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Civil Air Patrol Hurricane Season Response




118 aircraft have flown 2,840 hours on 1,196 sorties over impacted areas in Texas, Louisiana, Florida, South Carolina, Puerto Rico and the U.S. Virgin Islands




1,061 personnel from 44 CAP wings and regions across the country have worked these missions.



498,397 pictures were provided to emergency management personnel in the impacted areas to help focus recovery efforts.



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10

An unprecedented hurricane season in 2017 prompted a massive response from CAP.

DEPARTMENTS

- 5 From Your National Commander**

ON OUR COVER

A Civil Air Patrol Congressional Squadron Cessna 182T is intercepted by a U.S. Air Force F-16 during a Fertile Keynote mission near Washington, D.C. Maj. Lou Cantilena and Senior Member Rick Micker are members of the CAP aircrew aboard the plane. Both belong to the Congressional Squadron, which is based at Joint Base Andrews, Maryland, and is celebrating its 50th year of service in the nation's capital in 2018. Photo by

Col. John Swain, CAP National Headquarters

Civil Air Patrol Volunteer is oriented toward both internal (CAP) and external audiences. For that reason, it uses the Associated Press style for such things as military abbreviations. Official internal CAP communications should continue to use the U.S. Air Force rank abbreviations found in CAPR 35-5.

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Civil Air Patrol Honored for Public Benefit Flying

Civil Air Patrol received a 2017 Public Benefit Flying Award for its shadow escort flights for the U.S. Air Force Reaper Training Program in central New York. The National

Aeronautic Association, in partnership with the Air Care Alliance, a nationwide league of humanitarian flying organizations, recognized CAP for Outstanding Achievement in the Advancement of Public Benefit Flying as a result of the flights, which CAP has provided since June 2016. The award was presented to Maj. Gen. Mark Smith, CAP's national commander, by NAA President and CEO Greg Principato, who said, "CAP's support of the program has helped save taxpayers over \$1 million and has increased MQ-9 training by 25 percent."

AFA Announces New Partnership with CAP

The Air Force Association has announced a new partnership with Civil



Air Patrol designed to advance both organizations' mission to promote aerospace education in communities nationwide. The statement of mutual support, signed in Arlington, Virginia, by retired U.S. Air Force Gen. Larry Spencer, Air Force Association president, left, and Maj. Gen. Mark Smith, Civil Air Patrol national commander, calls for AFA and CAP to pair CAP squadrons and AFA chapters for the purpose of advocating for aerospace education at the local, state and regional levels.

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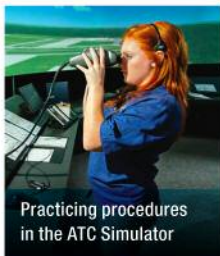
One of our aerospace majors in a Diamond DA40, just one of our 24 aircraft used for flight training. MTSU's Boeing 727 is visible in the background.



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MTSU aerospace majors working in the flight operations maintenance hangar.



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Good Times for CAP

These are wonderful times for Civil Air Patrol, with CAP having celebrated several key milestones.

On Dec. 1, 2016, we celebrated the 75th anniversary of our founding. Two years before that, our Congressional Gold Medal gala banquet was all the more significant as we were able to present our World War II-era volunteers with replicas of their newly approved medals. On Oct. 1, 2017, CAP celebrated the 75th anniversary of our cadet program. This amazing youth development program has helped America's young people develop into leaders who have positively affected our society, regardless of what career paths they chose as adults. I am proud to say that today's CAP cadets continue the tradition of excellence established by those who served before them.

We have yet another milestone on the horizon. On May 26, CAP will celebrate our 70th anniversary as the Air Force Auxiliary. On May 26, 1948, Congress passed Public Law 557, which formally established CAP as the volunteer auxiliary of the Air Force. CAP had served in support of the Army Air Corps previously, but this law ensured that the partnership continued with the newly formed Air Force. CAP will celebrate this milestone throughout the year, and the anniversary will be our theme for our August national conference in Anaheim, California.

CAP highly values our service to the Air Force and, by extension, to our



communities, states and nation. We strive for excellence and professionalism in performing our current missions while we partner with our stakeholders to determine what capabilities they need us to field in the future. Envisioning what CAP's future might look like was a topic I was asked about during a recent interview. Given the journey that CAP has had over its previous 75 years, what might CAP look like in another 75 years? Briefly, my answer was that some things will be radically different, yet many things will be the same. Let me explain.

First, I believe CAP will be just as vibrant an organization, and just as relevant to the Air Force and our nation 75 years in the future, as it is today. The technology that we use to accomplish our missions will change the most. To think of one current example, our search and rescue mission

The 70th auxiliary anniversary logo seen on the computer screen is the work of Maj. Erik Koglin of the Tennessee Wing. Koglin's design stands in homage to the shoulder patch used by CAP members in 1948 when the organization became the official volunteer civilian auxiliary.

has changed considerably due to technological advances. In the not-so-distant past, we would perform search missions that would last many days, using many aircraft and personnel. Now, courtesy of technological advances such as CAP's radar analysis and cell phone forensics, searches for missing aircraft often last just a few hours. We can only imagine what future technological advances might be in store to help CAP in performing its missions.

This new red, white and blue logo commemorates the 70th anniversary of Civil Air Patrol's service as the U.S. Air Force Auxiliary.



other agencies.

On the other hand, I believe that many things will remain fundamentally the same as they have been over the course of our 76-plus years as an organization.

Another area in which we will see change will be in the exact composition of the missions that we perform. We no longer perform coastal patrol missions searching for enemy submarines, as CAP did during World War II. More recently, our bread-and-butter mission was search and rescue. However, our mission set has evolved to where the larger percentage of our aerial missions is focused on disaster response. Looking forward, I am confident there will continue to be changes in some of the missions that we perform for the Air Force and

First, we will continue to perform value-added missions for the Air Force, other agencies and our communities, states and nation. Those who are serving in CAP 75 years from now will still be supporting the Air Force, responding to disasters and helping teachers and youth with aerospace-related science, technology, engineering and math educational resources. CAP will still provide America's young people with the opportunity to develop strong ethical character, leadership and self-confidence that will allow them to excel as adults in their chosen

professions. Even more importantly, CAP will still consist of amazing volunteers and staff members who are dedicated to service, excellence and professionalism. CAP's people are our organization's treasure, and their spirit of service is something that will remain unchanged over the next 75 years.

Join us in celebrating our newest milestone — 70 years as the Air Force Auxiliary. Thank you for your support of this amazing organization. Watch our people excel in performing today's missions while preparing for what may come tomorrow.

Semper Vigilans!



Mark E. Smith

Maj. Gen. Mark E. Smith
CAP National Commander

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A Sentimental Journey

Secretary of the Air Force visits CAP National Headquarters

By Steve Cox

Dr. Heather A. Wilson made her official first visit to Civil Air Patrol on the afternoon of Dec. 12, 2017, less than seven months after she was sworn into office as the 24th secretary of the U.S. Air Force. Wilson, the highest-ranking civilian military leader in the Air Force, toured CAP National Headquarters at Maxwell Air Force Base, Alabama, learning about various CAP programs and meeting several Alabama Wing cadets.

But it was a walk down the main hallway of National Headquarters that seemed to grab Wilson's attention, as it reminded her of her unusual connection to Civil Air Patrol. Halfway down the hallway, CAP National Commander Maj. Gen. Mark Smith showed Wilson her beloved grandfather's name on one of the plaques hanging on the wall, listing the names of past New Hampshire Wing commanders.

Her grandfather, Col. George G. "Scotty" Wilson, was one of the founding members of CAP during World War II and served as one of the first commanders of the New Hampshire Wing from November 1948-September 1954. So seeing his name on the headquarters plaque along with others she recognized was noteworthy.



CAP National Commander Maj. Gen. Mark Smith chats with Secretary of the Air Force Heather Wilson during her visit to National Headquarters. While there, she was briefed by Smith and other CAP leaders, in addition to taking the time to meet with a delegation of Alabama Wing cadets. Photos by Susan Schneider, CAP National Headquarters

"Secretary Wilson was delighted when she saw her grandfather's name on the plaque of New Hampshire Wing commanders," said Smith. "Secretary Wilson also pointed to the names of the wing commanders who had served before and after her grandfather. She had met several of them and had heard stories about them from her grandfather as she was growing up."

Her family's fascination with flight led to Wilson's success at the Air Force Academy and beyond.

"She has shared on many occasions that she and her grandfather had a close relationship," said Smith, "and that he served as her inspiration to

attend the Air Force Academy and chase her dream of a life in aviation."

Wilson graduated in 1982 as part of one of the academy's first coed classes. At the academy, she was the first woman to command basic training and the first woman vice wing commander. She also earned master's and doctoral degrees as a Rhodes scholar at Oxford University in England.

Wilson is the first Air Force Academy graduate to serve as secretary of the Air Force and the first service secretary confirmed in President Donald Trump's

administration.

After graduation from Oxford, she served as an Air Force officer in Europe during the 1980s, rising to the rank of captain, and was on the National Security Council staff under President George H.W. Bush during the fall of the Berlin Wall.

She also became the first Republican woman to represent New Mexico in the U.S. House of Representatives, from 1998-2009, and also the first female military veteran elected to a full term in Congress.

While Alabama Wing cadets in attendance for her visit to National Headquarters probably weren't aware



Cadet Col. Katrina Hunkapiller greets Secretary of the Air Force Heather Wilson as others await their turn — from left, Cadet 2nd Lt. Emory Crenshaw, Cadet Chief Master Sgt. Danielle Vigil, Cadet Capt. Omark Mulekar and Cadet Chief Master Sgt. Troy Simeone.

of all of Wilson’s lifetime achievements, they were certainly eager to greet the secretary and talk with her about various aerospace projects and science, technology, engineering and math (STEM) kits they use in CAP.

“I was honored to be able to meet her through Civil Air Patrol, along with my fellow cadets,” said Cadet Col. Katrina Hunkapiller. “I had previously heard her speak on issues such as American air and space dominance and noted not only her own intelligence, but also her confidence in our country’s military. I also enjoyed getting to know her humor and wit as she discussed the importance of advancing our scientific and technological efforts. I believe she is a great advocate and leader for our Air Force.”

“I appreciate her spending some time with us, especially with her busy schedule,” said Cadet Chief Master Sgt. Danielle Vigil. “It was inspiring to hear how she progressed in her career.

Nothing held her back from going to the Air Force Academy, becoming a pilot and working in Congress. It’s very clear that she is an outstanding role model for all CAP cadets, especially female cadets.”

“She is a successful and strong female figure in our country that ladies in particular need and can look up to,” added Hunkapiller.

Smith said the Alabama cadets demonstrated all that is good about CAP and its cadet program — excellence, professionalism and enthusiasm. “They were engaged and eager to share with Secretary Wilson what CAP meant to each of them. In turn, Secretary Wilson was enthusiastically engaged with the cadets. I would daresay that her time with them was the highlight of her visit to our national headquarters.”

Wilson participated in a brief interview with National Headquarters Public Affairs during her visit, and said CAP — the newest member of the Air Force’s Total Force — can be very helpful in addressing the ongoing pilot shortage in America.

“I think the Civil Air Patrol does inspire the next generation of young leaders in aerospace and that’s probably the most important role from the future of the Air Force,” Wilson said. “But there is also that auxiliary role that the Civil Air Patrol is there, at squadrons around the country.”

“Those skills and abilities, whether you’re an observer, whether you’re a pilot or whether you’re on the ground responding to a natural disaster, Civil Air Patrol is part of the team,” she added.

Smith said one of CAP’s strengths is its ability to positively impact young people and inspire them to seek careers in aviation and STEM-related fields.

This includes helping cadets interested in becoming pilots to realize their dreams.

“The Air Force recognizes CAP’s ability to do this well and has increased our funding, starting in fiscal year 2019 by \$2.4 million in order to perform what is called the Youth Aviation Initiative,” he said. “This funding will help us to fly more cadets and help them achieve their private pilot certificates, as well as extend our reach with STEM-related products and activities and career exploration opportunities for our cadets.”

Before leaving, Wilson thanked the Alabama cadets for their service in Civil Air Patrol.

“Thank you for your willingness to be part of us, and to be on the team,” she said. “Everybody as a citizen has an obligation to serve in some way. We’re a self-governing republic. That means all of us have to give back to the community in which we live. For some of you, you’ve chosen to serve in the Civil Air Patrol. And that’s an honorable service. So thank you for your service.”

Smith was encouraged by Wilson’s visit, which he said further confirms CAP’s importance to the Air Force: “We have had a number of senior Air Force officials take time out of their busy schedules to visit us at our national headquarters. This includes Secretary Wilson, Assistant Secretary (Shon J.) Manasco and 1st Air Force Commander Lt. Gen. (R. Scott) Williams.

“This clearly indicates to me that CAP is a valued member of the Total Force. Senior Air Force leaders want to learn more about our capabilities and, in turn, add our capabilities into direct support of our active duty, Guard and Reserve partners.” ▲



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Civil Air Patrol, in cooperation with the Air National Guard, conducts an aerial survey over northern Puerto Rico on Sept. 26, 2017, after Hurricane Maria ravaged the island.

Air Force photo by Airman 1st Class Nicholas Dutton



HURRICANES!

Unprecedented hurricane season
in 2017 prompts massive
response from CAP

By Russell Slater

Nearly 500,000 aerial
photos taken to assist
emergency management
officials in wake of
Harvey, Irma and Maria



Record rains from Hurricane Harvey caused historic flooding, like this scene along the Calcasieu River north of Lake Charles, Louisiana.

the fiscal year put CAP over the 100,000 flying-hour mark for 2017.

Prepared for a Hurricane, not a Disaster

Capt. Luis Herrera, the Puerto Rico Wing's inspector general, witnessed the chaos over his native island and neighboring islands from the air as a CAP pilot. Since the beginning of Hurricane Irma, Herrera and others were tasked with taking pictures over Puerto Rico and the Virgin Islands.

"Fortunately, Irma didn't affect that much of Puerto Rico, at least in most of the areas, as it did in the other islands. Flying over St. Thomas and St. Croix, we saw everything from destroyed houses (even concrete ones), partially destroyed buildings and damaged roads," he said. "When we were ready to wrap up the mission for Hurricane Irma, we received the Maria threat warnings."

The Category 5 storm made land-fall on the island on Sept. 20, and the devastation it wrought resulted in the Puerto Rico Wing springing into action to support flight operations in a full-scale disaster relief mission.

"Hurricane Maria has been the worst natural occurrence that has hit Puerto Rico, at least in my time," Herrera said. "The people from Puerto Rico prepared for a hurricane, but we didn't prepare for a disaster. This time it was us who were hit really bad. Puerto Rico suffered damages that I've never experienced before."

From overflowed rivers to a nearly collapsed dam, Herrera witnessed the damage inflicted on urban areas and other communities that were basically wiped out. "Most of the things we took for granted, like water, electricity and cellular connections, were not accessible anymore," he said. "Still

A trio of costly and deadly hurricanes put the training and capabilities of CAP members to the test in 2017.

In August and September, severe flooding near Houston caused by Hurricane Harvey devastated the area and caused more than \$125 billion in damage, making it the costliest hurricane of the year. September also saw Hurricane Maria hammer the island of Puerto Rico, resulting in \$90 billion in damage, and Hurricane Irma, which caused \$50 billion in damage, sweep over the Caribbean and Florida.

Combined, the hurricane season cost at least 251 lives and proved to be the most demanding ever for CAP, whose missions surpassed responses to previous record-setting storms like

hurricanes Katrina and Rita in 2005 and Superstorm Sandy in 2012.

CAP provided an unprecedented amount of support to impacted states during the 2017 hurricane season. In all, 1,061 volunteers from 44 CAP wings and regions across the country supported 1,196 CAP sorties by 118 aircraft that flew 2,840 hours over affected areas in Texas, Louisiana, Florida, South Carolina, Puerto Rico and the U.S. Virgin Islands. They provided 498,397 photographs to emergency management and responders to help focus response and recovery efforts. The 2,840 flight hours toward the end of

today, there is approximately 40 percent of the population that is without power in their homes.”

Herrera himself felt the storm’s impact in his personal life, as he and his family depended on a portable generator to help keep their refrigerator as cold as possible, occasionally charge electronic devices and run fans in order to keep cool at their home in Bayamon, south of San Juan.

Civil Air Patrol provided assistance through aerial reconnaissance and



Maj. Natalie Franc, aerial photographer, takes photos of floodwaters from above the Brazos River in southwest Texas. Franc is commander of the El Paso Composite Squadron. Photo by Lt. Col. Ronald F. Diana, Texas Wing



Cadet Capt. Luis Sierra, Cadet Senior Airman Daniel Sierra and Cadet Staff Sgt. Hector Rodriguez assist Capt. Gabriel Sierra, right, in setting up a VHF antenna to restore communications in the wake of Hurricane Irma. The cadets are members of the Capt. Saulo Solis-Molina Cadet Squadron, which Capt. Sierra commands.



Maj. Victor Santiago, front, Puerto Rico Wing assistant director of operations, and Capt. Luis Herrera, the wing’s inspector general, conduct a preflight inspection of their CAP plane before flying a Hurricane Irma mission from Fernando Luis Ribas Dominicci Airport in San Juan. Photo by Lt. Col. Wigberto Del Valle, Puerto Rico Wing

“For my teammates from Puerto Rico, I was impressed with all we accomplished. We were going through the worst times; most of us lost a lot. ... Still, we showed up day after day to volunteer our time in order to help as much as possible.” – Capt. Luis Herrera, Puerto Rico Wing inspector general

Cadet Senior Airman Seth Felan tells retired U.S. Air Force Lt. Gen. and current Civil Air Patrol Board of Governors Chair Judith A. Fedder how cadets are supporting CAP's Hurricane Harvey mission as Cadet Airman Steven A. Castrejon looks on. Felan and Castrejon, both cadets in the Alamo Composite Squadron, were part of a large contingent of Texas Wing members who supported the mission. Photos by Lt. Col.

Johanna O. Augustine, Texas Wing



Lt. Col. Rick Woolfolk, incident commander for CAP's response to Hurricane Harvey, briefs Fedder at the incident command post in San Antonio. Fedder was in San Antonio in August for CAP's 2017 National Conference.



damage assessment flights. Aircrews from the Puerto Rico Wing and other CAP wings took more than 80,000 photos during nearly 600 hours of flight time. The images helped the Federal Emergency Management Agency and other emergency responders focus their efforts on the most affected areas.

Twelve-hour days were typical, with members assembling at 7 a.m. for a briefing before launching morning sorties. Upon debriefing after their return, crews took a quick lunch break before launching additional sorties in the afternoon. Days were wrapped up with a final debriefing before exhausted personnel uploaded their photos to FEMA, concluding with a conference call with their command.

Lt. Col. William Wallace of the Georgia Wing, one of four incident commanders who eventually flew to

the island, oversaw the members from Puerto Rico and the mainland U.S. as they put in long hours under stressful and uncertain conditions. Faced with washed-out roads and debris-strewn landscapes, they worked to re-establish their repeaters and mission base communications capabilities.

"For the members that came from the continental U.S. to help us, I can only say that it was a privilege working with them," Herrera said. "They were key to the success of all the tasks requested of us. CAP training was essential for this. We worked as a team, like we knew each other from before.

"For my teammates from Puerto Rico, I was impressed with all we accomplished. We were going through the worst times; most of us lost a lot," he said. "Some lost their jobs, their homes were damaged, and others lost

everything. Still, we showed up day after day to volunteer our time in order to help as much as possible. We all worked as a team with one single goal, putting everything else aside, which made this mission a successful one."

One CAP

Col. Joe Smith, commander of CAP's Southwest Region, was more than pleased with the organization's performance in the wake of Hurricane Harvey. "Civil Air Patrol's response to Hurricane Harvey was an outstanding example of 'One CAP,'" said Smith, who officially became region commander a week after the storm hit. "It was certainly helpful that hundreds of members were attending the National Conference in San Antonio."

Harvey hit southeast Texas and southwest Louisiana with 130-mph winds before dumping 50 inches of rain, with major flooding adding to the widespread catastrophic damage, especially in the Houston area. All 857 CAP members residing in the vicinity were affected, each with stories of lost family members or friends, rooftop rescues and destroyed property.

Members of the Texas Wing took to the skies on Aug. 31 over Corpus Christi and Rockport, cities hit hard by Harvey. With the need to cover nearly 255 miles of shoreline and 23,000 square miles, Lt. Col. Rick Woolfolk, incident commander, realized that more help was needed.

From the first day of the response to Harvey, volunteers from four different CAP regions as well as National Headquarters were working at the incident command post. The second day saw more CAP members pouring in from the Great Lakes, North Central and Rocky Mountain regions, in

addition to the Southwest Region. A total of 582 volunteers from 44 different wings or regions and over 70 planes contributed in some way over a five-week period. The mission generated 375,973 digital photos, covering an area the size of Indiana.

“I am extremely proud of the teamwork and dedication demonstrated by all of the volunteers who contributed to this very significant disaster response,” Smith said. “This would not have been possible except for our strong CAP-wide emphasis on safety, training and professionalism. ‘One CAP’ is why we were successful.”

John Desmarais, director of operations at CAP National Headquarters, summed things up: “This hurricane season was incredibly busy,” he said. “We had personnel from all over the country involved, and it made a huge impact. It was resource-intensive and forced us to support several large operations at the same time, and with Puerto Rico and the U.S. Virgin Islands, we had to work to move resources that we normally wouldn’t. It all worked out, though, and CAP worked as a large team to make it happen.” ▲



Members of an Indiana Wing aircrew pose for a photo with Texas State Rep. Jason A. Issac, second from left, before a damage assessment flight near Houston. Issac represents District 45 in the Texas Legislature and is also a member of the wing’s Legislative Squadron. Photo by Matthew J. Congrove, Texas Wing

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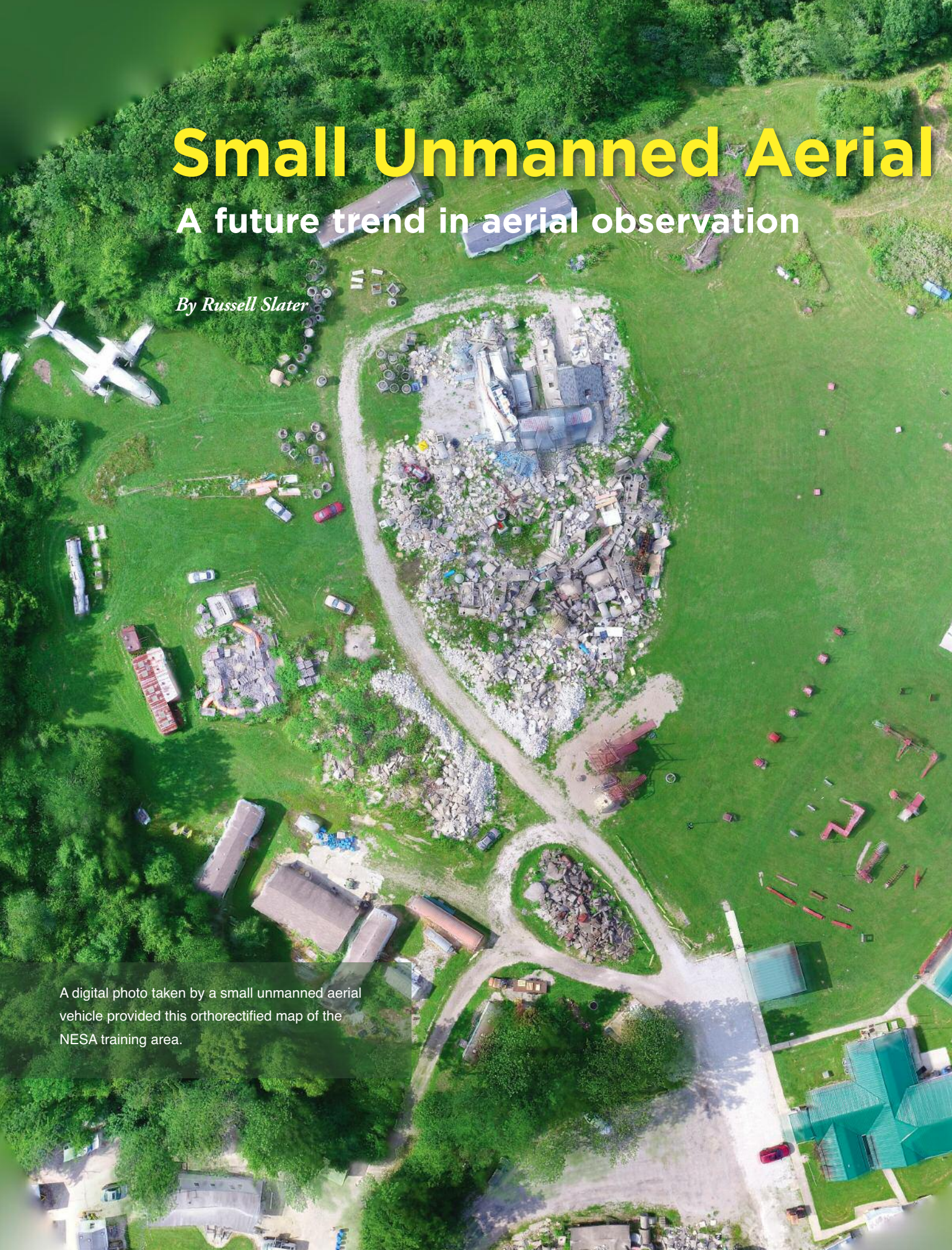
WINGPOINTS

Small Unmanned Aerial

A future trend in aerial observation

By Russell Slater

A digital photo taken by a small unmanned aerial vehicle provided this orthorectified map of the NESA training area.





Systems

The demand for miniature drones, or sUAS (small Unmanned Aerial Systems), continues to grow as everyone from the U.S. military to law enforcement and private businesses seeks to use the latest technological advancements to aid their operations — and CAP is no exception. Currently, 14 wings and 25 units are involved in field testing and training, with an eye toward establishing a full-fledged program in 2018.

Incredible potential

Aside from homeland security operations, sUAS have the potential for use in post-disaster response missions, rescue efforts, damage assessment and general aerial reconnaissance.

Maj. Austin Worcester, director of operations for the Missouri Wing and emergency services officer for the North Central Region, was a distinguished graduate of the advanced sUAS course last year at CAP's National Emergency Services Academy.

"The sUAS program has an incredible potential," Worcester said.

As an example, Missouri conducted a test to image a subdivision, simulating a post-disaster imagery response. Members were able to fully photograph the subdivision in 22 minutes of flight time, generating nearly 1,000 images. The photos were then used to process and produce a geo-referenced, orthomosaic image of the entire subdivision within an hour.

"Using a FLIR-equipped sUAS could improve our ability to conduct night search and rescue, or even day SAR, and find missing persons or aircraft," Worcester said.

Into the future

Capt. John Webber, assistant emergency services training officer for the Indiana Wing, has studied the latest techniques and applications using

sUAS technology and has helped pass that knowledge along to fellow CAP members. "This summer we had two weeks of small Unmanned Aerial Systems training at the Camp Atterbury Training Center in Indiana during NESAs," he said.

Webber, who works as an electrical engineer at AT&T Bell Labs, joined CAP 10 years ago and has attended NESAs for eight years. "In 2017, I participated as a student and also assisted as an instructor for the basic mini-UAV (Unmanned Aerial Vehicle) class and advanced UAV class." He also instructed for a week at the NESAs Center of Excellence in November, training 15 wing sUAS program managers from across the U.S.

Webber has flown manned and unmanned aircraft since he was 16. "I fly for Indiana University's Center for Unmanned Aerial Systems Imaging, conducting research of unmanned aerial imaging solutions. I served as the director of operations for the cell tower infrastructure inspection. I have a passion for aviation and for CAP," he said.

Plans are for CAP's burgeoning sUAS program to expand and become a key resource for wings nationwide. As members adapt to emerging technology and new training, small drones will most likely become a regular tool for CAP and other emergency services in future scenarios.

Capt. John Webber, left, of the Indiana Wing provides instruction to Cadet Capt. Linus McFarland at NESAs. McFarland is a member of the Wiesbaden Flight of the Ramstein Cadet Squadron in Germany, and one of many cadets now interested in CAP's sUAS program.

A professional mini-UAV flies above the training area at the National Emergency Services Academy in Indiana.



CAP Director of Operations John Desmarais believes small unmanned aerial vehicles are going to revolutionize the way members carry out their missions.

“They’re really changing how we do business,” he said. “There are some great capabilities in sUAS already, and new things are coming out every day that could help our missions, like IR (infrared) cameras to assist with search and rescue activities, as well as radio direction finding tools that will be very helpful.”

Desmarais said Civil Air

Patrol’s goal is to at least have sUAS operational capability in every wing by 2020, adding he would not be surprised if CAP were to push to get at least one per incident command post, or more, down the line.

“It is so exciting to be at the beginning of such an exciting technology. I feel we are in the Orville and Wilbur Wright stages of sUAS,” said Webber. “I am so happy to be part of helping to develop the methods and procedures to take us into the future of aerial imaging collection.” ▲



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The Congressional Squadron

*Has It Really
Been 50 Years?*

By Col. John Swain



A Congressional Squadron
Cessna 182T is parked near
Air Force Two, an Air Force
VC-32A, circa 2017. Photo by
Col. John Swain, CAP National Headquarters



Within sight of Air Force One, Civil Air Patrol aircraft stand ready for emergencies and other missions. These Cessna aircraft are assigned to CAP's Congressional Squadron, which continues a tradition of service to the nation that began a half-century ago. Like other units, the squadron supports the Air Force's Total Force as well as various government agencies, states and communities.

Political Attacks Spark Squadron's Creation

It was the demise of special military reserve units on Capitol Hill, where members of Congress could serve in the military, that led to the Congressional Squadron's creation. As the Vietnam War raged, congressmen were being legally challenged over their military service. As these units disappeared two former Civil Air Patrol members, both relatively new to the House of

Representatives, joined forces to charter a new CAP squadron in March 1968 in which members of Congress could serve.

U.S. Reps. Lester Wolff, D-N.Y., and Jerry Pettis, R-Calif., along with others such as U.S. Sen. Barry Goldwater, R-Ariz., were the principal movers in creating this unique nonpolitical unit. During World War II, Wolff had served in CAP's New York Wing and, later, helped establish the first cadet exchange with Canada — the beginning of the International Air Cadet Exchange. Pettis, a World War II aviator who flew in the Pacific Theater, had flown with the Colorado Wing as a flight instructor and search and rescue pilot.

The squadron provides those in Congress and their staffs a chance to serve in another way — some have become rated mission aircrew and participated in missions — as well as a way to observe CAP operations up

close. Membership also allows congressmen and staff to show support for wings and local squadrons and helps wings connect with their state congressional delegations. The squadron has 574 members, with over 200 currently serving in Congress.

50 Years — Three Commanders

Only three people have ever commanded the unit — Wolff from 1968-1981, Rep. Nick Rahall, D-W.Va., until 1991, and Sen. Tom Harkin, D-Iowa. With Harkin's retirement in 2015, the search is underway for a new commander. Former vice commanders include Pettis and Reps. Lindy Boggs, D-La., Rod Chandler, R-Wash., and Ben Gilman, R-N.Y. Five squadron members have gone on to serve as U.S. vice presidents and president, including Reps. Gerald Ford, R-Mich., Dan Quayle (later a senator), R-Ind., and Dick Cheney,

◀ A Congressional Squadron Cessna 182T flies over southern Maryland during a Fertile Keynote mission. Lt. Col. Ralph Abraham, Maj. Lou Cantilena and Senior Member Rick Micker make up the aircrew aboard the Civil Air Patrol plane. Abraham, R-La., is a CAP mission pilot who flies with the Louisiana Wing and Congressional Squadron. Photo by Col. John Swain, CAP National Headquarters

R-Wyo., and Sens. Al Gore, D-Tenn., and Joe Biden, D-Del.

Flight Operations Central to Its Service

The assignment of a sad-looking ex-Air Force training aircraft marked the start of Congressional Squadron flight operations at Andrews Air Force Base, now Joint Base Andrews, in 1975. For the first 20 years the unit was located with the Andrews Aero Club, but in 1991 the squadron built its own hangar. While the Andrews flight pattern can be demanding, with many high-performance aircraft, the squadron has safely flown a number of Cessna planes from there — including the T-41A, T-41B with a STOL kit, C-172, C-182R and C-182T.

Squadron aircrews support local missions when asked. In the past, they have flown Maryland Wing bay and bridge patrols, Delaware Wing counter-drug missions, Virginia Wing search and rescue missions, North Carolina Wing disaster support and National Capital Wing cadet orientation flights. They also routinely participate in Fertile Keynote missions and have previously supported Falcon Virgo missions.

Less traditional missions have been flown as well, such as government technical tests — including the first light aircraft to send satellite VHF radio transmissions via NASA's ATS-3, an experimental weather and commu-

nications satellite. Others include over-ocean counter-drug and smuggling missions, orientation flights for government officials and VIPs, special missions for the Air Force, public affairs support in government movies and capabilities demonstrations and training for agencies such as the FBI,



Former U.S. Rep. Lester Wolff prepares for a flight in the Congressional Squadron T-41B, circa 1980. Wolff, the longtime New York congressman who helped found the Congressional Squadron, was the unit's first commander, serving from 1968 to 1981.

National Transportation Safety Board and the Danish Air Force (which was establishing a CAP-like flight program).

The squadron also conducts programs to inform those in government about CAP as well as the Air Force about aerospace topics. These include orientation flights for congressmen and staff who are squadron members, special aerospace briefings and tours for those in Congress, support to visiting VIPs and delegations seeking to learn about CAP, and displays in the

area, such as the annual Air Force Association conference, where a squadron communications vehicle was displayed.

In 2007, Andrews Air Base officials asked the Congressional Squadron for help with its annual Joint Service Open House, the largest in the nation.

The squadron worked with members of the Maryland Wing, who provided manpower and leadership to assist the Air Force with air show operations, and it established the first-ever CAP National Display, which featured every type of aircraft in the fleet (except for those flown only in Alaska) for government officials and the public to see. This display continues a decade later, with the help of the Northeast and Middle East regions and wings.

A Lasting Impact

All three commanders have been critical to building the case for funding, new missions and recognition for CAP. Each sponsored and led the fight for key CAP legislation, starting with Wolff's first CAP Supply Bill in the late 1970s, which greatly improved operations and provided early funding. This preceded and led to Congress providing annual funding for operations, maintenance and procurement starting in 1985.

A few other examples include:

- In 1978, Wolff, chairman of the House Select Committee on Narcotics, suggested and arranged

for a special test of CAP's counter-drug capabilities along the southern border, a program that would later become a mainstay throughout CAP.

- In 1986, Harkin worked with Sen. Bob Dole, R-Kan., Goldwater and others to provide \$7 million in counter-drug funding to buy dozens of civilian-built, high-wing Cessnas (the high wing was critical for visual search). Literally overnight, this changed CAP's aircraft fleet from mostly excess military planes (difficult to find and costly to operate) to a lower-cost, civilian-built fleet.
- In 2010, Harkin led the charge to recognize CAP's earliest members with the Congressional Gold Medal for their unusual World War II service. CAP's total World War II contribution had never been appropriately recognized by the government. Joined later by Rep. Michael McCaul, R-Texas, this effort resulted in pioneering CAP veterans and their families being honored with the medal in December 2014. Today, CAP wings continue to recognize newly discovered veterans with replica medals.

Others also have provided support. For example, several years after 9/11, Rep. Charlie Dent, R-Pa., held hearings on using CAP for homeland security and border patrol after visiting Texas Wing operations. In the 1980s, Col. Jim Huggins (who worked for Sen. Robert Byrd, D-W.Va.) proposed an annual CAP Legislative Day and the concept of Talking Points cards, which to this day help CAP get its messages out to Congress.

Less visible are the key roles

squadron members find themselves in on occasion. For example, in 1999, Harkin waited with Sen. Wayne Allard, R-Colo., Air Force Secretary Whit Peters, Air Force Chief of Staff Gen. Mike Ryan and CAP legislative liaison Col. John Swain to talk with CAP leaders just below the Rotunda.



Lt. Col. Mike Sheen, the Congressional Squadron's standardization/evaluation officer, flies a special CAP mission over Northern Virginia. Photo by Col. John Swain, CAP National Headquarters

This historic meeting established an improved working relationship, which led to creation of the CAP Board of Governors and the Air Force Statement of Work — both major improvements in how CAP operates.

Experienced Staff Essential

The Congressional Squadron relies on a cadre of experienced CAP staff to operate, teach and lead. Many are or were high-level government officials or have exceptional aviation skills. Because the squadron commander and others are busy in Congress, day-to-day operations and aircraft management are the responsibility of an experienced deputy commander. Lt. Col. Randy Cohen currently holds that position; he is supported by Lt.

Cols. J.C. Hyde, Pat Sedberry and Mike Sheen; Maj. Lou Cantilena and Bob Gawler; 2nd Lts. Dwayne Defreitas and Eric Heigis (a congressional staffer); and Senior Members Steve Franklin, Rick Micker and Jon Sheller. Previous deputy commanders include Jim Huggins, Lt. Col. Tom Doyle and Senior Member Charlie Martinez.

The squadron adheres to CAP rules and regulations for flight operations and other activities. Its operations are routinely reviewed and monitored by CAP's inspector general, CAP-USAF Detachment 2 (Middle East Liaison Region) and CAP's national executive officer. The squadron also has a professional development program and works closely on base with a sister squadron, the National Capital Wing's Andrews Composite Squadron. The two units have conducted joint training for professional development and aircrews as well as cadet orientation flights and other activities.

As its first 50 years become history, the Congressional Squadron looks to the future and is exploring new ways to help the nation. Its many past contributions and achievements have helped make CAP a better organization. While many squadron members contributed to its success, it all started because two congressmen — an East Coast Democrat and a West Coast Republican — decided to serve their country again, together, in Civil Air Patrol. ▲

Col. John Swain is one of the early members of the Congressional Squadron and a former deputy commander of the unit. He currently serves as CAP's director of government relations in Washington, D.C.

A photograph of two young women in Air Force cadet uniforms. They are both wearing blue berets and jackets with "CAP" insignia. The woman on the left is holding a professional camera with a large lens, and both are looking at the camera's LCD screen with smiles. The woman on the right has several ribbons on her chest. The background is a blurred outdoor setting.

2018 Legislative Day on Capitol Hill

In between meetings with legislators, CAP's cadets enjoy taking photos of Washington's historic sites. Admiring their screen shots are Cadet Master Sgt. Marisah Goo, left, and Cadet Col. Sam Marrack, both of the Hawaii Wing. Marrack is the wing's first female Gen. Carl A. Spaatz Award recipient.


Photo by Capt. Sara-Ashley N. Tello, Hawaii Wing

Record Number of Meetings, Cadet Participants Create *Sea of Blue*

Civil Air Patrol cadets walk away from the U.S. Capitol following Legislative Day meetings in Washington, D.C. Photo by Maj. Robert

Bowden, CAP National Photographer



The image shows three young men in dark blue Civil Air Patrol uniforms walking in a line across a paved area. They are wearing dark blue jackets with epaulettes, trousers, and caps. The background features the iconic white dome and classical architecture of the U.S. Capitol building. The sky is clear and bright.

Civil Air Patrol senior members and cadets stormed Capitol Hill in early March 2018 to talk about CAP's national story and to ensure that members of Congress know CAP is spending federal funding well in support of communities and states across the nation. This year's visit occurred while the Rev. Billy Graham laid in honor in the Capitol Rotunda, which caused a last-minute reshuffling of meetings and other issues. Still, 52 wings conducted 445 meetings in the House and Senate, representing 99 percent of CAP's goal.

It is fitting that Civil Air Patrol's 2018 Legislative Day occurred just after the 75th anniversary of the cadet program. With over 200 cadets participating, this event represented a major cadet special activity. Cadets are playing an ever-increasing and important

role during Legislative Day meetings with members of Congress. This year's initial count shows that 432 members gathered in Washington, including 217 senior members and 215 cadets. All 24 attending Civic Leadership Academy participated, while other cadets flew and drove in, some from as far away as Hawaii and Alaska. Several cadets were presented Gen. Carl A. Spaatz and other awards by members of Congress during the day.

New Legislative Day administrative improvements made the wing's job easier. Improvements included a check-in, check-out desk to help wing teams when they arrived at the Command Council hotel and during their meetings, and an automated Legislative Day meeting system, which helped wings schedule, track and report on meetings with their states' congressional delegations. ▲

Jonathan Buckney Small, left, husband of U.S. Rep. Stacey Plaskett, D-Virgin Islands, meets with Capt. Joel Browne Connors, commander of the St. Thomas Composite Squadron. Others attending the meeting included Cols. Barry Melton, Southeast Region commander, and Carlos Fernandez, Puerto Rico Wing commander. Small is a former CAP Cadet. Photo by Maj. Robert Bowden, CAP National Photographer



“There is no greater privilege than service to country. I am proud of you guys for making that choice,” U.S. Rep. Tulsi Gabbard, D-Hawaii, told Hawaii Wing cadets who met with her in her office in the Longworth House Office Building. During the meeting Gabbard presented the Gen. Carl A. Spaatz Award to Cadet Cols. Andrew J. Gomes and Sam A. Marrack, who are holding their award certificates. Photo by Maj. Robert Bowden, CAP National Photographer

U.S. Rep. Robert Aderholt, R-Ala., studies Civil Air Patrol’s membership card for the Congressional Squadron. Photo by Maj. Robert Bowden, CAP National Photographer

Georgia Wing Commander Col. Andrea Van Buren, center, and members of her wing snagged a twofer — a Legislative Day photo with two senators. Posing with them are Sens. David Perdue, left, and John Isakson, right, both R-Ga. Photo by Susan Schneider, CAP National Headquarters

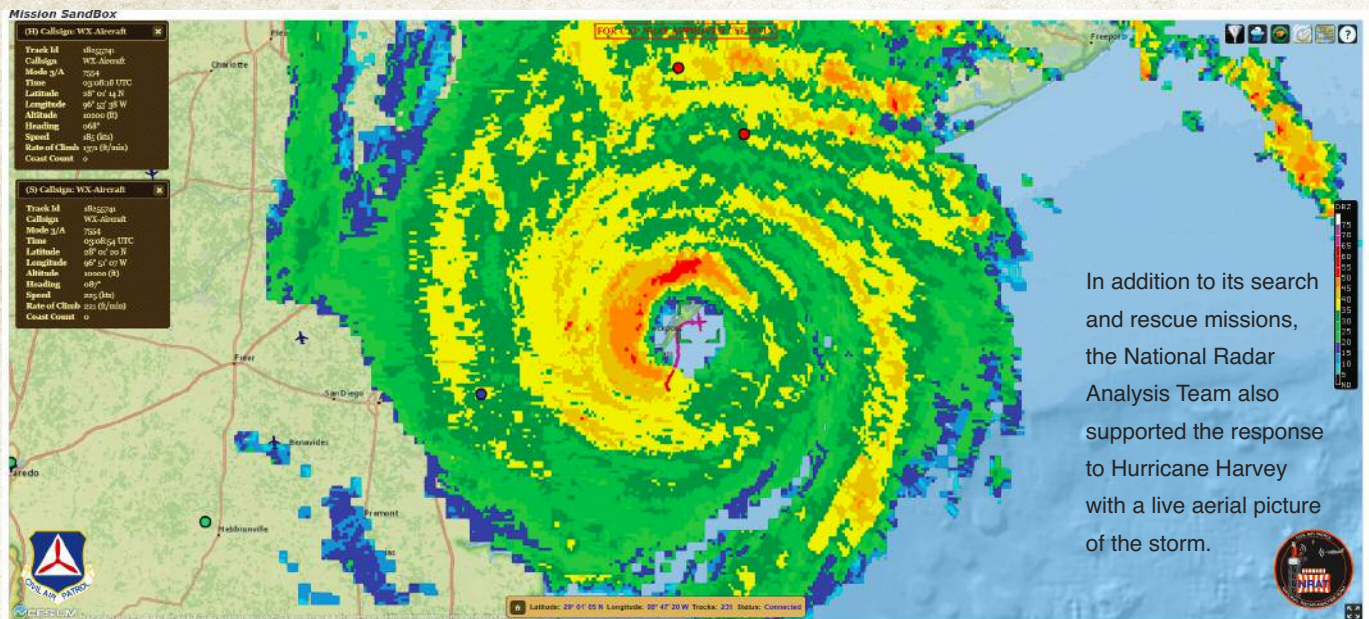


Sen. Jack Reed, D-R.I., listens attentively during the Rhode Island Wing’s overview of accomplishments and initiatives. The visit featured participation by a large number of cadets, who always bring an important perspective to CAP’s meetings on Capitol Hill. Photo by Susan Schneider, CAP National Headquarters

Playing in 'THE SANDBOX'

Radar team's dynamic technologies help reduce crash-to-rescue time

By Sheila Pursglove



In Greek mythology, Icarus plummeted into the sea after flying too near the sun with wings made of feathers and wax.

His name lives on in ICARUS, an aircraft crash detection and alerting near-real-time system to be launched this year, developed by Civil Air Patrol's world-class National Radar Analysis Team. This live radar data analysis system, which feeds incoming data into a scoring matrix, will alert NRAT members within 15 minutes of a potential crash when it senses an abrupt end to an aircraft's radar track.

The ICARUS computer modeling system will show a constant flow of radar data, look at every track it creates and analyze when and why that track stopped — taking into account factors

such as weather, time of day, terrain and much more, even simply the fact that the pilot has landed at an airport.

ICARUS is just one of many challenging projects for the radar team, which since its inception in 2009 has racked up an impressive 535 total missions, 237 finds and 32 saves.

The team's activities are two-fold: (1) the ongoing task of providing radar analysis support to the Air Force Rescue Coordination Center in searches for missing aircraft, and (2) the effort of turning innovative concepts into working systems and tools — all with the goal of shortening crash-to-rescue time.

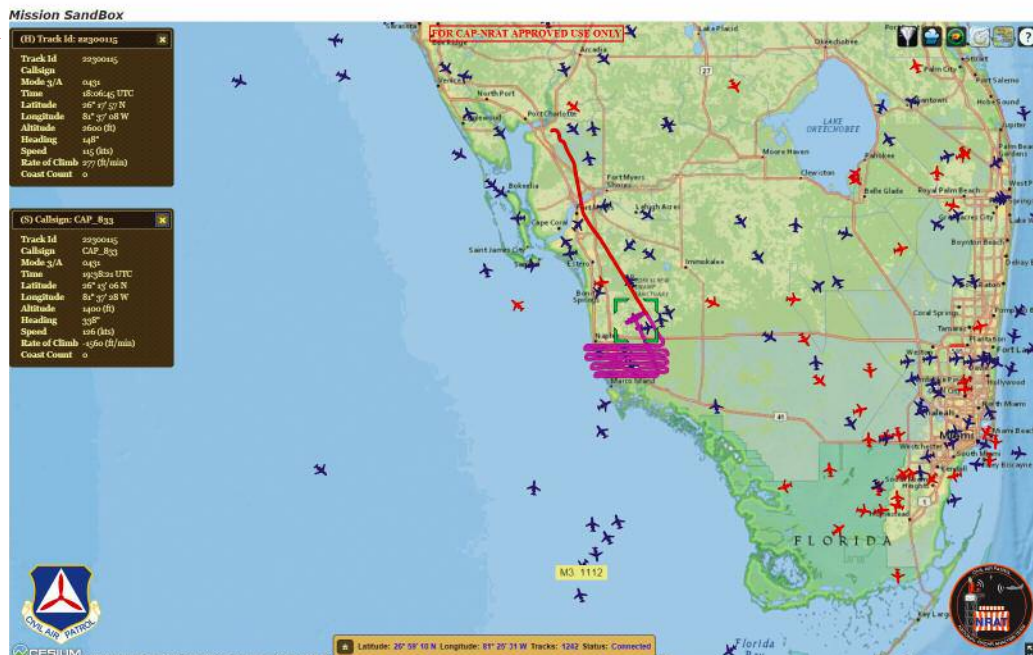
Ten highly specialized members with skills in radar analysis, software development and programming and

other unique aviation and communications skills make up NRAT — the most experienced such team in the world. They hail from the U.S. Air Force and the Federal Aviation Administration as well as various segments of the aviation community, including experienced pilots. Despite living in various cities across the country, team members unite electronically within minutes when duty calls.

When not working on at least one weekly mission, members are busy behind the scenes developing unique tools that allow them to conduct their analysis faster and with more precision.

“Since our developers and programmers have full-time jobs and do this on the side, it's always much faster to come up with fantastic ideas than it is

ICARUS, an aircraft crash detection and alerting near-real-time system developed by the National Radar Analysis Team, features this Mission SandBox. Once activated, the SandBox helps CAP incident teams watch where search aircraft are flying in real time.



Colored Dots

Raw radar data, called native hits, are unprocessed radar returns. There are three types:

1. If an object is not “squawking” it’s a blue dot, a primary target for radar specialists.
2. A reinforced radar message is a green dot, where analysts get dots that represent different radar returns but no identity of the craft. During a rescue-tracking operation specialists weed out all the tracks, a challenging process of elimination.
3. Beacon-only replies are red dots, indicating to analysts the radar energy is not able to reach the target.

Here, members of Civil Air Patrol’s National Radar Analysis Team work on a mission for the Air Force Rescue Coordination Center. The team consists of 10 highly specialized CAP members with skills in radar analysis, software development and programming and other aviation and communications specialties.



to bring them to life,” said Lt. Col. John Henderson, the team’s vice commander, whose base of operations is near McChord Air Force Base, Washington. “Some of our ideas, like ICARUS, are very complex and take a lot of planning and hundreds of programming hours.

“Part of ICARUS is the SandBox we got working last year. With this system, we can quickly set up a virtual ‘box’ anywhere in the country to support a search and rescue mission, natural disaster mission or exercise.”

On the mission side, last year was an exceptionally busy one for the team, with 90 missing aircraft missions, 50 credited finds and seven saves.

“We also supported two major disasters

— hurricanes Harvey and Irma — with a live air picture we call the Mission SandBox, and supported several live-fly CAP exercises with our SandBox aircraft tracking system,” Henderson said.

During the rescue and recovery efforts following Hurricane Harvey, a CAP command post leader used the team’s SandBox in the Texas State Operations Center so the state’s imagery coordinator and National Guard aircraft coordinator could see it. When a chemical plant northeast of Houston that had exploded a few days earlier reignited, radar team technology showed a CAP aircraft was on an image collection sortie nearby — and it was quickly redirected to collect imagery of this new priority target.

The CAP command post leader reported that officials in the Lone Star State were very impressed with the technology.

Other 2017 successes include the January rescue of a couple who crashed a Cirrus SR22 in the snowy wilds of Colorado, followed shortly afterward by the rescue of three people from a downed Cessna 180 in south-central Alaska; and a plane crash survivor rescue in Idaho in September, in which the team analyzed and processed about 1.2 million radar targets in 30 minutes to determine the downed Glasair GlaStar's correct radar track and pinpoint its location, leading rescuers to the site. The Mission SandBox was also used to direct a helicopter fighting a local forest fire to the crash site to confirm the location.

“These same tracks we produce for SandBox's use will be used in the ICARUS system,” Henderson said. “Bringing this system online is still a couple of months away, but it's our No. 1 priority.”

With ADS-B (Automatic Dependent Surveillance-Broadcast) technology — a precise satellite-based system using GPS information coupled with data from ground stations — being installed in all CAP planes by 2020, another team priority is to use the ADS-B data feed to supplement raw radar data and help identify objectives more quickly.

“It will also help facilitate a request from the CAP National Operations Center, which would like to use our SandBox system to track all CAP aircraft nationwide,” Henderson said.

“We never get bored and always feel a great sense of accomplishment,” he said. ▲



Mission (Not) Impossible

A typical mission follows this scenario:

- All team members receive texts and emails from CAP's Web Mission Information Reporting System after the Air Force Rescue Coordination Center activates the team for a mission.
- Within minutes, team members chat on the team-built collaboration website.
- The on-call lead makes a data request for radar and weather info, tailor-made for the mission.
- One team member checks the FAA's air traffic control system's tracking data sources for clues.
- Another member starts the mission page — a gathering and dissemination point for all analysis data — on the website.
- AFRCC, CAP's National Cell Phone Forensics Team, radar team members and eventually the CAP incident commander all collaborate on NRAT-Chat.
- When the radar/weather data comes back — with all team members receiving it at the same time — in about 10 minutes, team members use team-developed tools to start analyzing the information, looking through millions of radar targets for the right set of dots.
- Once the track is found, the team builds products to send to AFRCC and the field. Some are interactive tools on the website; some are stand-alone products.
- The team activates the Mission SandBox so the CAP incident team can watch where search aircraft are flying in real time.
- The whole scenario can take as little as 20 to 30 minutes or as long as several hours or days, depending on the situation and accuracy of information.

Meet the National Radar Analysis Team

Lt. Col. Mark Young
NRAT Commander
CAP Experience — 16 Years

2nd Lt. Argon Helm
Software Programmer
AF/CAP Experience — 25 Years

2nd Lt. Joe Berry
Radar Data Analyst
AF/CAP Experience — 29 Years

Lt. Col. John Henderson
Vice Commander
Radar Data Analyst/Software Developer
USAF/CAP Experience — 37 Years
SAR Missions — 650+

2nd Lt. Joe Ashworth
Radar Data Analyst
FAA/CAP Experience — 18 Years

Senior Member Rick Austin
Radar Data Analyst
FAA/CAP Experience — 20 Years

Capt. Guy Loughridge
Radar Data Analyst/Software Programmer
CAP Experience — 17 Years
SAR Missions — 500+

2nd Lt. Robert Roane
Radar Data Analyst — Adviser
FAA/CAP Experience — 20 Years

Col. Greg Cortum
Senior Mentor — Policy Adviser
CAP Experience — 21 Years

2nd Lt. Mark Keene
Radar Data Analyst
AF/CAP Experience — 15 Years



CAP Digs Out Erie

By Sheila Pursglove

Record snowfall requires hands-on attention to infrastructure, at-risk residents' needs

The weather outside certainly was frightful in Erie, Pennsylvania, last December. A record-breaking lake-effect snowfall began on Christmas Eve and rapidly accumulated over several days to total over 110 inches of snow.

The National Guard, first on the scene, recommended that CAP contribute to the rescue work. On Dec. 28, after the Erie County Emergency Management Agency requested assistance from the Pennsylvania Wing through the state Emergency Management Agency, 67 shovel-bearing volunteers, including 38 cadets, converged on the area. Several traveled overnight from a considerable distance. Cadets and senior members from western and

central Pennsylvania gave up their school break to volunteer.

The team, which sheltered at First Alliance Church in Erie, dug out critical public safety infrastructure such as fire hydrants as well as the homes of residents on the county's at-risk list, including senior citizens and people with medical conditions or disabilities. Volunteers worked in shifts, taking warming breaks. Erie County Emergency Management Agency supplied data and shovels, and the American Red Cross provided cots and hot chocolate.

"CAP had several squadrons represented, and we coordinated four different teams to go out on different routes based on the 211 emergency calls set up by the county," said 2nd Lt. K. Robert

Crawford, deputy commander of cadets for Jimmy Stewart Composite Squadron 714, which fielded eight cadets in addition to Crawford. "There were incredible volumes of snow — certainly more than we've ever seen at one time, compounded by the plows completely blocking driveways with over 5 feet of packed snow in some instances.

"The first day we only had shovels, and we broke many of them due to the heavy weight of the snow," he added. "The second day a squadron arrived with blowers for one of the teams to use in addition to the shovels."

The Humanity of It All

Despite the bitter cold, CAP volunteers found the hard work very rewarding.

"When you're helping folks that have no way to get themselves out of the huge volume of snow, causing them to

Members from the Pennsylvania Wing answered the call when over 110 inches of snow fell on Erie in late December 2017. The members, mostly cadets, contributed over 500 man-hours shoveling out critical public safety infrastructure, such as fire hydrants, and the homes of residents on Erie County's at-risk list, including the elderly and people with medical conditions or disabilities.

be completely homebound, there is pure joy in their hearts. That joy is contagious, and it's very rewarding to bring these folks an answer to their dilemma," Crawford said. "Many were reduced to tears of joy seeing the cadets clearing the snow, and offered cookies, candy or simply heartfelt thanks."

At one house, a disabled U.S. Air Force veteran of the Vietnam War, his car buried in snow, stood at his second-floor window entertaining cadets with stories of his service while they cleared 45 feet of sidewalk, 35 feet of pathway from the driveway to his front door and 25 feet of driveway to the road. The man, who asked cadets to check on his neighbor, also a disabled veteran, came to his porch to thank the cadets.

"As with every mission we take on, it was extremely rewarding to be able to help our communities during a time of need," said Cadet Col. Matthew Chirik, public information officer for the mission. "This was a true embodiment of the part of the cadet oath that talks about serving our community, state and nation."

"Overall, this was an outstanding display of the dedication of our volunteers," Chirik added. "Many of the members who responded live in the impacted area and chose to give their time to help their fellow citizens in a time of need. Our volunteers remained adaptive and dedicated while responding to a very physically demanding mission. This sense of volunteerism

and selflessness is what CAP is about, and it is what makes CAP great."

As of the end of the operational period on Dec. 31, Pennsylvania Wing members had contributed over 500 man-hours in support of this mission.

"While air may be in our name, our over 1,100 qualified personnel are equally suited for this type of relief mission on the ground, and we appreciated the support and partnership with the state, National Guard and the Erie Emergency Management Agency to enable our personnel to be of service to their community," said Lt. Col. Brian Cuce, Pennsylvania Wing director of emergency services and incident commander for the humanitarian mission. ▲

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Rebuilding Mary's Piper

Feik posthumously fuels passion of DC Youth to fly

By Vicky Travis



Pilots Lucia Mencia, left, and Melinda Benson Viteri founded DC Youth Aviation in 2016. The purpose of DC Youth Aviation is to share their love of flying with young people through practical experience with planes.

Two Washington, D.C.-area women, ignited by their passion to fly, have teamed up to teach young people the painstaking work of restoring a legacy plane. Build it, and yes, they will fly, too.

Melinda Benson Viteri and Lucia Mencia created DC Youth Aviation-Build A Plane in 2016 with the hope of lighting the fire to fly in others by building a viable airplane. Their work has connected them with late aviation legend Mary Feik, her 1952 Piper, Civil Air Patrol and world-class mechanics to create an extraordinary opportunity for young people.

Benson Viteri has built over 10 RV kit planes through Build A Plane programs in

the United Kingdom. She has been deeply involved in helping deaf and disabled people to fly.

When she moved to Washington to teach at the British International School four years ago, she looked for the same opportunity here and couldn't find it. Serendipitously, two years ago at a local restaurant, Benson Viteri met pilot Lucia Mencia, who shares Benson Viteri's passion for bringing aviation into young people's lives. They would get together at national aviation conferences, and they came up with the idea of working together to pursue a Build A Plane club in America.

A logical place to start was Benson Viteri's school. Thirty British International

◀ Col. Mary Feik's 1952 Short Wing Piper Pacer is now the focus of a Build A Plane student project in Washington, D.C. Photo

courtesy of Lt. Col. Robin Vest

School students quickly signed up to build a plane in fall 2016. Another 100 are on a waiting list.

The original plan to obtain a Cessna didn't materialize, so they put an ad in a flying magazine for a donation plane.

Out of the blue, CAP Col. Warren Vest called her about Feik's plane.

"I thought it was a bit of a joke," Benson Viteri remembered.

But Feik's daughter and Vest's wife, CAP Lt. Col. Robin Vest, truly wanted to donate her late mother's 1952 Short Wing Piper Pacer to DC Youth Aviation-Build A Plane to restore.

Feik, a CAP colonel, died in 2016 at age 92. The Vests wanted to find the perfect place to donate the Piper Pacer before their move to Idaho.

"That plane was really my dad's," Robin Vest said. "Mom had a Piper Comanche of her own." Even so, Feik took care of the Pacer and had planned to restore it herself, but got so busy with travel in her later years that she never got around to it.

"We'd been ready to start calling museums that my mom was connected with," Vest said. But then, her husband saw the ad from DC Youth Aviation.

A visit by Benson Viteri, Mencia and mechanic Vojtech "Joe" Vala at the Annapolis, Maryland, hangar, which is about an hour and a half away, sealed the deal.

"What golden news," Benson Viteri remembered. "We were overjoyed at this project for the club with such a legendary aircraft. This is a gift, a luxury."

Robin Vest, director of finance for CAP's Rocky Mountain Region, remembers the meeting. "They were very excited to see it," she said. "And we decided that this donation was the best way to go."

The gift led DC Youth Aviation to a connection with Civil Air Patrol, which now provides curriculum for the club. "We're very proud to use this curriculum and would recommend it to any school," said Benson Viteri, an aerospace education member with CAP. "It's really accessible, beautifully produced and shows how to teach experiments with aviation."

Long-range, the plan is to expose other D.C.-area high schools to the program.

All About Mary

Col. Mary Feik left a legacy of love for flight among Civil Air Patrol members and, now, that legacy is touching the lives of a new group of students in DC Youth Aviation.

As a young girl in Tonawanda, New York, she asked her father for a flight with a barnstormer. For \$5, she flew for an hour and a half, the news of which made her mother faint, she said in a 2015 CAP video.

At 13, she overhauled an auto engine with her dad. By age 18 she was teaching airplane maintenance to mechanics at Wright Field in Ohio. She designed one of the first flight simulators, called the P51 Captivair, which embedded the wings in concrete. She also wrote manuals on various airplanes.

She would restore aircraft for the Smithsonian and log more than 6,000 hours in flight. She joined CAP in 1971. With a long list of accolades, she was especially proud that the third achievement in the cadet program was named for her in 2002.

In 2016, the Maryland Wing's Annapolis unit was renamed the Mary S. Feik Composite Squadron.

"When she became ill, the squadron commander went to headquarters to ask to rename it after Mary. It was approved within 24 hours," said Capt. Teresa Edwards, the squadron's deputy commander for cadets. "She was aware, but with all of her greatness, she was still so humbled by it. She gave so much of herself to those kids."

The memory of the presentation in Feik's living room is still emotional for Lt. Col. Robin Vest, her daughter. "It was great, but it was hard," she said. "I think she was aware for one of the very last times when that happened."

Cadets from that squadron would visit every Tuesday. Toward the end of her life, it was hard for her to recognize people. "But if a cadet walked in to her house on Tuesdays, she recognized a cadet in a uniform and her face would light up," Edwards said.



GoFundMe: [dcyouthaviation.com](https://www.dcyouthaviation.com)



Below: Hall teaches students about rudders, floor pedals and wiring.

Bottom: Vala and DC Youth Aviation members work on the lengthy process of stripping paint off many of the airplane's parts.



Garth M. Hall, back left, International Baccalaureate coordinator and technology teacher at British International School, and FAA inspection authorization mechanic Joe Vala, right, teach students about wing ribs.

“We would like to concentrate at British International School, but want to open the hangar doors to invite them to come visit,” Mencia said. “We’ve invited four high schools to see what we were doing. But if we start trying to expand now, it could

dilute impact.”

The club meets every Thursday from 3:30 to 7:30 p.m. at the Washington Executive Airport hangar, about 45 minutes from the school. The hands-on lessons have included removing the plane’s soft covering, its

panels and small components. The students are learning about the physics of flight and how to read flight charts in what Mencia calls a mini-ground school.

Club members learn teamwork by working with kids they’ve never worked with before to organize small tasks, cooperate and find solutions in a realistic work environment.

“They’re learning practical skills through a vocational hands-on

experience,” Mencia said. “These skills will set them up for life.”

The club is invited to the EAA Air-Venture in Oshkosh, Wisconsin, in July. And they are taking some students to Reno, Nevada, for a Federal Aviation Administration Women in Aviation conference, where the kids will speak onstage about the project.

“Our hope is that, at the end, we see all the kids get to fly in the plane,” Robin Vest said.

Empowered by flight

A point not to be lost is that the project is led by women aviators, with a plane donated by a woman in honor of her mother. And to the joy of the adults involved, Feik’s legacy will live beyond the plane’s restoration, as two of the girls in the club have asked their parents for flight lessons.

For Mencia, that is fulfillment.

“We’ve got them,” she said. “That’s very satisfying to me.”

“Some of them have said they never considered aviation as a career path before,” she said. “Another student is now thinking about a career as an aeronautical engineer. We expose them to the science and the magic of it.”

Mencia sees a big benefit for all, but especially girls, to learn to fly.

“To fly, you have to know math, how to handle yourself in a crisis, and have great self-control and situational awareness,” said Mencia, who has logged more than 2,000 hours as a pilot since 1999. “Aviation transfers into very transferable life skills.”

Young pilots develop self-confidence when they know that they can plan a task such as a trip; analyze it for distance, speed and time; recognize the limitations of their plane and fuel; calmly plan for expected challenges

such as mountains or lakes; involve exterior factors such as weather; and have alternate airports (Plan B’s), she explained.

Above all, both Mencia and Benson Viteri said flying is empowering.

Mencia owns an architecture business, Aero-Biz Development Group, LLC, that designs and manages aviation construction and facilities projects. She’s heard the “you’re-just-a-woman nonsense,” she said. “But up in the air, it doesn’t matter if you are a girl, a boy or Harrison Ford. Flying gives so much confidence, which goes into life behavior.”

Benson Viteri learned to fly in 2010. Long enamored with flight, she finally went for it after a divorce. “It was life-changing,” she said. Mencia soloed in 1999, also after a divorce, and found the experience magical.

Both are members of Civil Air Patrol, Ninety-Nines, Women in Corporate Aviation International, the American Association of Airport Executives and the Short Wing Piper Association. Mencia also belongs to the Aircraft Owners and Pilots Association.

DC Youth Aviation member Zahra Heussen, 16, has been interested in aerospace since she picked up a book about Mars when she was 5. She’s been to Cape Canaveral and has built rockets at the U.S. Space and Rocket Center in Huntsville, Alabama. And while her family lived in Europe, she visited the European Space Research and Technology Centre in the Netherlands.

She jumped at the chance to build a plane, assuming it would be a model kit, just like the rockets.

“When we walked in that first day and saw that we’d rebuild a real plane, I was amazed,” she said. “The fact that we’re building a plane that will fly in

the end, I know that every part I work on now is key to the product. It never stops being cool.”

Building the plane birthed Heussen’s interest in learning to fly. She’s taking flying lessons as often as possible and is applying for scholarships to defer the cost. Only 3-5 percent of pilots are female. “It motivates me to stand on the shoulders of female pilots like Mary Feik, who didn’t have the same privileges as me,” she said.

“This experience has brought about a new world of possible aviation careers for me,” Heussen said. Her ultimate dream is to earn a doctorate in astrophysics.

The project

Feik’s plane was moved from Annapolis to its new home at Washington Executive. Stan Fetter, airport manager, helped establish a restoration hangar suitable for youth, Mencia said.

DC Youth Aviation is a nonprofit and is continually raising money for the project. Early help came from Ethan Martin, who runs the Aviation Community Foundation. Benson Viteri said ACF supports DC Youth Aviation, educational aviation workshops and student aviation expeditions.

Mencia networked with the flying community to find mechanics and materials.

Inspection authorization mechanic Vala, a retired Czechoslovakian Air Force colonel, leads the restoration project with mechanic Shahram “Chuck” Amirkhanian. The pair has restored other historic planes.

For the four of them — Benson Viteri, Mencia, Vala and Amirkhanian — it’s been a labor of love.

The project, however, is cash-strapped. The Piper needs an engine rehaul,

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"This experience has brought about a new world of possible aviation careers for me." — Zahra Heussen, DC Youth Aviation member



new panel dials, new wiring, new seats, fabric enclosure and other rebuild requirements. The original end date for the project was spring 2018, but that date is up in the air, with hopes to finish by fall 2018. The speed of the process depends on donations.

DC Youth Aviation member Zahra Heussen, 16, became interested in taking flying lessons as a result of the work in restoring the Feik plane and what she's learning in the club.

They estimate the total rebuilding cost at \$30,000 and have a GoFundMe account set up at dcyouthaviation.com. "We are continually fundraising," Benson Viteri said. "I want to reach out to every CAP member who loved Col. Feik. Together we could reach even more young people if everyone donated a dollar to help us complete the project. I wonder how many \$1 donations we could receive?"

The club reassembled much of the fuselage in Phase I. Next, Phase II work will focus on electrical and wiring. "We have a basic six-pack; however, in order to be compliant to the DC3 Special Flight Rules restrictions, we need a radio and transponder, which will be put into the glove compartment," Mencia said.

Other needs are a Garmin 430 GPS (for weight) and an AXP340 ADS-B transponder and Artex 406 MHz ELT 1000 to make the Piper compliant with FAA regulations for secure DC3 airports like Washington Executive. Phase III will be to validate the engine.

When completed, "It will be a very valid plane with wonderful karma, and it will fly and be FAA-compliant," Mencia said. ▲

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Civil Air Patrol supports **Super Bowl** air-defense operations

By Lt. Col. Steven Solomon

Every year the Continental U.S. North American Aerospace Defense Command Region shows the media what would happen if an unauthorized aircraft violates restricted airspace around the Super Bowl. And for the 17th time, Civil Air Patrol has played an outsized role.

For Super Bowl LII, a media day was held Jan. 30. CAP's Minnesota Wing provided an airplane for display inside the hangar at the Minnesota Air National Guard's 148th Fighter Wing at Duluth Air National Guard Base. It was positioned between a U.S. Customs and Border Protection Black Hawk helicopter and an Air National Guard F-16 fighter. CAP, as well as a Customs and Border Patrol pilot, an F-16 pilot and a Federal Aviation Administration official, briefed the attending reporters.

During a media flight on Feb. 1, F-16s flew alongside a CAP Cessna posing as a rogue aircraft. The F-16 pilots made radio contact and guided the CAP plane out of restricted airspace. The media watched both F-16s refuel during the mission from inside a Wisconsin Air National Guard KC-135 tanker from the 128th Air Refueling Wing. An NBC reporter, Ron Mott, was a passenger in an F-16D.



A Civil Air Patrol Cessna 182, right, with an F-16 fighter flying in front of it can be seen in this screen capture from "NBC Nightly News with Lester Holt." The Feb. 1 intercept exercise was the subject of Ron Mott's report on the massive Super Bowl security operation in Minneapolis.



"We shouldn't do any alert training without CAP. Even my own pilots have told me how CAP acting as a low and slow track of interest really enhances our training," said Lt. Col. Paul Thornton, the 148th's alert commander, who flew the two-seat F-16D during the demonstration.

"Civil Air Patrol provides an awesome training platform for us," added Maj. Ryan Durand, the 148th's chief of standards and evaluations, who piloted a single-seat F-16C.

Since the terrorist attacks of Sept.

11, 2001, the FAA routinely implements no-fly zones, called Temporary Flight Restrictions, around major events to ensure no general aviation airplanes enter for a specified radius. NORAD aircraft enforce the TFRs.

CAP is involved in similar exercises around the U.S. throughout the year to test airspace security. The air defense exercises are carried out as part of Operation Noble Eagle, coordinated by CONR.

The exercises are conducted in close coordination with the FAA and other



Officials brief the media at an Air Force presentation on Jan. 30 before an aircraft intercept exercise for Super Bowl LII. As part of the media day briefing, from left, Michael Fuller, Department of Homeland Security air interdiction agent; Andy Gold, Federal Aviation Administration air traffic special operations; Lt. Col. Paul Thornton, 148th Fighter Wing alert commander; and Lt. Col. Steven Solomon, Civil Air Patrol public information officer; explained how F-16s from Duluth Air National Guard Base would respond to any aircraft that violated the no-fly zone around Minneapolis.

On the day of the Super Bowl intercept exercise, snow blankets the runway at Duluth International Airport. The mission was conducted from Duluth Air National Guard Base in Minnesota, which is located in a secure area of the airport.



"Civil Air Patrol has given me a purpose for my flying." – Lt. Col. Kevin Dunlevy, CAP search and rescue pilot

*"Civil Air Patrol provides an awesome training platform for us."
 – Maj. Ryan Durand, 148th Fighter Wing chief of standards and evaluations*

interagency organizations, as appropriate.

Assigned to the Duluth Composite Squadron in Minnesota, CAP's Cessna 182 was flown by CAP Lt. Col. Kevin Dunlevy, a Minneapolis lawyer. The co-pilot was CAP Maj. Charles Schumacher. In the back was a military photojournalist.

"I joined Civil Air Patrol, actually, on 9/11," said Dunlevy, who serves as his wing's legal officer. "I had just gotten my pilot's certificate and my son was in Civil Air Patrol, and he had been encouraging me to join. Just by coincidence I filed my application that day. Civil Air Patrol has given me a purpose for my flying." ▲



In a follow-up exercise on Feb. 1, a Cessna 182 from CAP's Minnesota Wing was intercepted as it intentionally violated the no-fly zone around Minneapolis. Air National Guard fighters flew alongside the aircraft, made radio contact and guided it out of the restricted airspace. Piloting the target plane was CAP Lt. Col. Kevin Dunlevy, right. The co-pilot was CAP Maj. Charles Schumacher, left. They were accompanied by a military photojournalist, who recorded video of the intercept.

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Partnership With Norwich University Win-Win for Cadets

By Jennifer Gerhardt

A partnership is commonly formed when people come together to create a business team after realizing their skills and talents complement each other. Luckily for Civil Air Patrol cadets, a partnership has been created between Norwich University and the New Hampshire Wing.

It began in 2007 when the wing was searching for a place to hold an annual encampment. Norwich, the nation's first private military college, located in Northfield, Vermont, was looking for activities to hold on campus during the summer months.

Collins Davison, then Norwich's director of corps recruitment; Col. Don Davidson Sr., a former commander of the New Hampshire Wing; and Lt. Col. Walter Brown, homeland security officer for the wing and a

Marine Corps ROTC Cadet Damon Watkins is a sophomore at Norwich University. Like many students at Norwich who served as cadets in Civil Air Patrol, he has taken advantage of the school's CAP scholarship program.

Norwich alumnus, came together to explore the idea of holding CAP's encampments at Norwich.

Davison saw the potential for CAP cadets later enrolling at Norwich. But he also understood the financial constraints that could prevent cadets from attending encampment at such a facility. To overcome this hurdle, Norwich established a \$25,000 annual encampment scholarship, now totaling \$250,000.

"Everything about holding the encampment at Norwich was terrific," recalled Lt. Col. Robert Shaw, a Norwich ambassador who was the wing's director of cadet programs and emergency services training officer at the time. "We held the first encampment and Ground Team Training School in the summer of 2007, and it was a huge success."

The program's success led to establishment of an academy dedicated to hosting the encampments, as well as the Northeast Region Honor Guard Academy and a Noncommissioned Officer Leadership School. The university also established, for those who met certain criteria, a \$20,000 CAP cadet scholarship that includes an automatic academic scholarship. Since the program began, cadets have been eligible to receive more than \$3.8 million in scholarships.

One CAP cadet who took advantage of the scholarship is Ensign Josiah Boggs, who graduated from Norwich in May 2016 and was commissioned into the U.S. Navy.

Boggs joined Civil Air Patrol at 16, ultimately earning the organization's highest cadet honor, the Gen. Carl A.

Spatz Award. After attending his first encampment, he participated in the basic and advanced pararescue orientation courses, the combat control orientation course, region cadet leadership school and the National Honor Guard Academy. After he graduated from high school, he attended Norwich.

"As a cadet, I squeezed everything out of CAP that I could," said Boggs, now a senior member with the rank of captain. "Now, I staff encampments and other activities when I can, but being a TAC (tactical) officer at encampments is my favorite job. I try to challenge cadets to get everything they can out of CAP, because it has so much to give and it puts them in good places to get what they want for the future."

Another cadet also took advantage of what Civil Air Patrol and Norwich provided. U.S. Army 1st Lt. Mark Chapman joined CAP in the seventh grade. He attended the NCO Academy and winter survival school, as well as National Blue Beret in Oshkosh, Wisconsin.

"I had wanted to join the military since I was 5 years old," Chapman said. "Being in CAP enabled me to better prepare myself for what lay ahead."

Damon Watkins, a cadet in Marine Corps ROTC at Norwich, agreed, saying his time as a CAP cadet in Ohio helped prepare him for college.

"The transition from CAP to Norwich was fairly easy," he said. "Financially, Norwich's CAP scholarship was extremely helpful for paying tuition. But more importantly, CAP gave me a huge advantage by already knowing drill, how to make a rack and the



CAP Cadet Chief Master Sgt. Damon Watkins, seen here at a promotions ceremony, served in the Lt. Jacob Parrott Composite Squadron near his hometown of Van Wert, Ohio, before attending Norwich.



Mark Chapman, center, then a CAP cadet, participates in a search and rescue exercise at National Blue Beret.



First Lt. Chapman, left, gives his first salute after being commissioned into the U.S. Army. Chapman is one of many former CAP cadets who have benefited from the ongoing partnership between CAP and Norwich University.

other basics of a military lifestyle. I went in knowing what to expect.”

Since 2007, an average of five New Hampshire Wing cadets have entered Norwich University each year. Since the summer program attracts CAP cadets from across the country, an average of 25 enter Norwich annually. Cadets also have the opportunity to continue participating in CAP through the Vermont Wing’s nearby Capital Composite Squadron.

Norwich, which is celebrating its 200th birthday this year, is renowned for providing hands-on, high-quality, transformative learning experiences. The school offers 30 majors, 20 varsity

sports and over 900 leadership opportunities for students in both the civilian and military lifestyles.

Norwich also has a robust ROTC program with all four branches — Army, Navy, Air Force and Marines. In fact, it’s the birthplace of ROTC. The university commissions more officers than any other school after the service academies.

Cadets who receive a two- or three-year ROTC scholarship are eligible to use the CAP scholarship and other financial aid until the ROTC scholarship begins. Those who receive a full four-year ROTC scholarship as well as the I.D. White Scholarship for

room and board aren’t eligible for the CAP scholarship.

“The success of Civil Air Patrol cadets at Norwich has been credited to the CAP program,” Shaw said. “The cadets coming to Norwich are already prepared for the rigors of their freshman year. CAP cadets are highly sought after, because the university knows the cadets have to make an extra effort to attend squadron meetings since they aren’t typically held at school.” ▲

For more on Norwich University and the school’s CAP scholarship program, go to www.norwich.edu.

BoG’s Altieri Got His Start at Norwich

Col. Jayson Altieri, the former chair and current vice chair of Civil Air Patrol’s Board of Governors, is perhaps Norwich University’s most noteworthy CAP alumnus. He’s quick to tell everyone he knows what a good foundation the school gave him for working toward becoming a U.S. Army officer.



Col. Jayson Altieri, below, is a 34-year veteran of the U.S. Army. He began his military service as a cadet at Norwich University, in the photo at left.



“Norwich University helped prepare me for a successful military career as a U.S. Army officer, leading both aviators and paratroopers in combat and peacetime operations, in part due to the university’s unique Corps of Cadets and civilian student structure,” Altieri said.

He offered this rationale for such praise of Norwich, widely known as “The Military College of Vermont”:

“First, Norwich has no tactical officers or house masters assigned to the Corps and civilian halls; together cadet and civilian students lead and manage their peers under the supervision of the commandants and dean of student offices, but the day-to-day operation is run by the student leadership. This, of course, allows these developing leaders to succeed or fail based on their interaction with their own peers.

“Second, Norwich is a truly ‘joint’ operational environment, as all the services, to include Coast Guard, are represented at Norwich. Additionally, cadets are allowed to serve in the various Army, Air Force, Marine and Navy National Guard and Reserve units around New England, which gives our graduates a greater insight into the ‘Total Force’ of all services.

“Finally, our Norwich international students are

essential to help develop future leaders' ability to interact with leaders from around the globe. In my service career I have worked with men and women from all the services, both active and reserve; with civilians from the departments of Agriculture, State, Treasury, and USAID (U.S. Agency for International Development); and international civilian and military personnel on four continents. Norwich's diversity provided and continues to provide graduates like me with a strong foundation to succeed in our global and interconnected environment."

Altieri was a Norwich cadet in the mid-1980s, following his experiences as a Civil Air Patrol ground team leader with the Virginia Wing's Roanoke and Blacksburg composite squadrons.

"Until my Army enlistment in 1984, I had led ground teams on numerous missing person and aircraft searches in the mountains of western Virginia," he said. "This required a great deal of planning and leadership, especially when you are in charge of combined groups of cadets, seniors and civilian volunteers.

"Civil Air Patrol leaders like Col. Charlie Glass, Lt. Col. John Jackson, Maj. Otto Hartenstein and Capts. Melva Blake, Boots Mercer and Douglas Russell all taught me and an entire future generation of CAP leaders what we call CAP values today. The proof of how important these mentors were in growing future Civil Air Patrol leaders is the fact that CAP Brig. Gen. Richard Anderson (a former national commander and Board of Governors chair) was also a member of both the Blacksburg and Roanoke squadrons during this time."

These CAP experiences, along with his time as a U.S. Army noncommissioned officer, helped Altieri become a successful Norwich cadet and eventually an Army colonel. He now teaches at the National War College at Fort McNair in Washington, D.C.

"As I enter my 34th year of Army service, I continually look for new opportunities to give back to both CAP and Norwich; whether it is serving as the chair of the CAP Board of Governors, working as a Hawk Mountain staff member or serving on the Norwich University Bicentennial Committee.

"I and others of our generation, like Richard Anderson, (current CAP National Commander Maj. Gen.) Mark Smith and (former CAP National Commander Maj. Gen.) Joe Vazquez, all have an obligation to take our collective experiences from places like CAP, Norwich University and the U.S. military to teach, coach and mentor the future leaders of our republic." ▲

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**Civil Air Patrol
provides FEMA with
aerial photography
to help assess fire
damage in California**

By Jennifer S. Kornegay

“I’ve been involved in many wildfire missions we’ve done in the past, but this was massive, just massive devastation, something you can barely believe even though you’re seeing it with your own eyes.”

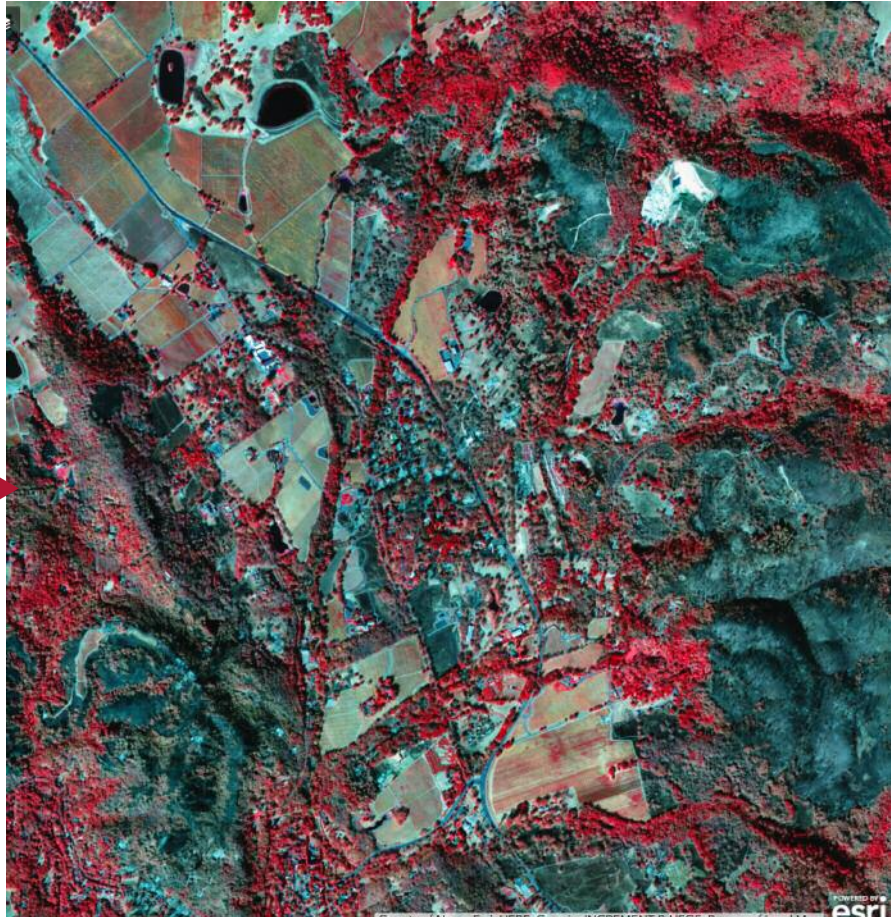
Lt. Col. Joe Brickman, operations director for Civil Air Patrol’s California Wing, was describing the level of destruction left in the path of two immense wildfires that burned their way across his state last fall. The extent of property damage and lives lost — close to 9,000 structures destroyed and at least 43 deaths — led the Federal Emergency Management Agency to request CAP’s assistance in its relief and assessment efforts in the affected regions.

In October, the agency asked the California Wing to survey and photograph the areas hit hard by two fires: one in Orange County in Southern California, the other in the Santa Rosa area of Northern California. The wing responded rapidly. Within hours, CAP planes were in the air capturing the photographs FEMA needed.

The mission in both regions was impressive in both scope and success. The Northern California phase totaled approximately 120 sorties that captured and uploaded more than 5,750 images from 940 square miles. In Southern California,

◀ This VIRB image taken on one of the many sorties flown in Northern California shows blackened regions where fire destroyed virtually everything, interspersed with relatively unaffected areas. Source: FEMA (photo taken by California Wing)

▶ This Aerial data provided from above Napa County captures images in both the visual and the near-infrared spectrums. When pieced together as a mosaic, the Aerial data displays an infrared overlay on visible-spectrum photographic images, showing badly burned areas of the county. Source: FEMA (photo taken by California Wing)



five planes flew 19 sorties targeting 180 areas and resulting in more than 6,800 images uploaded. About 120 volunteers supported the mission with 208 hours in the air.

But equally important was a new approach used for the first time, as John Desmarais, CAP's director of operations, explained. "CAP does not generally support wildfires, because there are usually so many other resources already allocated for that," he said. "But FEMA was looking for the best way to document the damage, and we have become known for our imagery collection in disasters, so they called us, and we saw an opportunity to try out a new system we'd been looking at."

The new system involved an Aerial Sensor Pod, which is mounted



▶ This Aerial Sensor Pod is mounted on the outside of a CAP plane for use during the California Wing's wildfires mission. CAP used the pod, which captures images in both the visual and the near-infrared spectrums, for the first time following the wildfires that burned much of California last fall. Photo by Lt. Col. Juan Tinnirello, California Wing

on the outside of the aircraft. This pod was originally developed for use in agriculture, enabling large-scale farms to judge whether and how their spraying operations were working



California Wing planes line the tarmac at Livermore Municipal Airport, which served as a base for CAP's support of FEMA after devastating and deadly wildfires last fall. Photo by Lt. Col. Juan Tinnirello, California Wing

Staff works in the temporary incident command post established at Livermore Municipal Airport, including, left, front to back: 1st Lt. Ken Richter, 2nd Lt. Nikolay Zhrebnekov, Maj. Maggie Wang and 2nd Lt. Regien De Bleecker; right, front to back: Maj. Noel Luneau and Jordan Hayes, Capt. Kathy Brown and 1st Lt. Stephen Pierce; and center, front: Maj. Elsie Lam. Photo by Lt. Col. Juan Tinnirello, California Wing



by capturing images in both the visual and the near-infrared spectrums.

During the wildfire mission, CAP put the pod to the test, using the opportunity to both evaluate its efficacy and train CAP personnel in its use. "Due to the large areas, we saw using it on these wildfires as a great way to try it out," Desmarais said.

CAP has traditionally used two methods when collecting aerial photography: a hand-held camera operated by a photographer inside the plane and a wing-mounted Garmin VIRB camera that snaps timed-sequence pictures that are later pieced together to form a mosaic.

The Aeroptic brings some new benefits, Brickman said. "The lens on the Garmin cameras gives you some distortion, so you have to make adjustments for that when putting those photos together," he said. "The Aeroptic doesn't do that, and

the company that makes it puts all the images together for us, resulting in this great, flat photo of an area."

Desmarais agreed, pointing to the Aeroptic pod's accuracy and echoing Brickman on the time it saves. "It allows the collection of high-fidelity imagery, and then it's stitched together for one look at the entire area," he said. "That can be done with the other imagery tools too, but it is done manually, which is much harder and slower. That saves manpower and lets emergency managers analyze the imagery faster."

The Aeroptic pod also showed a few downsides, as Brickman explained. "Its camera resolution and, therefore, the level of detail is not as high as what we get from the Garmin VIRB cameras," he said. But he added that the Aeroptic system's manufacturer is working on second-generation cameras that

should remedy that issue. “There are advantages and disadvantages to all of our methods, so it really depends on the purpose of each mission,” he said.

The Aeroptic also requires more from pilots, so it’s crucial that a highly specific course is followed. “For the Garmin, the pilot just flies straight and level,” Brickman said. “You do have to maintain a certain speed, but that’s it.”

The Aeroptic is not as forgiving. If the plane deviates even a bit off the heading of the pre-programmed route, that section will have to be re-flown and re-photographed. As Desmarais pointed out, though, some level of learning and training is required with every new system.

Even on this initial use, CAP pilots proved up to the task, delivering images that had FEMA once again praising the organization’s work. “They loved everything we gave them,” Brickman said. “We had good and open communication between us and the Aeroptic folks, so it was a real coordinated effort.”

While Desmarais doesn’t see the Aeroptic system replacing either the handheld cameras or the Garmins, after its test run he does see it being used again. “It worked great,” he said. “FEMA was pleased with the end product and is telling us what they need in the future, so we can work with Aeroptic to meet long-term needs.

“I don’t see us putting it on every plane, but since the Aeroptic package is transferable, we can easily move it between planes. We might put a couple in each region or



Maj. Maggie Wang, left, checks an aircrew’s camera placement before flight. Members of the crew, from left, include Lt. Col. Roger Dunn and Maj. Paul Vance.

Photo by Lt. Col. Juan Tinnirello, California Wing

have units available for rapid deployment from National Headquarters,” Desmarais said. A lot will depend on the costs for the refined CAP system, which is yet to be determined. “It will be a wonderful new tool for our toolbox either way, though,” said Desmarais.

As technology continues to advance, CAP is committed to staying on the leading edge with its equipment, but at the end of the day the organization’s success relies mainly on its people, as Brickman stressed.

“The California Wing never ceases to surprise me; no matter what we have to do, everyone comes together. We had members from all over the state working on this,” he said. “Our group of volunteer airmen is so dedicated to our disaster relief and search and rescue efforts, and the professionalism of these volunteers is amazing. As operations director for California, to see that, and to know they are always there when you need them, makes me very proud to be part of this team.” ▲

First Lt. Karin Hollerbach of the California Wing contributed to this story.

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CAP Couple Makes Living Off the Grid Look Easy

Oh, those traffic jams, pollution and people. We sigh and think about getting away to peaceful, pristine places. For most of us, a tranquil vacation is enough to satisfy our souls.

By Vicky Travis

But for Civil Air Patrol Maj. Bryan Emerson and his wife, Laura, a 2002 honeymoon vacation in beautiful Alaska whetted an appetite for even more. After another visit in 2006 and years of preparation, the couple left Houston to make their own paradise about 45 miles from civilization in Alaska, whose 570,640 square miles would cover about one-third of the continental U.S.

CAP's Alaska Wing has about 725 members, most of whom live in villages or cities, said Col. Carl Brown, the wing's commander. Emerson might be the only one who lives so far out, Brown said.

Off the grid for the Emersons means living on solar and wind power, hunting and growing most of what they eat and building a well, a communications tower and more. Above all, it means constantly learning new things.

"I fell in love with it," Emerson said of Alaska's wilderness. "Then, after I came up here with my father to fish in 2006, I started my research and had a five-year vision to investigate more."

"A lot of people do change their mindset when they see Alaska for the first time," Brown said. "Coming here is really not much different than when people went west for the first time. It's attention to detail that makes

◀ Laura and Bryan Emerson take in the view from the front porch of their rustic cabin in the Alaskan wilderness.

a difference.”

Emerson, 57, was born in Houston, then lived in a suburb of Chicago through his high school years. His parents bought a tree farm in Wisconsin, where they would make fires, hunt and fish.

“It was a very formative time,” he said. After college in New York, he attended grad school at Rice University in Houston, where he lived for nearly 25 years.

“Alaska brings me back to my childhood of hunting and fishing and making trails through the woods,” said Emerson, who jokingly adds that his wife calls it his midlife crisis.

The real reality

A word from the wise, said the Emersons: Living off the grid in Alaska might not be what you think it is. That’s especially true if your information is based on reality TV shows.

The couple bought land in 2007 and contracted with their only neighbor to build a cabin, a several-year project that included hand-cutting 106 spruce trees. Emerson came up in the summers to buy supplies and assist. In 2012, the couple moved into their 740-square-foot house with out-buildings, including an outhouse, fuel shed and power shed.

It wasn’t perfect, and Laura Emerson admits to fears about what they’d gotten themselves into. But the avid learners would figure much out as they lived it.

“In the first couple years here I realized there were things lacking in our preparation,” he said. Sucking water out of a lake through filters wasn’t the best idea, so they contracted to have a

well drilled that connects to a shower house. “Showers are good things for marital bliss,” he laughed.

And in summer 2017, after a year of patiently planning every detail, the Emersons installed an outside hot tub, which has become a relaxing refuge in zero-degree winters. Laura details the hot-tub installation in her blog about off-the-grid life, <http://alaskauu1.blogspot.com/>. Nothing comes easy here.

Their home sits between Anchorage and Denali National Park on a hillside with a lake, about a 20-minute flight from the nearest major road. The lake serves as the landing strip for their Piper PA-20, which is outfitted with floats in the summer and skis in the winter.

Alaska has six times as many pilots per capita as the rest of the U.S., according to ak99s.org.

The Alaska Wing’s missions tend to be half search and rescue and half chasing down activated emergency locator transmitters, neither of which is a small task in this vast terrain.

“In the Lower 48, when transmitters set off accidentally, you can drive to them,” said Brown, who has lived in Alaska for 40 years. “Up here, it’s just the opposite.” Just 25 percent of the wing’s ELT searches are reachable by roads.

“Alaska has many different microclimates with mountains, open expanse and glaciers,” Emerson said. Through his own flying and CAP training, he’s learned to navigate all of them.

Brown said pilots, himself included, almost have to relearn flying once they get to Alaska, as the distance, geography and terrain are like none other.

Back in 1999 in Houston, Emerson



The Emersons installed a 125-foot steel wire communications tower, which both rely on for work and Bryan Emerson uses for Civil Air Patrol purposes.



During the summer, the couple eats fresh vegetables Laura Emerson grows, and in winter they eat what Laura canned, with a little supplement from the grocery store 1½ hours away.



Maj. Bryan Emerson, right, and fellow Alaska Wing members arrive for a Civil Air Patrol mission in Homer to analyze the local squadron's radio communications capabilities and needs. Pictured, from left, are Maj. Kristin Freeman, Eric Freeman and Sandra Stark; Lt. Col. Douglas Stark; Capt. Darren Deloach; and Emerson.



Majs. Kristin and Eric Freeman board a float plane on the Emersons' dock. Kristin Freeman is Rocky Mountain Region deputy chief of staff for communications, while Eric Freeman is the Idaho Wing's director of communications.

took his first orientation flight. "I was hooked, and had no idea where it would take me," he said. He joined CAP in 2010 to do volunteer work and learn more about aviation, knowing how much he would need the skills in Alaska.

The Emersons' typical day in the Alaskan wilderness changes with the season and the weather.

In winter, they get just five hours of daylight — from about 10 a.m.-3 p.m. Emerson is up early to rev up the

Honda generator. He works online for an investment banking firm starting around 5:30 a.m. local time to 9:30 a.m. EST. Once the sun's up, chores might include adding wood to heat the hot tub and cutting dead black spruce in the woods because it's a fire hazard.

In the afternoon, he and Laura might go cross-country skiing in the tracks he's made with the snow machine and groomer, which are also used to create the plane's landing strip. He ice fishes for northern pike. With Laura's scratch-made meals that include bear meat or fish and vegetables, he has homemade beer and she has homemade wine. Then they relax their cold muscles in the hot tub. Laura said they use it almost daily, even in the coldest of weather.

In summer, temperatures might reach 70-80 degrees and daylight lasts 20 hours, making sleep more difficult. They tend to their chickens, rabbits and beehives and scare off bears that frequent the yard that time of year. Cutting and hauling wood is a constant chore, and at 6 p.m. or so they might kayak out on the lake and watch eagles and moose.

"That's our commute," he laughed. With no TV, they read a lot and watch DVDs.

Once the Emersons decided to make the move to Alaska, they immersed themselves in learning.

"In Houston, we put together a list of things to learn," Bryan Emerson said. They took a wilderness Red Cross weekend course, and he took welding and furniture-building classes. While not an expert, Emerson now has skills most might envy.

"Training was really important even before we got here," Emerson said. "Civil Air Patrol has been very important in that."

Laura Emerson, 60, dove into the life-changing project with an academic mindset and created a curriculum. She's now certified in permaculture, master gardening, master naturalism and herbalism.

This spring she is taking a distance-learning course with the University of Alaska on the chemistry of medicinal plants. "I'm really excited to learn more about foraging wild foods that we add to stew or tea and really learn why this is good for food," she said.

Her husband wants to learn how to tan animal skins, such as rabbit fur. "And I might want to learn to raise quail since it's an economical form of meat," he said. "Each year I want to try to learn a new skill."

Staying connected

Both Emersons telecommute with far-away employers.

Bryan Emerson is chief financial officer and chief compliance officer for South Carolina-based Sequence Financial Specialists. He also provides consulting services in the financial and securities industries to clients in the U.S. and India.

With CAP he is public affairs officer, director of communications and finance officer for the Alaska Wing. The wing happens to be the first in the nation in saving lives, with eight in 2017, said Brown.

Emerson's many jobs are possible in part because of the 125-foot steel wire communications tower near the couple's cabin. In warm weather, Emerson uses a harness for the scary job of climbing up the tower to change the antenna. He uses the high-frequency radio antenna on the tower to check in to the daily national CAP HF radio network. He has heard stations clearly from as far away as Maine, Puerto Rico and Hawaii.

"For me, it's been a pleasant surprise to be able to stay as active as I am with CAP and in business. In this age of technology, we have so many tools to maintain high-quality communication," he said.

Emerson runs errands every two weeks or so, with a 1½-hour flight and drive to Wasilla, Alaska, to get milk, cheese and other things they don't produce. "There's always a hardware store run and checking the mail for deliveries from the Amazon truck of happiness," he said. He bunks for the night at the CAP bunkhouse, which is maintained for traveling wing members. Wing headquarters is in Anchorage, and four or five of its squadrons — including the Polaris Composite Squadron, of which Emerson is a member — are based close to the city.

The Alaska Wing is about to add two new squadrons, one in Anchorage and another north of the city. With those, Brown expects the number of cadets to grow from its current 250.

Laura Emerson, who has two master's degrees in humanities, produces her blog and writes for an Alaska magazine. She's also a consultant for the business in India.

"There are certain points in life that are pivot points, and now we have very few encumbrances," she said. "Working here was a seamless transition."

The couple leaves Alaska for about six weeks in the fall, during the "freeze-up" time, when ice on the lake is forming but isn't yet thick enough to support their plane's weight. Leaving takes planning and preparation to winterize the house, which includes draining all water so it won't freeze.

That's when they visit family around the U.S., including Laura's sons, 23 and 28, in Houston. That's the time they



In winter, the Emersons' plane is outfitted with skis for landing in front of their cabin on picturesque Trail Lake. In the summer, the plane is outfitted with floats for landing on the lake in front of their cabin.


enjoy theater, restaurants and museums. The rest of the year, they keep in touch through regular phone calls and have had a few family members visit. And last year, the Emersons spent several weeks touring India.

Timing has been just right for this life adventure.


"It's so hard to envision this in my earlier life when my kids were young," Laura Emerson said. "And I wouldn't have been mentally there in my 30s."

Today, they enjoy the day, complete with a constant Christmas-card scene outside their windows. ▲

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The **FUEL STOP**

CAP members develop product to keep from losing fuel gauges

By Alexis Faire

Let's. Cols. Rich Sweeten and Jim Holler hadn't known each other long. Both were F-15C fighter pilots before joining Civil Air Patrol. Holler had already been a member of the Massachusetts Wing's Coastal Patrol 18 for two or three years before Sweeten joined. At the time, neither knew they would soon be business partners.

Sweeten asked Holler about riding in a CAP Cessna 182. Holler happened to be planning a flight that day and asked Sweeten if he wanted to join. During the ride, the two landed at Falmouth Airpark to refuel before returning the plane. Having served in the military before joining CAP, Sweeten wasn't used to having to refuel his own plane, but he was willing to give it a try.

"Rich, being the nice guy that he is, said, 'Well, I'll jump up on the wing and use the fuel checker and see how much fuel we've got,'" Holler said. "Before I could say anything, he was up on the wing."

While checking the fuel, Sweeten accidentally dropped the fuel gauge into the tank. They couldn't take off without finding it.

Using a flashlight to see and a coat hanger to search, they had about three hours to find the fuel checker. Because the fuel gauge is clear, it was



Word about the Fuel Stop is spreading throughout the aviation community, as seen here in *Plane & Pilot*.

especially hard to find.

While searching for the gauge, Holler decided to call a friend of his who does maintenance work on Cessnas. Holler and Sweeten were informed they weren't the first to encounter this problem.

After the incident, at a CAP meeting, Sweeten approached Holler with an idea. After brainstorming for ways to prevent others from experiencing the same difficulty, the two decided to create a new product.

A fuel gauge is about 12-18 inches

long and resembles a drinking straw. Incremental marks down the side allow the user to measure how much fuel a tank contains. Because of its size, it can easily be dropped into the tank or can roll off the wing and fall onto the ground, creating a foreign object debris hazard for planes.

"We went around and around with design and plastic engineers," Sweeten said. "It probably took us a year and a half with plastic engineers."

Known as "The Fuel Stop," their creation snaps onto the top of a fuel



New “Fuel Stops” arrive from the manufacturer. Today, many of the gauges are used on CAP planes.

Lt. Col. Jim Holler, right, assists Capt. Dennis Mills in the promotion of his son, Christopher, to cadet captain.



Lt. Col. Rich Sweeten, third from left, stands next to a CAP Cessna 182 being prepped for a mission.

gauge, avoiding the possibility of losing or dropping the device. It has wing-like features and makes fuel checking much easier.

Holler said the engineer for the product recommended creating the Fuel Stop by using 3D printing. They developed a few prototypes, and when the final product was ready, it was sent to a mass manufacturer.

The Fuel Stop is available online at www.thefuelstop.net for \$7.95, but it's

primarily sold at Aircraft Spruce and other online aviation sites.

“I get a report from Aircraft Spruce, which is an online pilot store for pilot products,” Sweeten said. “I’ve seen them sold in Australia and Canada. They’re sold already in England and Spain.”

Sweeten said they’ve also sold the product to many states, and four or five Civil Air Patrol wings bought enough for all of their airplanes.

Gary Schneider, logistics director for CAP, said refueling an airplane isn't as easy as refueling a car, and the Fuel Stop helps make the process smoother.

“It’s a very inexpensive tool to prevent the dip stick from falling into the fuel tank, because there’s a cost associated with having the maintenance facility find it and remove it from the fuel tank,” he said.

Sweeten and Holler didn't develop the Fuel Stop to make money. They

thought it could help the huge number of general aviation pilots who use the gauges to check their planes' fuel levels.

"We are not a big business," Sweeten said. "We never thought we'd make big money. To be perfectly honest, we are still in the red trying to make back the money it took to make this product happen.

"We really did it just out of the fun of doing it, recognizing it was a necessity," he said.

If a gauge is dropped into a tank, the tank is exposed to contamination. Though he's never heard of an accident caused by contamination, Holler said the Fuel Stop can prevent anything like that from happening, and the product is worth it.

"For the price of the product, it's a good little piece of insurance to prevent that in the future," he said. ▲

"We really did it just out of the fun of doing it, recognizing it was a necessity."

– Lt. Col. Rich Sweeten, on development of the Fuel Stop

Five former CAP cadets shine in their Air Force careers

By Jennifer Gerhardt



Air Force Staff Sgt. Marisela Lugar poses in front of one of the planes in the air park at Moody Air Force Base, Georgia.

Integrity.
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The core values of Civil Air Patrol and the U.S. Air Force are so similar, it's no surprise former cadets feel comfortable in the military and use their skills to become leaders in a variety of career fields.

Staff Sgt. Marisela Lugar joined the Air Force in 2013 and went into security forces. She then cross-trained to be an equal opportunity adviser with the 23rd Wing Equal Opportunity Office at Moody Air Force Base, Georgia, in 2017.

"I was in Civil Air Patrol from 2002 until 2007," said Lugar, a former cadet second lieutenant in the Arizona Wing's Tucson Composite Squadron 105. She was the squadron's first sergeant and color guard commander for most of her time in CAP.

"My main focus was color guard," said Lugar, who attended several field training exercises and color guard competitions. "I took my team to the national color guard competition to represent the Southwest Region. I was the first female commander to take a team to National, and we were only the second team to go from Arizona."

First Lt. Haley Barela was a New Mexico Wing cadet from the fall of 2007 to spring of 2011. Barela went to New Mexico Wing summer and winter encampments as a basic cadet, then went back as part of the staff for additional summer and winter encampments. She is a graduate of the Air Force Academy.

Capt. Kristopher Atabaki is a C-17 pilot and aircrew development officer with the 7th Airlift Squadron at Joint Base Lewis-McChord, Washington.

Atabaki was a cadet with the National Capital Wing's Fairfax Composite Squadron and then the Virginia Wing's Prince William Composite Squadron from 2007-2009. He participated in the Virginia Wing encampment in 2007, followed by a National Flight Academy the same summer.

Lt. Col. Richard Gerhardt, inspector general for CAP-USAF,

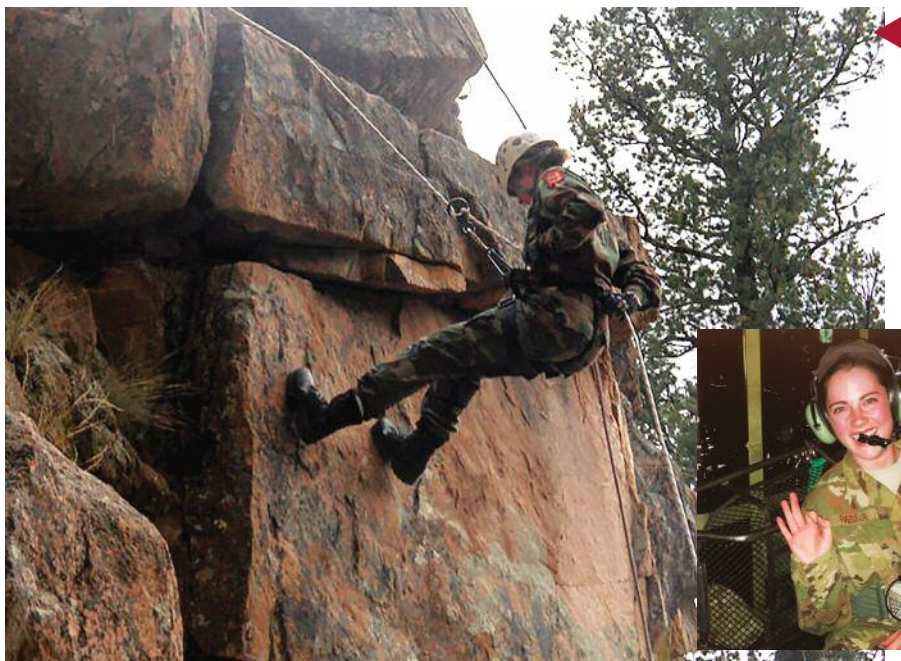
joined the Nebraska Wing's Lincoln Cadet Squadron in 1988. As a cadet, he attended encampments in South Dakota, Nebraska, Iowa and Oklahoma. Gerhardt also participated in Cadet Officer School, the Pararescue Orientation Course, the Advanced Pararescue Orientation Course and three National Cadet Competitions.

Lt. Col. Jason Trew, commander for the 30th Student Squadron, Squadron Officer College at Maxwell Air Force Base, Alabama, joined Civil Air Patrol in 1989 when he was 11, and it quickly became his life.

Not only did Trew compete in National Cadet Competition with his Louisiana Wing drill team, but he also earned his private pilot's certificate, received an Order of Daedalians Award and CAP's Gen. Carl A. Spaatz Award and was named National Cadet of the Year in 1995. After all that, he



Then-cadet Lugar, second from left, was the first female commander of the Tucson Composite Squadron's color guard in 2002. She participated in color guard during most of her time in CAP.



Then-cadet Haley Barela enjoyed learning how to rappel and completing other search and rescue activities during her time as a cadet in the New Mexico Wing.

Air Force 1st Lt. Barela deployed to Turkey in 2017 and got an opportunity to ride on a Sikorsky HH-60.

first, I was interested in the Marines, but then after being in CAP, I became interested in the Air Force.”

A military career never crossed Barela’s mind when she first joined CAP. One of the squadron’s senior members told her about the Air Force Academy. Then, after attending the Pararescue Orientation Course in 2010, the idea of joining the military solidified.

“The more I looked into it, the more I loved the idea of attending and commissioning,” Barela said. Once she had made the decision, one of her CAP instructors helped her get accepted to the Air Force Academy. She was commissioned into the Air Force in 2015.

Atabaki was already planning on joining the military, but “CAP was the organization that cemented that decision for me,” he said.

Joining the Air Force was already in the future for Gerhardt, too.

“My dream was to join the Air Force and be a pilot,” he said. “CAP was a great way to learn Air Force values.”

Trew also dreamed of being a pilot as a kid.

“I wanted to be an Air Force fighter pilot in the fifth grade,” he said. “I joined CAP as soon as I finished sixth grade.”

went to the Air Force Academy with five fellow cadets from his wing.

The Best Part of CAP

“There are several ‘best parts’ about being in CAP,” Lugar said: “The lifelong friends I made, what I learned, and the experience. The people I met are like my family now. The senior members still support my Air Force career, and I still go to them for mentoring.”

People and experiences were also important to Barela.

“I really found camaraderie and friends in the cadets and discovered I liked leadership,” she said. “My favorite part of CAP was anything emergency services-related. From trekking around with my friends in the woods on a search and rescue exercise to teaching my mom how to read a map when she first joined, these were all awesome memories.”

Atabaki noted the dedication to serve as being the best thing about CAP.

“My favorite thing about being in

CAP as a cadet is the same thing as being a senior member: the people,” he said. “No matter what we want out of the program or organization, we are all joined together by a common desire to make an impact that’s larger than ourselves.”

For Gerhardt and Trew, CAP’s best aspect was the opportunity to learn leadership.

“Gaining leadership experience by managing people and having to organize activities were the best parts of being in CAP as a cadet,” said Gerhardt.

Trew agreed.

“The best part of CAP was the practical leadership experience while being in a safe environment,” he said.

Making the Military Decision

Although interest in the military isn’t a prerequisite for joining Civil Air Patrol, many cadets eventually develop that focus.

“I was interested in the military, but didn’t know anything about it. That’s why I joined CAP,” said Lugar. “At

Preparation is Key

Civil Air Patrol's guidance and training definitely prepared each cadet for military life.

"CAP helped me learn to speak in front of people, but also communicate with people in general," Lugar said. "I learned to utilize leadership skills I had no idea I had, and how to expand those skills to become a stronger leader. Even if I had not joined the Air Force, CAP still helped me learn skills I could utilize in civilian jobs and college."

Barela's CAP experience helped a great deal when she went to the Air Force Academy.

"Basic knowledge on how to march, respond, stand at attention, wear a uniform and shine shoes was incredibly helpful," she said. "Plus, the Pararescue Orientation Course specifically was great exposure to physical conditioning and outdoor survival; basic training and physical training sessions were a breeze after that. Aside from that, being comfortable with public speaking and leading my peers in CAP put me at a definite advantage over many other cadets in the academy and even among other young officers now."

Atabaki also credits CAP with preparing him for military life.

"CAP prepared me to be a good cadet in Air Force ROTC," he said. "I was several steps ahead of my peers in knowledge of the Air Force, customs and courtesies, basic responses and uniform wear. Plus, flying with CAP also helped me get my start as a pilot and, in my opinion, had a direct impact on my earning a pilot training slot out of Air Force ROTC."

Advice for Newcomers

Each of the former cadets has advice for those interested in joining Civil Air Patrol. But the biggest advice is to just



Kristopher Atabaki, right, is pictured on his last day as a CAP cadet in the Virginia Wing's Prince William Composite Squadron. Cadets who were going to college ROTC or one of the service academies were honored with certificates of appreciation and a going-away celebration.



As part of preparations for graduating Euro-NATO Joint Jet Pilot Training, every student took a "hero shot" with the T-38. Here Atabaki takes his turn in front of the T-38 before graduation.



Atabaki, as an Air Force second lieutenant, prepares to head out on his first solo flight in the T-6 Texan II as a student pilot at Euro-NATO Joint Jet Pilot Training at Sheppard Air Force Base, Texas. One of the many milestones of pilot training is taking to the skies alone, without an instructor.



Air Force Lt. Col. Jason Trew flies in an F-16 fighter.

Then-cadet Trew poses for a photo before heading to a CAP meeting as a member of the Louisiana Wing.

join and be involved.

“It’s a great place for kids to grow up and learn some great life skills,” Lugar said. “The scholarship programs available and the experiences you have in CAP will follow you through adulthood, whether you join the military or not. Most importantly, don’t give up or quit if things become challenging; nothing is impossible.”

Barela agreed.

“The best advice I can give to young girls (or anyone) is to never hold back,” she said. “I joined CAP when a lot of my friends at school said the military was a guy’s thing. I went to the Pararescue Orientation Course when fellow cadets said girls couldn’t complete the course. Every time someone said I couldn’t do something because I was a girl or small or too low-ranking or whatever the reason, I did it anyway and I did everything in my power to be the best.”

“I have always been amazed at how many situations I am able to look back on and think, ‘Wow, that wasn’t even that bad.’ So don’t be afraid to be unapologetically you and

unapologetically amazing. You’d be surprised how far you can go,” Barela said.

Atabaki echoed Barela’s sentiment of never holding back.

“CAP is an investment in yourself — you get out of the program what you put in,” he said. “The cadet program is a leadership laboratory; it’s where you can experiment with your leadership style in a safe environment, so jump in and when in charge, take charge. Don’t be afraid of failure; that’s what we learn from the most.”

Gerhardt feels CAP helps cadets grow.

“Use every opportunity in CAP to learn something new and develop your skills,” he said. “Even if you are the lowest-ranking person, you can still make a difference by working hard and having a positive attitude.”

Trew tells young people, “If you are interested, it is worth exploring. If it still seems valuable, invest your time in it, and your hard work will yield great benefits.” ▲



Lt. Col. Richard Gerhardt returns from a six-month deployment and is greeted by his two sons, Samuel and Matthew. Photo courtesy of Jennifer Gerhardt

Then-cadet Gerhardt heads to one of his monthly meetings as a Nebraska Wing member.

Photo courtesy of Kim Gerhardt





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