were able to participate in glider flights arranged by the ESC.

“We had tremendous participation by the club members who volunteer to fly with the STEM Aviation students and teachers,” said Jere

Matty, AEDC STEM coordinator. “They were taken by a tow plane up to 2,000 feet above the ground and released for a 15-20 minute flight in the beautiful sky over Eagleville, Tenn.”

Eight volunteers from AEDC and UTSI assisted with the classes.

Students from East and West Middle School, Tullahoma; North Middle School, Franklin County; and Westwood and Coffee County Middle School, Manchester, used the Fly to Learn software, a 10-lesson curriculum using virtual airplanes. The software

provides an understanding of science concepts, such as energy and forces, and allows students to modify aircraft designs to improve aircraft performance.

Matty said the Murfreesboro school system has expressed interest for the next school year.

VIKING from page 1



The NASA Viking Mars Probe is set up here in 1971 for a free flight test at the AEDC von Kármán Gas Dynamics Facility by drilling a hole through the diameter of the two-inch models and suspending them on a wire. A system of pulleys and weights held the wire taut while the desired conditions were established inside the wind tunnel. Sudden force applied to the ends of the wire caused it to break within the model, leaving the model unsupported for a brief interval. This permitted engineers to examine the airflow, not only around the model, but also in its wake. Airflow is from left to right. Observing the test arrangement is then F.L. Badman, a test engineer. (AEDC photo)



Extensive instrumentation required on the NASA Viking model is shown here before a test at AEDC in 1973 before final assembly. There were 68 sensors to record localized heat buildup around protrusions on the face of the Mars entry vehicle, while 13 heat and five pressure sensors were installed on the base cover. Then Maj. Dale Holasek of the AEDC Directorate of Test watches the assembly by Ray Moore, a test facility craftsman. (AEDC photo)

The data is continually analyzed, and the thermal protection system and parachute were used on other Mars lander missions such as the Mars Pathfinder and the Mars Exploration Rovers, Spirit and Opportunity.

NASA will host a Viking 40th Anniversary Symposium July 20 at the NASA Langley Research Center in Hampton, Va., with a panel of 20 speakers including former Viking program scientists and engineers. “The Martian” author Andy Weir will also be part of the panel and other key members contributing to past, present and future Mars missions.

Watch a live stream of the symposium called “From NASA’s First Soft Landing to Humans on Mars” July 20 at <http://livestream.com/viewnow/viking40>.

Small team ensures special tactics career fields grow with the best

By Senior Airman

Ryan Conroy

24th Special Operations Wing Public Affairs

HURLBURT FIELD, Fla. (AFNS) – On the shores of the Emerald Coast, candidates from all walks of Air Force life approach the sand, covered in salt and grit, their uniforms soaked with seawater as the warm Florida sun beats down on their red faces.

A team of cadre shouts commands at the candidates to confuse them, stress them out and push their bodies to the limit.

Before the group has a chance to evaluate their situation, the instructors push them through more assessments, continuously asking each candidate one important question: Do they have what it takes?

Special tactics career field training pipelines are some of the most physically and psychologically challenging in the Air Force. To ensure the correct individuals are on the battlefield, a group of special tactics Airmen weed out the cross-training candidates who don't meet the high standards, putting them through a weeklong selection process to select only the best-qualified individuals.

This group is known as the Recruitment, Assessment and Selection (RAS) team from the Special Tactics Training Squadron at Hurlburt Field.

What's little known is that members of the RAS team are from special tactics career fields, so they know firsthand what it takes to make it through the training pipelines.

"The candidates are going to be challenged mentally and physically, and what we're doing is looking for certain attributes," said Master Sgt. Ismael Villegas, the squadron's RAS section chief. "Those attributes are what we believe will make them successful in special tactics training pipelines."

The assessment process is broken down into a five-day process where RAS cadres put candidates through demanding tasks that test their physical ability, mental flexibility, leadership skills and psychological state of mind.

"It was the most physically-demanding week of training I had yet been to – the team of candidates (was) strong physically, but the cadre managed to push us all to our limits," said 1st Lt. Daniel Bieber, who went through special tactics officer selection in 2013. "While the physical demands of the week were obviously very tough, the cadre wanted to see those who could take the physical stress in stride and still keep their heads to accomplish complex tasks, and keep track of team members."

When Airmen cross train into special tactics it becomes important to test their leadership skills, Villegas said, citing his personal experience coming up through the combat control pipeline.

"When I was coming through as an Airman, our lieutenant and our staff

sergeants in our team quit," Villegas said. "As a young Airman, you don't know what you're getting yourself into and when you see these seasoned guys with experience, who have been in for a while, you think to yourself, 'If these guys can't hack it, I don't have a chance.' It really brings the team down, so we need to ensure we pick the right candidates who will help the younger Airmen push themselves."

The focus on finding the best-qualified recruit has led the RAS cadres to have a considerable amount of success, according to Villegas. Before the addition of the RAS program, the attrition rates for cross training current Airmen into special tactics pipelines was about 80 percent. Since its implementation, those numbers have flip-flopped.

"From a financial standpoint, we're saving the Air Force a lot of time and a lot of money," said Villegas, referring to the long and expensive process of creating a battle-ready special tactics Airmen. "We do our best to pick the right candidate with the highest chance of success. They're going to be leading these Airmen and pushing the ones who want to quit."

Staff Sgt. Stephen Culbertson, a combat control student with STTS and a former selection candidate, credits the difficulty of the program with preparing cross-training NCOs with the correct mindset.

As an NCO going through the combat control pipeline, Culbertson explained he had to worry about more than just getting through the pipeline – he also had young Airmen to lead.

"I take this very seri-

ously as I am sometimes their first impression of what working with an NCO is like," he said. "They look to me for guidance, mentorship and decision making. If I am struggling physically or mentally in a course, then my ability to lead them drastically declines."

In addition to the selection process, an integral piece of the RAS program is to recruit Airmen who are currently working in other career fields.

The RAS educates the general Air Force audience about special tactics and provides them information and the criteria and how to properly train and better prepare for selection. Members of the team visit two to three bases a month and meet with groups of 40-60 Airmen, who often flood the RAS with questions about special tactics officer, pararescue, special operations weather and combat control career fields.

"Obviously education is a big part of the recruiting process, but putting a face and name to the special tactics community and showing the Airmen their goals of becoming an operator are obtainable is huge," Villegas said. "Most guys think that special tactics Airmen are these unearthly forces, but when our people visit these bases, Airmen see that we are just extremely fit, and they can work to that level too."

The RAS team is dedicated to this mission because it means their legacy will continue with another generation of warriors who belong to the ground special operations forces.

"At the end of the day, we are training these Airmen to replace us in this career field," Villegas said.



Special tactics officer candidates carry a Zodiac boat to the shore during a selection at Hurlburt Field, Fla., Oct. 21. Special tactics career field training pipelines are some of the most physically and psychologically challenging in the Air Force. To ensure the correct individuals are on the battlefield, a group of special tactics Airmen weed out the cross-training candidates who don't meet the high standards, putting them through a weeklong selection process to select only the best-qualified individuals. (U.S. Air Force photo/1st Lt. Katrina Cheesman)



A Recruitment, Assessment and Selection cadre member yells commands at special tactics officer candidates during a selection at Hurlburt Field, Fla., Oct. 21. Special tactics career field training pipelines are some of the most physically and psychologically challenging in the Air Force. To ensure the correct individuals are on the battlefield, a group of special tactics Airmen weed out the cross-training candidates who don't meet the high standards, putting them through a weeklong selection process to select only the best-qualified individuals. (U.S. Air Force photo/1st Lt. Katrina Cheesman)

Safety – Make it a habit for life

By Maj. Gen.
Andrew Mueller
U.S. Air Force chief of
safety

KIRTLAND AIR FORCE BASE, N.M. (AFNS) – The summer months equate to a seemingly insatiable appetite to get outside and have some fun. Good weather, warm temperatures and the extra daylight hours instinctively drive people to a wide variety of outdoor activities, which simply put, are a lot of fun.

Summertime can be an enjoyable time to relax and recharge with family and friends. These enjoyable summertime activities do not come without hazards. Too often, what was thought to be risk-free fun turns into a not so enjoyable injury or accident. In fact, in recent years, exciting and fun activities like swimming, rock climbing, mountain biking and canoeing have needlessly claimed Airmen's lives.

These injuries or accidents are almost always preventable through the application of solid risk management. "Do I have the right gear?" "Did I plan



The Check3 GPS campaign was created to bring awareness to summertime activities. Individuals should always make sure they have the right gear, plan and skills to stay safe, no matter the season. (U.S. Air Force illustration)

appropriately?" and "Do I have the necessary skills?" are essential questions to ask before diving into any summer fun. Identifying the hazards, assessing the consequences of those

hazards and mitigating the risks are sound risk management principles, which can protect everyone.

Through increased awareness in the Air Force Risk Management program,

the Air Force Safety Center looks to improve the use of sound risk management principles in on-duty activities and develop habits in each and every Airmen which make

safety a part of every on-duty activity. These habits can easily translate into off-duty activities as well, helping to keep Airmen and their families safe all year long.

As the crowds step out to have some fun this summer, take the time to re-establish safety habits and make the choice to assess and reduce risk for a memorable summer of fun.

ZIKA from page 2

microcephaly or intracranial calcifications born to women who traveled to or resided in an area with Zika virus transmission while pregnant; and 2) infants born to mothers with positive or inconclusive test results for Zika virus infection.

Unrelated to pregnancy, Zika is also suspected to be associated with a limited number of cases of Guillain-Barré Syndrome, a neurological disorder.

Travel Precautions

The CDC has issued a travel alert, Level 2-Practise Enhanced Precautions, for currently affected areas. Prospective travelers are advised to consult a medical professional with occupa-

tional and travel health expertise and check the CDC's online world map depicting active-transmission regions.

As long as there is exposure risk, the CDC recommends special precautions for women who are pregnant, in any trimester:

- Consider postponing travel to any area where Zika virus transmission is ongoing.
- If you must travel to one of these areas, talk to your doctor first and strictly follow steps to prevent mosquito bites. Women who are trying to become pregnant:
- Before travel, talk to your doctor about your plans to become pregnant and the risk of Zika virus infection.

- Strictly follow mosquito-bite prevention during your trip.

Symptoms, Diagnosis and Treatment

Until recently, Zika was not considered a major public health threat because its symptoms are relatively mild. One consequence is that there are no vaccines or medications available to prevent or treat Zika infection. President Barack Obama and other world leaders have called for expedited research to support a rapid response.

About one in five people who are bitten by a Zika-infected mosquito develop symptoms. The most common symptoms are fever, rash, conjunctivitis or pink

eye, joint and muscle pain, and headache. The incubation period and the illness are believed to last several days to a week.

An evaluating occupational health or personal physician may order blood tests to detect Zika and similar viruses in individuals with symptoms who are in or have recently traveled to an active-transmission region. Diagnosis by serology can be difficult because the virus can cross-react with other viruses such as dengue, West Nile and yellow fever.

Treatment recommendations include rest, staying well-hydrated and avoiding additional mosquito bites. Medications to relieve fever and pain should only

be taken under the direction of a physician. Aspirin and other non-steroidal anti-inflammatory drugs like ibuprofen and naproxen should be avoided until dengue has been ruled out to reduce risk of internal bleeding, public health officials advise.

Prevention

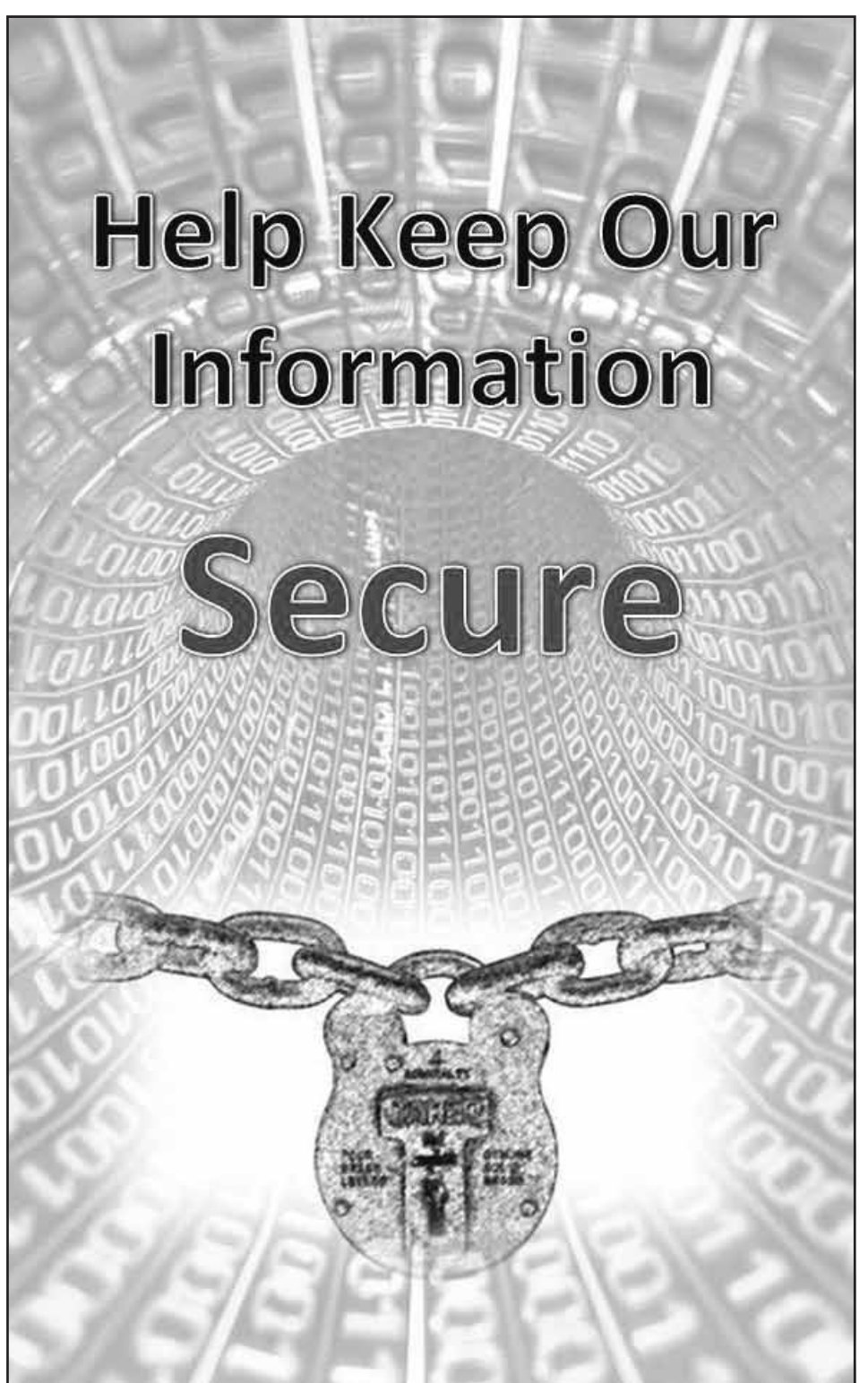
The following are recommendations to help prevent mosquito bites in transmission-active areas:

- Wear clothing and headwear to cover exposed parts of the body.
- Use EPA-registered insect repellents containing DEET, picaridin, oil of lemon eucalyptus (OLE) or IR3535—always as directed. Pregnant and breastfeeding

women can use all EPA-registered insect repellents, including DEET, according to the product label. Most repellents, including DEET, can be used on children older than two months.

- Use or wear permethrin-treated clothing and gear (such as boots, pants, socks and tents). New items may be pretreated or treated after purchase.
- Eat and sleep in air-conditioned rooms with windows closed or screened enclosures.

This information was prepared by the communications team and physicians of WorkCare, Inc., AECOM's partner in occupational health.



Coalition leader talks airpower effects

By Capt. Sybil Taunton
380th Air Expeditionary
Wing

SOUTHWEST ASIA (AFNS) – The head of U.S. Air Forces Central Command took time June 28 to discuss the impact airpower has had in the fight against the Islamic State of Iraq and the Levant and throughout the region during a visit with the 380th Air Expeditionary Wing.

“Airpower allows us to apply pressure, to execute the mission, and also helps to deter and defend the region from other potential adversaries or contingencies,” said Lt. Gen. Charles

Q. Brown Jr.

Well into the wing’s 14th year at its undisclosed location in Southwest Asia, a change of command ceremony in which Brig. Gen. Daniel Orcutt passed the reigns to Brig. Gen. Charles Corcoran presented Brown with an opportunity to highlight the 380th AEW’s contributions to the AF-CENT mission.

“I’ve got three priorities: deliver airpower, defend the region and develop relationships,” Brown said. “Delivering airpower comes in many different forms, and the 380th touches every mission set, whether it’s

strike, whether it’s air refueling, whether it’s command and control, or (intelligence, surveillance and reconnaissance). We really can’t do many of the things we do without all those capabilities, and the 380th has all of them and they do great work.”

With a diverse inventory of fighter, refueling and reconnaissance aircraft, the 380th AEW has flown over 72,000 hours, delivered 253 million pounds of fuel to the air coalition, imaged 142,000 targets, and employed over 4,000 weapons with a 98 percent hit rate since June 2015.

See **AIRPOWER**, page 9



Lt. Gen. Charles Q. Brown Jr., U.S. Air Forces Central Command commander, meets with members of the 380th Air Expeditionary Wing during his trip to an undisclosed location in Southwest Asia on June 28. Brown visited the location to interact with members of the wing and to officiate over the 380th AEW change of command ceremony. (U.S. Air Force photo/Tech. Sgt. Chad Warren)

AF selects first enlisted Airmen for Global Hawk pilot training

By Secretary of the Air
Force Public Affairs
Command Information

WASHINGTON (AFNS) – The Air Force recently selected the first 10 enlisted Airmen to attend RQ-4 Global Hawk pilot training, marking the first time since World War II enlisted Airmen will be behind the stick.

The first combined enlisted and officer training course will begin October 2016, with the first enlisted

Airmen expected to graduate in 2017.

“We’re opening the RQ-4 career field to enlisted pilots for the first time,” said Secretary of the Air Force Deborah Lee James. “We’ll take this important step in a deliberate manner so that we can learn what works and what we’ll need to adjust as we integrate our highly capable enlisted force into flying this weapons system. The intelligence, surveillance and reconnaissance mission continues to grow in importance

and our enlisted force will be central to our success.”

The initiative to incorporate enlisted pilots is the first step to developing future operating concepts within the multi-domain intelligence, surveillance and reconnaissance enterprise. The Global Hawk is the most stable remotely piloted aircraft community and presents an opportunity now to integrate enlisted Airmen in RPAs to posture the force for dynamic future operating environments.

Air Force Chief of Staff Gen. David L. Goldfein also weighed in on the importance of the ISR enterprise to the joint force.

“Looking at new ways to operate within our RPA enterprise is critical given that ISR missions continue to be the number one most requested capability by our combatant commanders. We expect that will only continue to expand,” Goldfein said. “We know our enlisted Airmen are ready to take on this important mission as we

determine the right operational balance of officer and enlisted in this ISR enterprise for the future.”

“We have been taking a hard look at the ISR enterprise and ways to maximize what our amazing Airmen can do in support of this mission,” said Gen. Hawk Carlisle, the commander of Air Combat Command. “There is no doubt that the challenges of meeting incredible demands for ISR with a small force requires solutions that make the best use of our talented enlisted corps.”

Enlisted pilots will undergo the same rigorous Air Force training as current RPA pilots with respect to flight training, rules, and responsibilities.

The new enlisted pilots will begin their Undergraduate RPA Training with the RPA Initial Flight Training where they will learn to fly a DA-20 Falcon. From there they will attend RPA Instrument Qualification and Fundamentals Courses before finishing with Global Hawk Basic Qualification Training. At the conclusion of this training they will be rated, instrument qualified pilots who are Federal Aviation Administration certified to fly the RQ-4 in national and international airspace and mission qualified to execute the high altitude ISR mission.

“There has never been a

doubt that our enlisted corps could step up and accomplish this mission for our Air Force,” said Chief Master Sgt. of the Air Force James Cody. “We’ll certainly see that as the first enlisted Airmen go through the training. They will set the tone for the future of the RPA enterprise.”

Airmen interested in applying for RPA pilot duty should work with their supervisor and through the Air Force Personnel Center. AFPC will add enlisted RPA pilot categories to their annual flying training selection boards and the next boards will convene Jan. 23-26, 2017, to fill fiscal year 2017/2018 training seats. Applicants must be a Career Enlisted Aviator (1AXXX or 1U0XX), a staff sergeant through senior master sergeant, be able to attain six years of retainability from course graduation date to complete the required undergraduate RPA training service commitment and not previously declined enlisted RPA pilot training. Eligible applicants should apply by Nov. 18, 2016.

The training plan could see 12 Enlisted Pilot Initial Class graduates in fiscal 2017, 30 in fiscal 2018, 30 in fiscal 2019, and 28 in fiscal 2020. In 2020, approximately 70 percent of those flying day-to-day missions in the RQ-4 are expected to be fully trained enlisted pilots.

Visualizing threats: A decade of threat modeling



Dynamic explosions, missile launches and air-to-air dogfights are just a few animations the National Air and Space Intelligence Center threat visualization team at Wright-Patterson Air Force Base, Ohio, create to help communicate potential threats in the world. For the past decade, these types of animations have allowed policymakers at all levels of government to watch a video clip, rather than read a stack of intelligence reports filled with military jargon and technical data. (U.S. Air Force graphic/Justin Weisbarth)

By Senior Airman Matthew Lotz

National Air and Space Intelligence Center Public Affairs

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFNS)

Dynamic explosions, missile launches and air-to-air dogfights are just a few animations the National Air and Space Intelligence Center threat visualization team create to help communicate potential threats in the world.

For the past decade, these types of animations have allowed policymakers at all levels of government to watch a video clip, rather than read a stack of intelligence reports filled with military jargon and technical data.

“Seeing really is believing when it comes to our job,” said Arthur Luke, a contractor from Ball Aerospace and Technologies Corp. “We explain important dangers using visual communications.”

Since opening their doors in July 2006, the five-person shop – a mix of civilians and contractors – has created more than 250 visualizations for customers throughout the Air Force and intelligence community.

“When an analyst requests a product, we must build off of information in the intelligence analytic report,” said

team member Greg Sundra. “It’s the creativity of each individual in this office that builds off that foundation to communicate a critical message which makes our work so special.”

Most of the products have a security classification and cannot be seen by the general public, but that doesn’t stop the team from striving for perfection.

“I always think something can be improved in our work; it’s never good enough,” said team member Justin Weisbarth, a contractor from Ball Aerospace. “Each person on the team has particular skill sets and we use those capabilities to always give the customer greater than what they are asking for.”

The threat visualization team has more than 100 years of combined experience, with most of their backgrounds including productions related to freelance movies, 2-D graphics, logos and video special effects.

According to Steve Vanzant, the NASIC threat visualization team leader, he works with the best of the best and has people he can trust with anything.

“I have the jokester, the straight-man, the calm soul and the button-pusher,” Vanzant said. “The diversity of thought helps the creative process, plus all those char-

acters make it enjoyable to come to work.”

The team’s next project

includes working with the Air Force Institute of Technology to

allow visualization specialists across the intelligence community to use

and share 3-D models, textures and other animation elements.

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AIRPOWER from page 8

The air coalition can deliver a precision strike with multiple weapons inside of 10 feet and roughly 99 percent of the weapons employed in Operation Inherent Resolve are precision guided, according to Brown. This capability enables the coalition to strike more lucrative targets such as logistics, command and control, weapons manufacturing areas, ISIL financial resources, and oil facilities with greater effect.

“Precision-guided munitions allow us to do several things. One – to hit the target we’re aiming at, and two – to minimize civilian casualties. That’s something we spend a lot of time and energy on in planning and execution,

and by being precise we don’t have to employ as many weapons,” Brown said. “That’s hugely important to moving the campaign forward.”

Operating daily alongside coalition partners, the 380th AEW achieves U.S. Central Command mission priorities across the Middle East, North Africa and Central Asia.

“The 380th provides AFCENT and CENTCOM with a potent complement of Airmen, joint and coalition partners, that are instrumental to the delivery of precise airpower effects that are not only affecting (ISIL’s) capabilities, but are also having an impact in a number of operations across the region,” Brown said.

2016 August

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			3 ALC FREE THURSDAY MOVIE 6:30PM	4 Café 100 <i>National Chocolate Chip Cookie Day</i> Buy lunch combo and get 1 free cookie Movie: X-Men: Apocalypse, PG13	5 ALC Jam Night 6pm 	6 <i>** ALC Closed **</i> ODR Zip Lining Trip 8am-4pm age 12+ ONLY \$20 inc bottled water, snack, and lunch!! Sign up by July 30 GC Hot Summer Night Glow in the Dark Tournament 8pm all ages \$5 per person Two person scramble Sign up by Aug 4
7	8	9	10 FC Dog Day Challenge 5 interval style exercises testing cardio and muscular endurance First 30 to complete receive t-shirt	11 ALC Jewelry Fair Café 100 8am-1pm All jewelry \$20 or Less Movie: Teenage Mutant Ninja Turtles: Out of the Shadows, PG13	12	13 <i>** ALC Closed **</i> ODR Aerial Challenge \$20 Call for details 454-6084 GC Fall Open Two day stroke play 8:30am \$40 per person Sign up by Aug 11 Awards to gross & net winners
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21	22	23 ALC Book Fair Café 100 9am-1pm 	24	25 Movie: TBD Not available at time of publication	26 ALC Trivia 6:30pm	27 <i>** ALC Closed **</i>
28	29	30	31 <i>Café 100</i> National Bacon Day Buy omelet, get large bacon for \$1.25 	Watch for changes to Café 100 menu and pricing this month Remember, First Plus members receive discounts! Show your card and save!		

Little Rock Airman saves woman from drowning



Senior Airman Colton Lien, a 19th Civil Engineer Squadron explosive ordnance disposal technician, and his friends saved a woman from drowning June 25 at the Ouachita River Whitewater Park in Malvern, Ark. He grabbed a woman from a whirlpool in the river, and with the help of others, paddled her to safety and performed CPR until she regained consciousness. (U.S. Air Force photo/Staff Sgt. Regina Edwards)

By Staff Sgt. Regina Edwards
 19th Airlift Wing
 Public Affairs

LITTLE ROCK AIR FORCE BASE, Ark. (AFNS) – “Help!”

“That scream was even more chilling than the water I and my friend were in,” said Senior Airman Colton Lien, a 19th Civil Engineer Squadron explosive ordnance disposal technician.

It was June 25, a normal Saturday of kayaking at the Ouachita River Whitewater Park in Malvern, Arkansas, for Lien and his friends when they witnessed a woman fall out her inner tube into the middle of the river.

“She was with a group of people in approximately 10 tubes,” he said. “All the tubes were tied together, so the river continued to carry them down stream after she fell.”

Lien, who is also a certified canoe instructor, knew that something needed to be done immediately. The woman fell into a suck hole, which is like a whirlpool in the river. Once a swimmer becomes stuck in a suck hole, it is extremely dangerous to be in and difficult to swim out. He and his friends paddled their kayaks toward the woman as they alerted others they passed to get help.

Once they reached her, they noticed that she was spinning. She would go underwater for five to 20-second intervals. Lien, his friends and another paddler, who came to help, tried for minutes to grab her with a rope, catch her with their paddles and reach for her from the kayaks, but nothing worked.

Eventually, the woman became unconscious.

“I was nervous, but I didn’t want to panic,” Lien

said. “Plans A, B, nor C worked. We were about to attempt plan D with hopes that we didn’t have to attempt plan E, which was jumping in there myself and getting her.”

Lien surfed closer to the woman and finally, he bumped her body out of the whirlpool with his kayak. He grabbed her and pulled her body beside a large canoe that one of the paddlers was in. Though there was a small sigh of relief, she was still unconscious.

After moments of deliberation, Lien paddled the woman to shore as one person held her body and two others gave her breaths.

“It felt like forever getting back to the bank, but I think it was actually 10 minutes,” Lien said. “Reaching the bank was the easy part. When we got there, I checked for a pulse; there was none. Other people came to help with giving the woman chest compressions. Within about 15 seconds, she regained consciousness and her pulse.”

Lien stayed with the woman for an additional 15 minutes as she recovered. When the paramedics arrived, they took the woman and continued care. Lien said he walked away from the crowd for a few minutes to take in what just happened.

“I don’t feel like a hero,” he said. “We did what needed to be done. It was definitely a team effort. We didn’t have time to panic because she didn’t have time for us to panic. We had to move and move fast.”

Lien credited his training as an EOD technician to his fast reaction to the emergency situation. EOD members focus on the protection of personnel and property, with emphasis on personnel first. He leaned on his water safety knowledge and train-

ing to quickly assess the situation and lead the others to making the right decisions that ultimately saved

a woman’s life.

“Even if you are a good swimmer, wear a life jacket in deep water, and don’t

paddle alone. Those tips could be the difference between life and death,” he said.

