



**THE**

# MOBILITY FORUM

THE MAGAZINE OF AIR MOBILITY COMMAND | SUMMER 2021

Fighting the Virus  
From the Air:  
**The 618th Air  
Operations  
Center in Action**

AMC Deputy Commander,  
Lt Gen Brian Robinson:  
**How MAF Projects  
the Power of the  
Joint Force Forward**

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## THE MOBILITY FORUM

Volume 30, No. 2  
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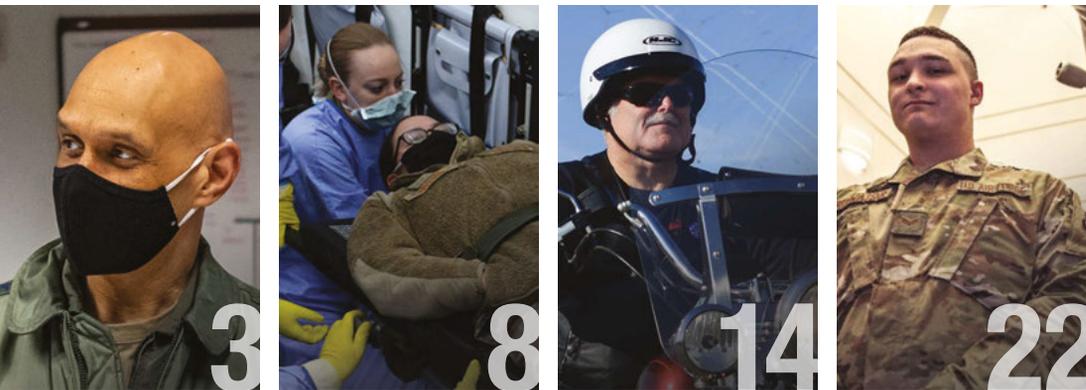
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SSgt Andre Rivera, 911th Maintenance Squadron Jet Propulsion Technician, inspects a C-17 Globemaster III engine during a Home Station Check inspection at the Pittsburgh International Airport Air Reserve Station, PA, May 18, 2020.

USAF photo by Joshua J. Seybert



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 Lt Gen Brian Robinson is shown from the chest up, wearing a dark green flight jacket with patches, a black face mask, and a white earpiece. He is in a meeting room with a whiteboard and Starbucks bags in the background.
 

## AMC Deputy Commander, Lt Gen Brian Robinson: How MAF Projects the Power of the Joint Force Forward

BY MS. ALLISON ELLIOT,  
STAFF WRITER

**W**ith 85 percent of the joint force assigned to the continental United States, the Mobility Air Forces (MAF) has had to evolve its warfighting capabilities to project the power of the joint force forward. According to Lt Gen Brian Robinson, Deputy Commander of Air Mobility Command (AMC), Scott Air Force Base, IL, projecting that power forward has involved a degree of modernization.

“We are on a path to advance our technologies and capabilities to allow us to advance our decision-making in the role that we will play for projecting power for the joint force,” Robinson said. “The ability to do that while being fully aligned with JADC2 [Joint All-Domain Command and Control] and projecting that power to the time and place of our nation’s choosing is going to be key.”

It has been important for MAF to be involved in the development of

JADC2—the link connecting the joint forces, command, and control—because of platform size, electrical power, and presence.

“There are some unique reliances, operationally and tactically, that our partners will have on us because of the size of our platforms and the power they can generate. Those factors allow the ability to carry some of our capabilities plus our ubiquitous presence around the world at any one time,” Robinson said.

The features of the MAF platform allow the Air Force and joint force flexibility and options to engage the enemy, wherever they may present themselves in the world.

“Where we are going with JADC2, every platform—before it is considered for its true capabilities—is a node in a network architecture, and if we are part of that architecture with our ubiquitous presence and power,

Lt Gen Brian Robinson, Air Mobility Command Deputy Commander, speaks during a preflight brief at Dover Air Force Base, DE, March 23, 2021. Robinson visited Dover AFB to engage with base leaders and fulfill training requirements on the C-17 Globemaster III.

USAF photo by SrA Christopher Quail

we offer alternative paths to that global network should the adversary decide to contest us in a particular geographic region or particular domain,” said Robinson.

The tankers are vital to AMC’s role in competition and future high-end fights for moving forces to wherever they need to be.

“The tankers are going to be the key to getting that force into the position it needs to be in for its assigned objectives quickly. They are going to be the key to establishing that air bridge—the ability to stay connected on behalf of the joint partners as we are dragging the fighters across the

**“It is about expediting decision-making for the next best move to stay on top of or out in front of the adversary in a position of advantage.”**

ocean or refueling the bombers as they are making their way to the objective area,” Robinson said.

The role of tankers and airlifters in day-to-day operations and competition—not just high-end fights—is one that Robinson feels is “under-represented and appreciated.” Specifically, he notes the ability to be in sync with allies while being out of sync with adversaries.

“Take a look at open-source reporting on some of the bomber task force missions and the dynamic force employment approach. Those activities go on every day, and the idea is for us to be strategically predictable to ourselves but unpredictable to the adversary that the particular operation is aligned against. It is the same roles that tankers and airlifters will play, but in daily competition, as opposed to just high-end conflicts,” Robinson said.

AMC learned a significant amount of information from the first four experiments or exercises it conducted on the capacity of the KC-46 Pegasus tanker and the role of the C-17 Globemaster III transport. The challenges the team faced included combining the existing systems and hardware with potential future systems.

“The first four, I think what we learned is, it is okay and necessary to fail. We went into some of those on-ramp experiments with expectations with how a certain system design or architectural approach would work, and sometimes it worked but sometimes not as well—and sometimes not at all,” Robinson said.

Additional experiments are planned, and Robinson states they will happen as long as progress is shown with the experiments.

These experiments are all part of an evolution to developing JADC2. The key, once again, is adaptation.

“We have to learn to adapt our acquisition process and thinking about how we have to go after future capabilities rather quickly because there is a terminal point where the game ends and there is a winner and a loser, and everyone is jockeying for position in the competition infinitely. We have to adapt,” Robinson said.

Artificial intelligence (AI) has a “significant” role in modernizing AMC for its part in JADC2. The future for this technology in aircraft operations applications is bright, as seen in the private sector.

“Today, it is all done fairly manually when an aircraft, if you will, comes into a particular operating site. [That] is when we get the best visibility on it or the status of the airplane or crew or lots of other factors. So there is a lot of distance to make up for AI and machine learning from that perspective. We see corporate aviation entities have sort of blazed the trail already..., and we can certainly learn from it,” Robinson said.

Robinson notes, however, that AI experts state that machine learning cannot make up for human decision-making. They can help with a decision or even make a minor decision, but pressing the button should fall to a person.

“Humans learn from machines and machines learn from humans, so you can work that back into machines, but if the consequences are ‘should we go to war or not,’ you may not want to let the machine make that call,” Robinson said. “But if the decision is ‘what is the most important thing out the door,’

then a machine can make that decision or at least a recommendation to the decision-maker.”

The Advanced Battle Management System (ABMS) focuses on technological solutions as opposed to JADC2, which focuses on intangible operational elements of the mission. The experiments are centered on the ABMS component.

“The experiments are going after some material solutions. The material solutions are more about the ABMS side of it, what hardware is necessary to move the data across. JADC2 tends to be more about tactics, techniques, and procedures—the non-material solutions about what you are going to do with that hardware,” Robinson said.

Developing and modernizing AMC’s platform for its role in JADC2 is not about learning more about the adversary, Robinson explained, but more about ourselves: our capabilities, capacity, and disposition. These experiments and AI technologies are to further our decision-making capabilities to better respond to adversarial advances.

“It is about expediting decision-making for the next best move to stay on top of or out in front of the adversary in a position of advantage. TRANSCOM [Transportation Command] calls it ‘advancing decision-making.’ That is why their strategic principles are what our combatant command is aligned under, but it is similar with the effort from the Air Force with JADC2, same outcome. Sensing, aligning, orienting, and making decisions very quickly in a battle and the operational space we know will be rapidly changing,” Robinson said. 

# Air Mobility Command Receives Two Prestigious Safety Awards

BY MAJ CAROLYN SPARKS,  
AMC PUBLIC AFFAIRS



**A**ir Mobility Command (AMC) recently received two awards recognizing the accomplishments of their 2020 safety program.

AMC captured the Secretary of the Air Force (SAF) Safety Award for the third consecutive year, and the Major General Benjamin D. Foulois Memorial Award for the second year in a row and the 19th time in its history.

"We are incredibly honored to have earned these coveted safety awards," said Col Brandon Hileman, AMC Director of Safety. "It is truly a team effort and a testament to our outstanding Air Mobility warriors."

The SAF Safety Award is the Air Force's most prestigious safety award given to the major command, field command, direct reporting unit, or field operating agency with the most effective overall safety program. Recipients of this award are approved by the Secretary of the Air Force.

"The many achievements of Air Mobility Command indicate strong support for safety at all levels of command personnel," said John P. Roth, Acting Secretary of the Air Force.

Since 1938, the Major General Benjamin D. Foulois Memorial Award recognizes the major command, field command, direct reporting unit, or field operating agency with the most effective aviation safety program.

"Our safety programs save lives," Hileman said. "People are our greatest asset, and AMC is doing everything we can to protect Airmen so they can continue to provide rapid global mobility."

Air Mobility Command is recognized across the Air Force as a benchmark for proactive safety, according to Hileman. He cited the command's risk management culture as the reason for extraordinarily low aviation Class A and Class B mishap rates, which have been 54 percent below the Air Force average since 2017.

The AMC safety programs also save the Air Force money.

"Mishaps can cost millions of dollars and result in destroyed aircraft or assets. Preserving these valuable resources equals combat capability," said Hileman.

Unique to the command, AMC's "Hindsight in 2020" Critical Days of Summer campaign leveraged lessons learned to recognize and avoid seasonal hazards and successfully reduced lower level, Class C mishaps by 35 percent.

The command's leadership role in the Airmen Safety Action Program, or ASAP, was another key component in the safety accolades. Airmen and civilians submitted 1,210 ASAP reports, and the AMC safety team worked with appropriate stakeholders across the enterprise to assess and resolve identified hazards. 



A KC-46A Pegasus prepares to land on the flightline June 28, 2019, at McConnell Air Force Base, KS.

USAF photo by SrA Skyler Combs

# What Do You Do Here?

BY MAJ JONATHAN R.N.K. WEAVER,  
AMC FLIGHT SAFETY

Safety, as a discipline, is arguably one of the easiest concepts to voice and one of the most misunderstood facets of our daily lives in the Air Force. Merriam-Webster's Dictionary defines *safety* as "the condition of being safe from undergoing or causing hurt, injury, or loss." Despite this knowledge, before I began my career as a safety officer, the pilot in me viewed the safety office not as a helping hand but rather as a dreaded "black hat" evaluator—out to fail me somehow on an inspection or investigate me for some possible mistake.

Teaching safety classes to new aircraft commanders and speaking to my peers, I would say that most aircrew members have privately held similar opinions at some point in their careers. I would also venture to say this idea is not limited to just aircrews across the Air Force. We never want to point out our own faults to others, especially those coming to us with very pointed questions

about our failures. Outsiders, such as mishap investigators, are generally regarded with suspicion; it is just human nature. These personal mental blocks then contribute to individuals not seeing the bigger picture. When safety findings are released, many folks unfortunately focus on the feeling that a report is blaming an individual as opposed to attempting to stem a system-wide fallacy that may cause a similar accident. Those misconceptions are ever present in our lives while in-garrison, so it is no surprise that safety is even more of a misunderstood beast while in a deployed environment.

I deployed as Chief of Safety in January of 2020. As you know, that was right around the same time the theater heated up tactically, and we felt the pressure immediately. Despite those external challenges, the biggest issue my team faced was trying to reinforce safety's helping hand persona in preventing the next mishap. I saw many individuals

across the area of responsibility fall into the trap of believing that when they left the United States, regulations and procedures designed to ensure their welfare could be disregarded if it meant getting the job done. I unfortunately saw too many accidents that were completely preventable, such as vehicle rollovers due to excessive speed, erratic maneuvering over sand dunes, or electromagnetic radiation exposure because individuals were in the wrong place at the wrong time.

Initially, when incidents occurred and we would try to investigate as we had been taught, we were met with hostility or outright questioning of why Safety was involved. We were honestly taken aback. Like the base around us, my safety team came from the Total Force, and I had individuals from nearly every major command represented. To combat the problems we saw, we all had to take a step backward and try to understand what was happening and why Safety was viewed with the

**As we emphasized time and again, the need to ensure personal safety does not change during war or peacetime. No one goes to work with the desire to be injured, and clearly those who skirt procedures to get the job done mean no malice; however, they are introducing a great deal of risk that does not have to be introduced into an already complex and risky situation.**

preconceived notions I also once had, although we all go through the same training and annual refreshers.

We finally found success in defeating the expeditionary mindset and the distrust by providing in-depth safety mishap data and having frank conversations, relaying to Airmen and commanders alike that every day lost, every person injured, and every mechanical part broken was doing more damage to our expeditionary effort than the enemy could muster. As we emphasized time and again, the need to ensure personal safety does not change during war or peacetime. No one goes to work with the desire to be injured, and clearly those who skirt procedures to get the job done mean no malice; however, they are introducing a great deal of risk that does not have to be introduced into an already complex and risky situation. Supervisors and commanders need to reinforce the idea of “no undue risk.” When that piece of the error chain failed was when we saw the greatest

number of mishaps occur; when it was corrected, the change that took hold was amazing to watch, and we began to see the number of incidents drop.

In addition to the wartime environment in which we found ourselves, 2020 also proved to have other challenges—to personnel and the mission—when COVID-19 hit. On a personal level, one can argue that the measures normally associated with keeping oneself safe on a daily basis do not change during a pandemic. You still need to follow best practices and regulations, and at the end of the day, you still have to listen to your gut feeling of acting when the situation does not feel right. If you fail to heed guidance, you are still risking life or the mission.

Safety itself is thus a double-edged sword. On one side, personal accountability is a must to ensure one’s own well-being. On the other side, the duty of those in actual safety positions is to be the risk management experts and remind others of the lessons of

the past to avoid repeat accidents. Air Mobility Command’s “Just Culture,” an atmosphere of trust in which people are encouraged to report essential safety information without fear of reprisal, is the true key to this. As it took me 14 years and many fortunate roles and assignments to truly understand those subtle points, I wrote this article to help save you some years on the learning curve.

As I have stated, everyone in the military understands the first definition of safety and attempts to apply those principles daily to varying degrees of success. What is interesting, however, is that the very next dictionary definition of safety is “a device (as on a weapon) designed to prevent inadvertent or hazardous operation.” I like to think this definition is the true purpose of the Safety Office. Because Airmen are our best weapons, it only makes sense that a protection device is in place to ensure their continued good health should other means fail. That is what I believe the safety discipline is: a safety switch. 



A C-17 Globemaster III is prepared to transport a transportation isolation system at Charleston Air Force Base, SC, March 6, 2019, during a training exercise that allows Airmen to practice the most effective and safest form of transportation for patients and their medical professionals.

USAF photo by SrA Cody R. Miller

## Fighting the Virus From the Air: The 618th Air Operations Center in Action

BY 618th AIR OPERATIONS CENTER  
PUBLIC AFFAIRS AND MS. ALLISON ELLIOT,  
STAFF WRITER

In late 2019, the world began to adapt to the COVID-19 pandemic and follow measures to mitigate its effects. When the virus began to spread, the 618th Air Operations Center (AOC) sprang into action.

The team of 700 active duty, civilian, Guard, and reserve personnel who make up the 618 AOC provide global command and control over the U.S. Transportation Command's air mobility missions. They work around the clock to support the full spectrum of global mobility missions, such as strategic airlift, air refueling, and aeromedical evacuation, to name a few. Their mission since March 2020

has become transporting patients with COVID-19, as well as vaccines and equipment, across the world.

In addition to allocating and controlling aircraft to deliver vaccines, test kits, ventilators, and refrigerating units worldwide, the 618 AOC also played a key role in bringing American citizens home at the start of the pandemic.

The 618 AOC has made use of the Negatively Pressurized Conex (NPC), as well as the Transportation Isolation System (TIS) and the NPC-Lite, to relocate patients. These pressurized biocontainment units (BCUs) are metal shipping containers used to transport patients with confirmed or suspected COVID-19 infections while protecting the aircrew from the virus

during flights. For an in-depth look at NPC and NPC-Lite units, review the diagrams at <https://airman.dodlive.mil/2021/02/24/negative-for-covid/>.

The 618 AOC uses the NPC as a ready-response medical transport asset to evacuate up to 23 infected, or suspected to be infected, patients with COVID-19. Since the beginning of the pandemic, the 618 AOC has facilitated 21 TIS missions and 46 NPC missions, totaling 326 patients transported using BCUs.

In the later stages of the pandemic, the focus has become vaccinating the world population against the virus. Even during this phase, the 618 AOC has been called to action, using their skills, experience, and training to accomplish this additional task.

The 618 AOC utilizes channel lanes and existing missions to deliver lifesaving vaccines on time and to various locations around the world.

Air Mobility Command (AMC) has issued guidelines for personnel related to wearing masks and screening passengers. In addition, the AMC website<sup>1</sup> includes precautions for those traveling to specific countries based on the restrictions those countries have instituted for entry. As a team with a global mission, the 618 AOC has adopted the Department of Defense mandated requirements and procedures into their operations to maximize the safety of flight personnel.

All NPC teams receive extensive training and take all appropriate precautions to protect aircrews and their passengers. One such precaution includes NPC ground personnel decontaminating all aircraft involved in NPC movements after mission completion.

Although the 618 AOC has always prioritized the safe and timely execution of mission requirements, the virus has added a new level of complexity to their duties. They have not only met these expectations for safety, the team has also managed to complete their missions on time, with built-in allowances for the new procedures.

Preflight procedures and ground times for NPC missions are longer than those for non-COVID AE (aeromedical evacuation) missions due to the complexity of the equipment and the time and attention needed to ensure the safe loading and transportation of patients.

The additional time needed when conducting NPC missions is built into the mission timeline to maintain on-time departures and arrivals.

With ever-changing requirements within an often unpredictable environment, one of the keys to accomplishing important missions during the pandemic has been the 618 AOC's flexibility and commitment to minimizing mission risk.

As the pandemic progressed, changing entry and exit requirements for several countries forced the 618 AOC to reroute NPC missions. The 618 AOC has also supplemented or heavily modified NPC teams to meet the demands of extended mobility missions and minimize the risk to personnel.

In addition to doing their part as global citizens by following various health and safety guidelines, the team's efforts, from transporting hundreds of patients during the pandemic to delivering more than 38,000 vaccines to 11 overseas locations, have been vital in fighting the COVID-19 virus. Some would say their success has been due to their "resilience and expert efficacy."

The 618th Air Operations Center has been an essential player in the COVID-19 response and relief effort. Despite operating in an ever-changing environment under increased mission demands, the men and women of the 618 AOC have continued to demonstrate their resilience and expert efficacy when supporting global mobility missions. The 618 AOC's performance during the COVID-19 pandemic demonstrates its ability to continue supporting warfighters, 24 hours per day, 7 days per week, 365 days per year, whenever and wherever they are needed. 



Airmen assigned to the 10th Expeditionary Aeromedical Evacuation Flight familiarize themselves with a Negatively Pressurized Conex secured inside a C-17 Globemaster III aircraft during a training at Ramstein Air Base, Germany, Jan. 30, 2021.

USAF photo by A1C Daniel Sanchez



Capt Conor Favo, 28th Test and Evaluation Squadron Division Chief, adjusts the settings of his headset during the first in-flight testing of a Negatively Pressurized Conex prototype on a C-17 Globemaster III at Charleston Air Force Base, SC, April 30, 2020.

USAF Photo by SSgt Chris Drzazgowski



Airmen assigned to the 10th Expeditionary Aeromedical Evacuation Flight secure a litter holding a simulated patient and medical equipment inside a Negatively Pressurized Conex during training at Ramstein Air Base, Germany, Jan. 30, 2021.

USAF photo by A1C Daniel Sanchez

<sup>1</sup> <https://www.amc.af.mil/Home/AMC-Travel-Site/Coronavirus/>

# Why the TAWS/GPWS Nuisance Event Worksheet Is So Important

BY MR. JAMES JOYCE, C-17 MFOQA FLIGHT DATA ANALYST

The Operations Risk Assessment and Management System (Ops RAMS) branch in Air Mobility Command (AMC)/A3 wants all crew members to have confidence in their warning systems, responding to system alerts in a timely and appropriate manner (as opposed to discounting them as invalid and nuisances) to prevent a controlled flight into terrain mishap from ever happening again. As we all know, aircraft safety systems are complicated, thus requiring continual improvements.

The Terrain Awareness and Warning System (TAWS)/Ground Proximity Warning System (GPWS) Nuisance Event Worksheet was created to provide crews an avenue to address the “imperfections” that they discover concerning these two vital safety systems. Consequently, a major part of Ops RAMS’ effort to enhance crew confidence in their aircraft safety systems is to analyze every submitted worksheet. Although this particular worksheet is a C-17 product, should not all crew members flying with similar safety systems report imperfections in their systems as well? If a similar process is not in place for your Mission Design Series, the Airman Safety Action Program (ASAP) reporting system is the perfect tool to use to express your concerns to AMC staff.

Occasionally, Ops RAMS’ analysis of nuisance worksheets shows that the TAWS and GPWS worked as designed, especially in hot, high-altitude, and

heavy-weight situations in which the true airspeed is much higher than normal. Those conditions are typically not present during training, so crews often do not fully appreciate the rate of descent achieved when using the full flap idle/direct lift control techniques they practice in training; however, analysts often confirm actual nuisance events—for instance, a TAWS event at Yokota Air Base (AB).

Analysis of that event confirmed that the radar altimeter was erroneous because, during the bank, the device started bouncing its signal off the gear doors. Until a planned TAWS software upgrade is fielded, this “radar altimeter and gear door” issue will continue to result in a navigation solution error for the TAWS, which determines that the aircraft is not in a safe position to land (although it really is) and thus sounds the warning.

Following is another example of a TAWS event that was found to be a nuisance alert at Bardufoss Airport, Norway.

In Figure 1, yellow arrows point to the location of two tall erroneous obstacles inexplicably off the approach end of runway 10 that have been causing nuisance alerts for years, which, until recently, crews were not reporting.

Figure 2 shows an event at Bardufoss Airport that provoked the crew to report the nuisance warning, which lasted 32 seconds until the aircraft (blue path) passed Obstacle 1078.

After the team’s notification, the National Geospatial-Intelligence Agency confirmed that the obstructions no longer exist and they were removed from the databases.



Figure 1. Two Erroneous Obstacles Causing Nuisance Alerts at Bardufoss Airport.

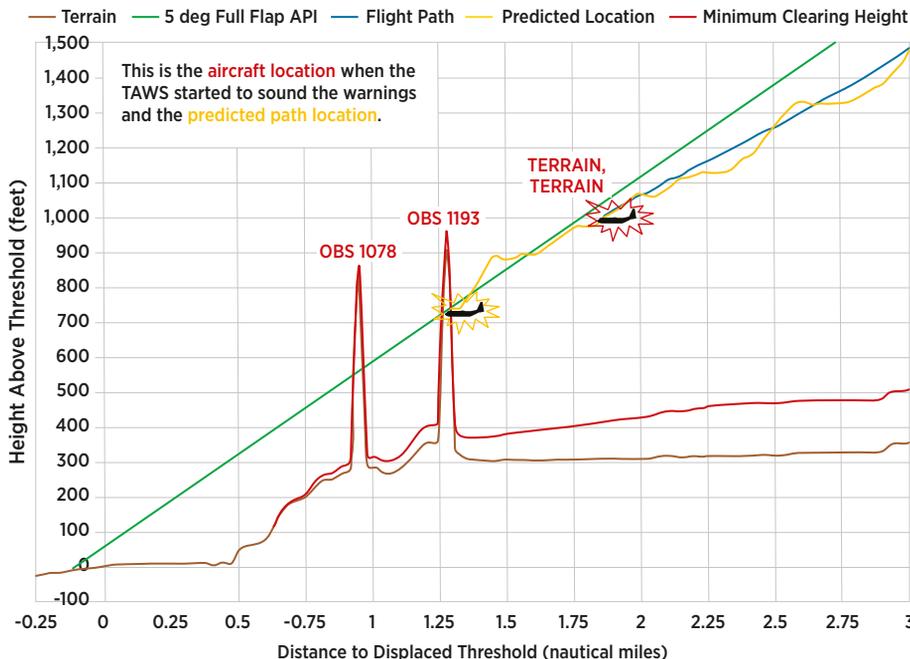


Figure 2. Aircraft Location When Warnings Sounded

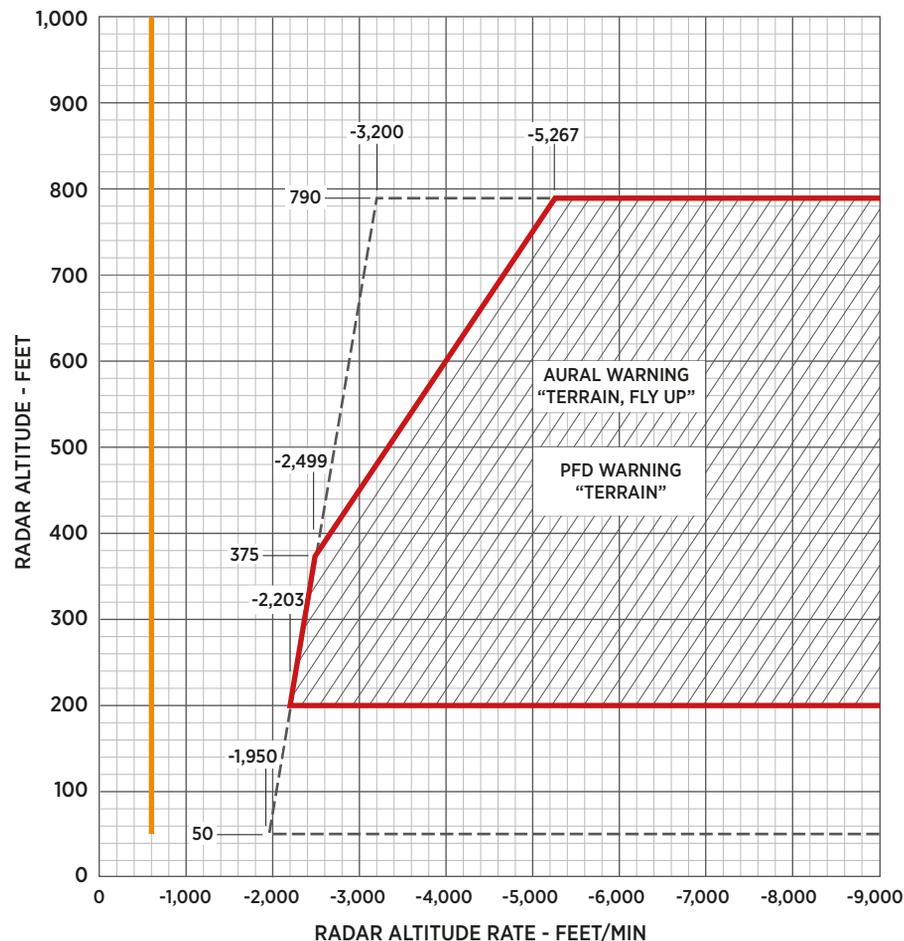


Figure 3. GPWS Mode 2B Envelope

In addition, nuisance worksheet analysis has explored other unique terrain features, such as valleys and cliffs, on short final approach that will cause the GPWS to sound a false positive warning. After confirming locations with unique terrain features identified in TAWS/GPWS Nuisance Event Worksheets, Ops RAMS then performs additional in-depth analyses to provide precise distances and altitudes so crews know exactly where to anticipate the unique terrain warnings and can continue their approach if all appropriate conditions are met, as detailed in Air Force Instruction 11-2C-17v3 and the Airfield Suitability and Restrictions Report/Giant Report list of GPWS-anomalous airfields. (Note: None of these airfield waivers are for TAWS warnings.)

Occasionally, C-17 pilots confuse the two terrain safety systems because they are so similar. The basic difference is that the TAWS, which relies on a terrain database and cannot be tricked by terrain anomalies, effectively looks ahead for obstacles and terrain, whereas GPWS Mode 2B simply looks down at the ground directly below the aircraft.

Although all C-17 pilots are familiar with the GPWS Mode 2B envelope (entry criteria shown in red for emphasis in Figure 3), they do not typically see where their flight paths would place them on the chart. If an aircraft were flying over the dry lake bed at Edwards Air Force Base, with its flat terrain, maintaining a steady 600 fpm descent, the flight path would be depicted by the very straight orange line down to the 50' power push. Most runways have varying terrain on final, however, so the radar altitude paths are much more dynamic.

With this understanding of how GPWS Mode 2B works, the following example of Military Flight Operations Quality Assurance (MFOQA) analysis addressed crew-reported nuisance alerts at Daegu AB, South Korea. The

analysis results allowed Ops RAMS to support, as crews had requested, adding Daegu AB to the list of airfields with special procedures to disregard GPWS warnings at night or in instrument meteorological conditions if GPWS warnings occurred over either of the two hills circled in Figure 4.

Several approaches were plotted by the MFOQA analyst in the verification process; the one in Figure 5 was chosen for this article because it highlights how variable these warnings can be. The blue path shows how the crew was slightly *above* the green 3-degree glide path while crossing the 2.6 nautical mile (nm) hill and was then slightly *below* the glide path crossing the 1.1 nm hill.

Figure 6 shows that the “Terrain, Fly Up” envelope was penetrated as the aircraft crossed the first hill between 600’ and 700’ above ground level (AGL), but the radar altitude rate did not quite reach the red line between 200’ and 300’ AGL as the aircraft crossed the second hill. Flying the aircraft to the left or right parallel runway affects the likelihood of receiving a warning, as well, due to hill slope variabilities.

The bottom line is, if you receive a TAWS or GPWS warning that you do not think is legitimate, *please* fill out a TAWS/GPWS Nuisance Event Worksheet. By doing so, you are helping to improve the safety of the fleet and increase crew force trust in these vital safety systems. If you have never heard of or filled out this worksheet, have your favorite instructor pilot show you where to find it and fully explain its purpose. Whenever you fill out the worksheet, please take photos of the Mission Computer Display pages for each event at the completion of your sortie, send them to Stan/Eval, and ask Maintenance to harvest the flight data from the recorder as soon as practicable by making an Air Force Technical Order Form 781A entry. 🛩️



Figure 4. Unique Terrain Features at Daegu AB, South Korea

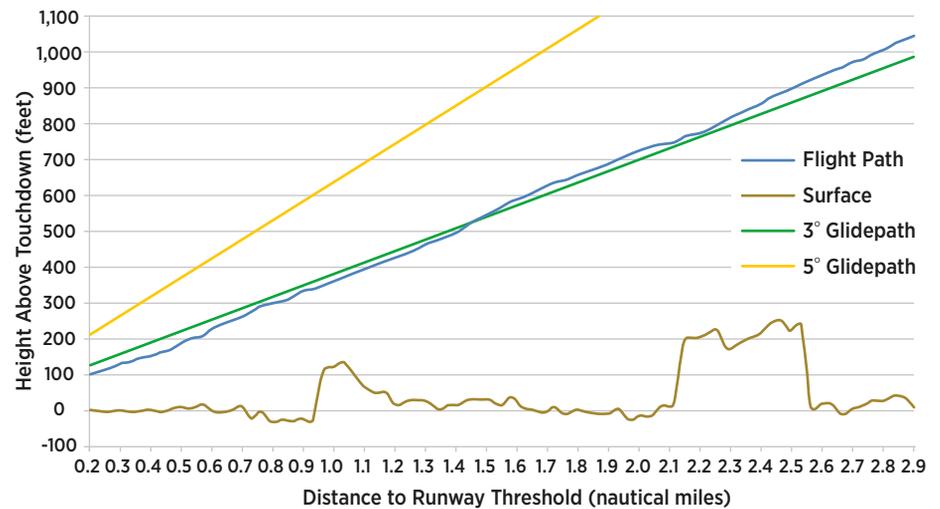


Figure 5. GPWS Event Flight Path at Daegu AB, South Korea

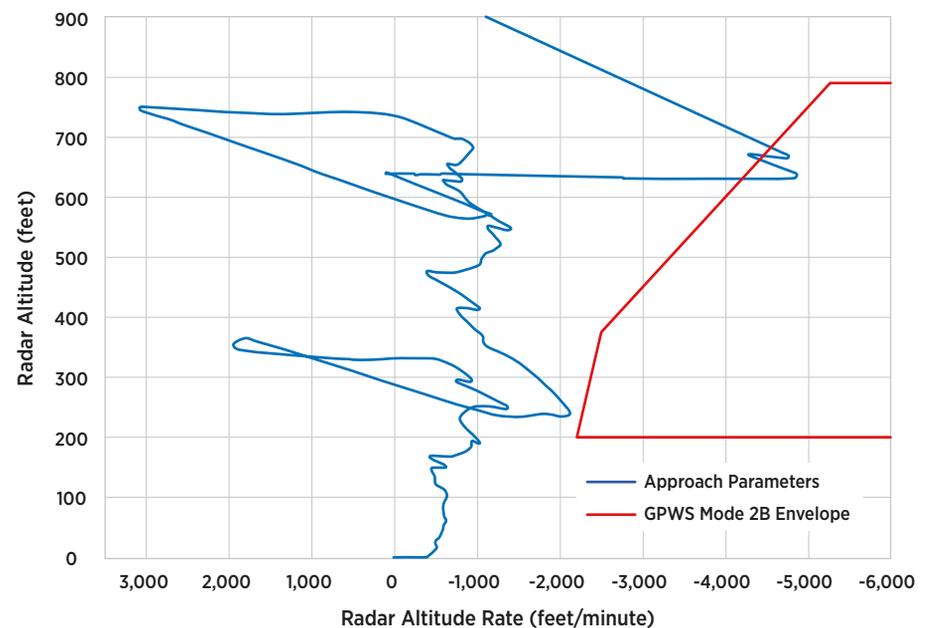


Figure 6. GPWS Event Radar Altitude Rate at Daegu AB



## Robert Clapp: Distinguished Civilian Service Award Nomination



**R**obert D. Clapp, Deputy Chief of Safety and Occupational Safety Manager, 22d Air Refueling Wing (ARW) Safety Office at McConnell Air Force Base (AFB), KS, has been nominated for the 66th Department of Defense **Distinguished Civilian Service Award**. It is the highest award he could possibly earn in his current position, and he is the first safety professional to ever receive the nomination.

To read what his colleagues and superiors say about Clapp, it is no wonder he was considered for the notable award.

“Mr. Clapp is a transformational leader within the safety community and has a long history of distinguished service,” according to Col Richard C. Tanner, Commander, 22 ARW. “His sustained outstanding performance drives tangible safety improvements across the air refueling enterprise and ensures continued mission success every day.”

The synopsis of his written nomination tells of how, when Clapp stepped into his position as Occupational Safety Manager at the 22 ARW Safety Office, the position had been vacant for more than 10 months. “Without pause, he quickly developed an aggressive management plan, turning around a stagnant program and launching it

into a high-energy, pace-setting division,” said Lt Col Andrew Washburn, Chief of Safety, 22 ARW.

Clapp was instrumental in developing mitigation strategies for high-priority issues, such as hexavalent chromium exposure, which can lead to adverse health effects including nasal and sinus cancers, kidney and liver damage, nasal and skin irritation and ulceration, and eye irritation and damage (National Toxicology Program, National Institute of Environmental Health Sciences). Clapp also championed fall protection standards in a further effort to ensure safe and effective air refueling operations.

He instituted safety initiatives and inspections that elevated the mishap-prevention program at McConnell to premier status. As Washburn states, “His transformational leadership led the 22d Air Refueling Wing’s Safety Program to recognition as the Command’s best safety office as well as the best risk management program.”

As the Occupational Safety Manager for three wings, 22 host and tenant organizations, and more than 5,000 personnel, he led more than 15,000 hours of safety education and training for 900 unit safety representatives, ensuring compliance with Department

of Defense and Occupational Safety and Health Administration standards. He also designed the Wing’s motorcycle safety program and orchestrated the Bird/Wildlife Aircraft Strike Hazard contract, saving the Air Force \$2 million in the process. In support of safe aviation and effective mission accomplishment, Clapp tenaciously lobbied for Air Mobility Command’s number one construction project, the \$3 million Air Traffic Control tower at McConnell AFB.

Over the years, Clapp has received many awards—too many to list in this brief article—but among them are the Department of the Air Force Award for Meritorious Civilian Service from 2009 to 2011; Air Mobility Command Outstanding Safety Civilian of the Year in 2012 and 2019; and 22 ARW Safety Civilian of the Year in 2011, 2012, 2013, 2014, 2015, and 2019.

Robert Clapp has certainly earned esteem and appreciation for his superlative, skillful leadership and vision. Congratulations, Mr. Clapp! 



Students line up as they begin the Basic Rider Course 2 at Kirtland Air Force Base, NM, July 17, 2020.

USAF photo by SSgt Enrique Barcelo

# WHAT MAKES YOU TICK?

**BY MR. ANTHONY MCKEE,  
AMC OCCUPATIONAL SAFETY**

Every year, Memorial Day weekend officially kicks off the start of Air Mobility Command (AMC)'s Critical Days of Summer safety campaign, which runs through Labor Day weekend. During this period, we typically see an increase in travel and leisure activities. Historically, there has been an uptick in accidents and injuries during the summer as a result.

This year's theme for AMC's Critical Days of Summer is "What Makes You Tick?" As we roll into the critical days of summer, consider this question. Whatever it is you enjoy doing—whether it is traveling, participating in water activities, attending sporting

events, or barbecuing with friends and family—take a few seconds to identify, assess, and mitigate all the risks associated with those activities. Take an extra couple of seconds for trip planning to ensure that you have enough rest and preparation for any incidents that may arise, avoid alcohol while driving or participating in sporting activities, and make sure to use appropriate protective gear.

Last year during this period, AMC lost an Airman to a motorcycle accident, and two other members suffered significant injuries from firearm incidents. Those mishaps could have been prevented if the participants had taken the time to apply personal risk management. Every day, we go out and do activities we have done hundreds of times in

the past—without issues. We cannot let our guard down; sometimes it takes just one minute to prevent a routine task from turning into a cascade of not-so-routine events.

Like this past year, this summer will undoubtedly be different because of COVID-19. We have been inside, and we are all eager to start summertime activities. Do not rush and let distractions cloud your judgment. While you and your family are making the most of the opportunities you have to enjoy the summer, taking the time to incorporate risk management into your off-duty leisure activities is important. Remember to make sound decisions, and enjoy this summer doing whatever it is that makes you tick. 🇺🇸



**I WANT YOU  
TO WATCH FOR  
MOTORCYCLES**



## 721st Aerial Port Squadron, Ramstein, Germany: Casa de Pax

BY DR. ANDREW WACKERFUSS,  
521 AMOW HISTORIAN

The COVID-19 crisis entered a new phase in early March 2020, inconveniencing travelers around the world as one country after another closed its borders, commercial carriers canceled flights, and airports turned into holding areas until passengers could find follow-on transportation. Governments around the globe were trying to fully understand the health risks and took measures to protect the general public from the virus.

It quickly became evident that military airlift would be the most reliable means of passenger air travel across the Atlantic, but even this option proved arduous. In a series of unusual events at Ramstein Air Base in Germany, pandemic revisions to entry policies led to personnel having to be temporarily billeted in the Air Mobility Command Passenger (Pax) Terminal.

In the early morning of March 19, 2020, the Patriot Express military passenger rotator arrived at Ramstein from the Baltimore-Washington International Airport. This passenger flight is well known to many Department of Defense

travelers as a reliable and cost-effective means of transporting military members from the continental United States to Ramstein Air Base, before proceeding downrange to installations within U.S. Central Command.

For this mission, around 170 passengers disembarked from the aircraft as they normally would. The passengers had already experienced a series of new policies at Baltimore prior to their departure, including travel screening, health questionnaires, and other COVID mitigation restrictions. They expected more of the same upon arrival. However, this policy was not to be the case on the morning of March 19.

Although the Ramstein terminal may be operated and maintained by the Airmen of the 721st Aerial Port Squadron (APS), the largest squadron of the 521st Air Mobility Operations Wing (AMOW), Ramstein Air Base sits on sovereign German soil. This fact means that German authorities still control Immigrations and Customs in accordance with German and European Union immigration law.

Prior to and after March 19, the U.S. Embassy-Berlin put forth extraordinary diplomatic efforts to preserve U.S. forces' ability to support air transport of military personnel within a rapidly changing pandemic environment. In early March, they had successfully negotiated the entry of personnel who had official orders assigning them to Germany and who possessed a North Atlantic Treaty Organization (NATO) Status of Forces Agreement card or passport stamp.

Unfortunately, the passengers on this flight were transiting through Germany and were not on orders there; therefore they lacked required documents for entry. They could not officially enter the Federal Republic of Germany, which meant that they could not exit the AMC terminal for billeting and other support services.

These passengers found themselves stuck in limbo. The Ramstein passenger terminal was never designed to house passengers overnight. Its food options are on the outgoing side of the terminal rather than the entry side. It was not designed as lodging in any



PAX terminal beddown PE Gate 3  
Photo courtesy of 721 APS



Medical screening station, front entrance of the PAX terminal. During this time, only pre-booked passengers were allowed to enter the terminal after accomplishing a medical screening questionnaire, having their temperature taken, and providing their complete travel history for the past 14 days to passenger service agents. All other services to the larger base populace were suspended.

Photo courtesy of 721 APS

way, or indeed to be occupied for any length of time beyond what it takes to move through customs. The 721 APS suddenly took up an unexpected challenge to create a makeshift hotel inside the terminal, which 521 AMOW members dubbed the “Casa de Pax.”

The 721 APS and its mission partners instantly moved into action. Maj Mallory Malda, 721 APS Director of Operations, spearheaded the effort, which wound up bringing in all three wings located at Ramstein. The 86th Logistics Readiness Squadron sent hundreds of sleeping bags. The 435th Air Ground Operations Wing (AGOW) provided cots and a volunteer team of group and squadron commanders to personally assemble and stage them. The United Services Organization provided mass quantities of food and toiletries, and the 86th Airlift Wing’s flight kitchen provided boxed meals.

“Maj Malda did outstanding combat-style logistics in the middle of a whirlwind,” said Lt Col Travis Bohanan, 721 APS Commander at the time. “She led a phenomenal combat logistics effort that I haven’t seen outside a deployed environment. Within hours, she had not only sourced all the items we would need but had them actually set up. She, and the partners from the host wing and the 435 AGOW, really led from the front on this one.”

It was clear from the start of this crisis that a negotiated diplomatic solution would take time, and therefore Casa de Pax organizers also had to make a plan for maintaining these operations for days or even weeks—not just for the initial batch of stranded passengers, but for future ones who might arrive on missions already scheduled. Although each group of passengers usually cleared in a day or two, missions kept flowing to Europe as Department of Defense personnel rotation needs continued. Planners from the 721 APS therefore resolved to build a system that would stand for the long haul.

In these efforts, disease mitigation became another important factor that required dedicated attention in order to keep everyone safe. Organizers arranged laundry services for the sleeping bags, spaced cots for maximum physical distancing, and tried to ensure maximum hygiene protocols for passengers.

On March 27, immigrations officers at Ramstein received official word that transiting military members could leave the passenger terminal as long as they remained on base. By this time, a total of 455 passengers had stayed overnight in the Casa de Pax.

Having learned from experience that pandemic-era restrictions can

change rapidly with little warning, the 721 APS Airmen wisely chose to stage materials for potential future contingencies rather than close up shop entirely.

In the end, COVID-19 made 2020 a very challenging year filled with unique problem sets and complex challenges to Air Mobility operations. Fortunately, the collective efforts of the 521 AMOW, the 721 APS, and their mission partners ensured that affected travelers were fed, housed, and ultimately supported with travel exemptions so that they could eventually proceed to their destinations.

Looking back on the bilateral diplomatic efforts to preserve U.S. forces’ global reach and air mobility, this crisis also reinforced the critical importance of maintaining close and trusted relations with our allied and partner nations. Without the Federal Republic of Germany’s cooperation, the number of mission-degrading stays at the Casa de Pax would have been much higher.

As for the Airmen of the 721 APS, the Air Force has already recognized their extraordinary efforts. In March 2021, AMC announced that the 721 APS was selected for the highest honor for a squadron of its type: AMC Large Terminal of the Year. 

# BASH: Keeping Aviators Alive

BY MR. DEAN J. JOHNSON, CHIEF OF SAFETY,  
109th AIRLIFT WING

Hello, fellow Airmen. A recent incident at Albany International Airport, NY, highlights how important it is to be aware that we share the flying environment with many wildlife species.

During an evening training flight, an LC-130 crew was planning a touch-and-go on runway 19. Just before touchdown, they noticed a black streak cross their flightpath, followed by a noticeable “thud.” The pilot quickly decided to perform a full-stop landing instead of the planned touch-and-go. The results of the postflight inspection are seen in images 1 and 2. This mishap highlights the gravity of wildlife threats.

## SCOPE OF THREAT

1. On average, the annual cost of wildlife strikes is \$700+ million for civil aircraft and \$25+ million for U.S. Air Force (USAF) aircraft.
2. Of all wildlife strikes, 97 percent are birds, 2 percent are terrestrial mammals, and 1 percent are flying mammals.

## Bird/Wildlife Aircraft Strike Hazard Program



Image 1: Great Horned Owl Carcass

Image 2: LC-130 Radome

3. Waterfowl, gulls, and raptors (such as this owl) are the species that cause the most damage to all aircraft. European starlings have been responsible for the greatest loss of human life, whereas vultures and waterfowl cause the most losses to U.S. military aircraft.

## THREAT MITIGATION TACTICS

1. Avoid flying within 1 hour of sunrise or sunset, when wildlife is the most active.
2. Minimize operations below 500 feet above ground level (AGL), where two-thirds of all inflight strikes occur.
3. Access the USAF Avian Hazard Advisory System (AHAS) at [www.usahas.com](http://www.usahas.com) before a flight. This database uses a combination of predictive models and NEXRAD (Next-Generation Radar) to determine bird threats in real time. It also lists higher threat areas to be avoided near selected airports—for example, landfills and dams, where wildlife congregates.
4. Listen to the Automatic Terminal Information System (ATIS) and pay attention to any airfield wildlife advisories.
5. If confronted with an inflight conflict, consider initiating an avoidance climb, as birds tend to dive when frightened. Be prepared to perform a go-around on landing approach or a full stop if planning a touch-and-go to keep an aircraft that may be damaged on the ground.
6. Communicate. Notify air traffic control (ATC), fellow pilots, and airfield personnel of wildlife hazards just as you would for low-level wind shear. In the world of aviation safety, every Airman is a sensor.
  - a. Grass heights on the airfield should be 7–14 inches. This intermediate grass height disrupts interflock communication and predator detection. It also inhibits seed germination. Seeds



Image 3: Barred owl nesting pair

## Ask yourself three questions: “What is the threat? Who needs to know? Have you told them?”

- attract insects, insects attract mammals and smaller birds, and mammals and birds attract raptors.
- b. Be on the lookout for standing water, which is a major wildlife attractant.
  - c. Airfield personnel have many tools to mitigate wildlife threats—for example, environmental “shaping,” trapping and relocating, and harassment, to name a few. Ask yourself three questions: “What is the threat? Who needs to know? Have you told them?”
7. Be aware of increased wildlife activity during peak migratory and breeding times, as listed in DoD Flight Information Publications (i.e., Bird/wildlife Aircraft Strike Hazard Phase II), and ask for the current Bird Watch Condition.
  8. Perform a thorough post-flight inspection to assess your aircraft for a possible strike. You may not be aware that you hit something. Birds fly at night and in clouds.
  9. Report all wildlife strikes to flight safety in accordance with (IAW) USAF instructions and to the Federal Aviation Administration IAW Advisory

Circular 150/5200-32B. To quote Bryan Haslun of the U.S. Department of Agriculture, “You cannot manage what you do not measure.”

I am passionate about managing the risks that wildlife present to aviation. We clearly share the airspace, so let us work together to ensure that all our aviators—including the feathered ones (see image 3)—return home safely to their families.

Fly safe. 

# A Safe Unit Is a Ready Unit

BY MS. JESSIE PERKINS,  
AIR FORCE SAFETY CENTER

**H**ow does your organization measure up? Are violations of operating instructions in the unit common? Is the organization genuinely concerned about safety? Can leaders and supervisors in the squadron be trusted? Survey items such as these questions come from the Air Force Combined Mishap Reduction System (AFCMRS) survey.

The **Human Factors Division** at the Air Force Safety Center (AFSEC) provides this survey to meet the Air Force's safety mission to safeguard Airmen and Guardians, protect resources, and preserve combat capability by addressing the number one cause of Air Force mishaps: human error.

A proactive safety tool, AFCMRS helps commanders assess the safety climate of their units through anonymously surveying members' attitudes and perceptions. These surveys can be conducted at any echelon in the Air Force and Space Force, from the squadron to the major command or field command.

"The AFCMRS survey helps leaders find hidden safety risk, inform mitigations, monitor changes, or affirm a safe culture," said Col Geoffrey Ewing, Chief of the Human Factors Division and a physician of aerospace and occupational medicine. "Airmen and Guardians want to be safe, compliant, and productive by nature. A safe working environment for them directly results in increased productivity and trust in leadership."

The AFCMRS program hails from a solid history beginning in 2007.

In the past 5 years, 4,724 total unit surveys were completed consisting of 289,929 individual participants. There were 28,854 aircrew members, 55,064 maintainers, and 88,922 other support personnel, accounting for the majority of the career fields surveyed.

The Safety Center debriefed results to more than 2,700 unit commanders during those 5 years. During each debriefing, commanders were provided an opportunity to give feedback on the program. In an effort to highlight areas that needed improvement, one commander stated, "The results highlighted a few areas of concern based on the majority of responses. This [feedback] allows me and the rest of the unit leadership to better focus our efforts in addressing Airmen's concerns."

The survey can also highlight successes, as another commander stated, "The overall feedback ... was that the unit was moving in the right direction overall. I did not see any major areas of concern. All responses were an improvement from the previous year."

"The survey can be up and running within 15 minutes of a request," said Moses Winston, AFCMRS Program Manager. "The median completion time is under 10 minutes and the results can be debriefed within 2 hours, giving units a very valuable measurement tool that can be done quickly and, best of all, at no cost."

"We have a team of professionals at the Air Force Safety Center that guide commanders through every question to help them understand the results," said Ewing. "Our goal is to ensure they are able to take the data we provide and mitigate unit issues through an informed decision-making process."

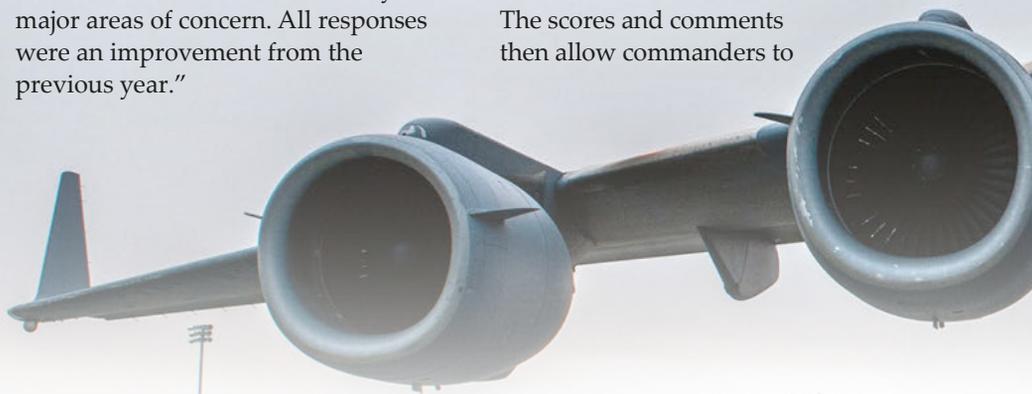
Participant perceptions are scored from 1 point, for strongly disagree, to 5 points, for strongly agree. The use of the Likert scale allows commanders to target limited resources with lower scores and continue operations in areas with higher scores to improve mission effectiveness for their squadrons.

The scores and comments then allow commanders to

AFCMRS has the ability to reach every member of the unit with the click of the mouse or tap of the finger on a mobile device, providing commanders with a quick and easy way to check the pulse of their unit.

compare their unit with other, similar units across common subject areas.

"Effectiveness of survey results to Air Force Safety as a whole is hard to quantify," said Winston. "On a



squadron-by-squadron basis, good commanders are rarely surprised, and often survey data confirms ‘gut’ feelings about their units.”

According to AFCMRS, the value of the data is directly proportional to the effort that the Airman or Guardian and his or her command put into conducting the survey.

Winston added, “Commanders who are surprised by the results appreciate how AFCMRS was able to identify the issue and include data to back up perceptions.”

There are three main surveys available. The first is OPS (Operations), which is targeted to the line aviator in a flying squadron. The second is MX (Maintenance), targeted to the crew chief on the line and wrench-turners in the back shops that keep aircraft flying. The third is SUP (Support), which includes everyone on the commander’s staff and other wing agencies who keep the mission going.

Additional surveys are available, such as one that

assesses patient safety in medical units or the impacts of COVID-19 on unit operations. Other specialized versions are available for members within the nuclear, space, special warfare, and intelligence, surveillance, and reconnaissance communities.

There are also surveys for higher headquarters and staff at Numbered Air Force and above, used to assess their level of support to lower-echelon organizations. Unique surveys exist as well, such as a survey that looks into the driving habits of Airmen and Space Professionals.

“Keep in mind, AFCMRS items are not limited to just safety practices; outcomes are likely improved as well. Squadrons with a good safety

climate in the areas of process, climate, resources, and supervision are less likely to experience slips, trips, and falls or even more serious incidents,” said Winston.

Winston recommends and encourages squadrons to take the OPS, MX, and/or SUP surveys within 30 days of a change of command and then biennially thereafter. Deployment cycles, a desire to examine a particular issue, or a feeling that something is not right can also be reasons to initiate a survey.

Contact the AFSEC Human Factors Division at [AFSEC.SEH](mailto:AFSEC.SEH). [LocalDivision@us.af.mil](mailto:LocalDivision@us.af.mil) to learn more about how a proactive safety culture equals a ready unit. 🇺🇸

Matt Stevens, left, a U.S. Department of Agriculture Airport Biologist, and Capt Sean Harte, 60th Air Mobility Wing Safety Office Flight Commander, go over C-17 Globemaster III pre-flight procedures before a safety familiarization flight at Travis Air Force Base, CA, July 2, 2018.

USAF photo by MSgt Joey Swafford

# Airman From Travis AFB Saves Life of Local Motorist

BY SRA CHRISTIAN CONRAD,  
60TH AIR MOBILITY WING PUBLIC AFFAIRS



SrA Max Brunwasser, 660th Aircraft Maintenance Squadron Combat Navigation Journeyman, poses for a photo Oct. 6, 2020, in the 660 AMXS building at Travis Air Force Base, CA.

USAF photo by Sra Christian Conrad

The lack of streetlights only made it worse.

SrA Max Brunwasser, 660th Aircraft Maintenance Squadron Combat Navigation Journeyman, was on his way to work in the early hours of September 8, 2020, straddling the dark, winding narrows of Highway 113 in his Subaru Legacy.

That morning, the wind was strong. Brunwasser could hear it battering against the thin pane of his driver's-side window, and his steering became erratic as he fought to compensate against the violent gusts that swirled around him.

SCREEEEEEEEEEEE!

Suddenly, the car ahead of Brunwasser lost control atop the road's rough surface, flipping over and into the irrigation canal that ran adjacent to the highway.

"I immediately veered off to the shoulder," Brunwasser said. "My one

thought was, 'I need to make sure everyone is okay.' I sprinted over and jumped in."

The water reached up to his waist. Even in the dense, weathered fabric of his military uniform, Brunwasser felt the cold rush of water reach up his nerves, stealing his breath for a moment while he waded closer to the vehicle, his heart racing all the while.

"The car was upside down, so I figured there might have been a risk of drowning," Brunwasser said. "I got closer and I was right—the driver was in probably a good three or four feet of water."

The driver was unresponsive to Brunwasser's offers for aid as the vehicle was filling with water by the minute.

"I needed to get her out of her seatbelt—out of her seat," said Brunwasser, a 3-year veteran of the Air Force. "I was able to free her, but she was still disoriented, maybe even in shock. I kept asking her 'Is there

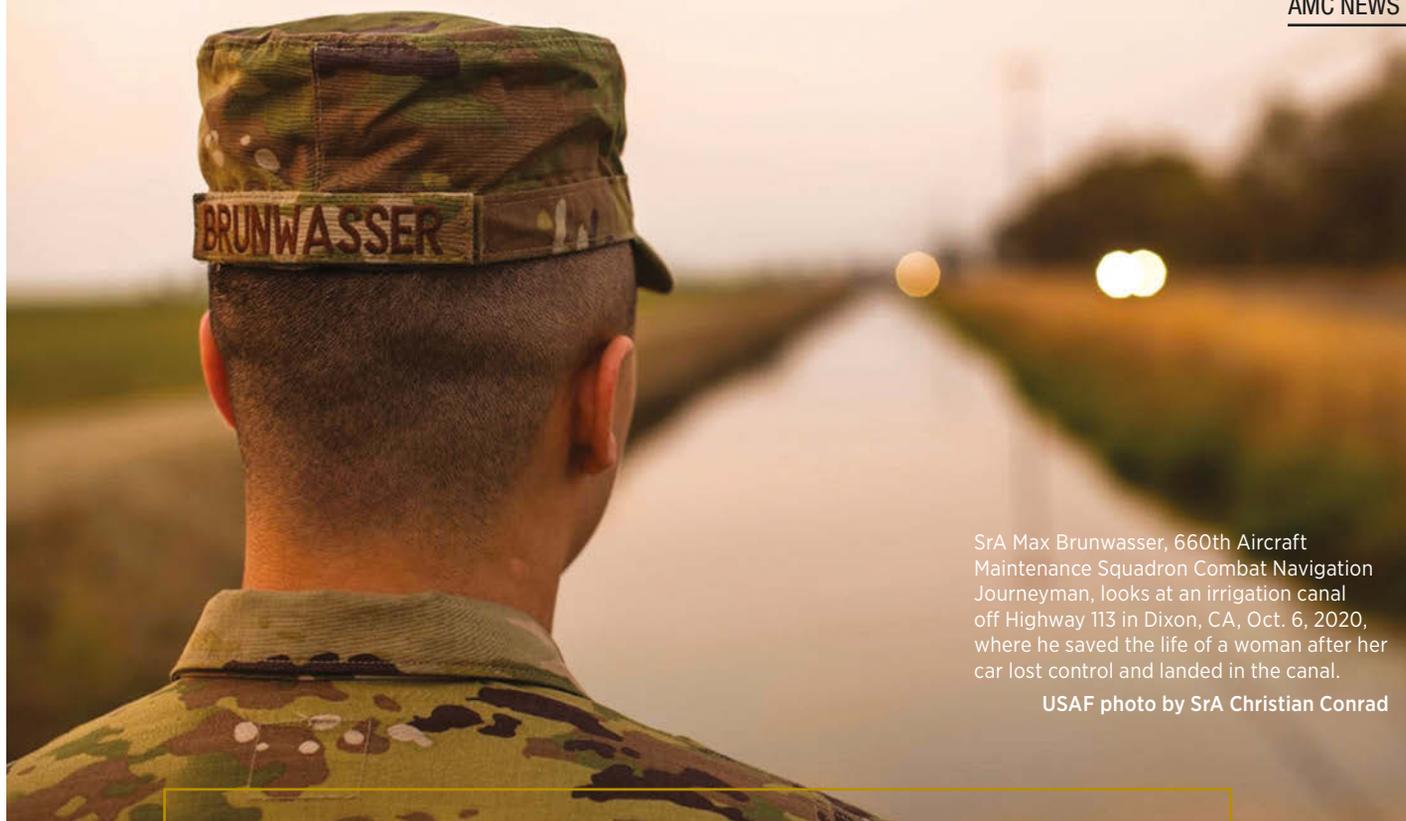
anyone else inside,' but I was not able to get a response. I went back into the canal, but did not find anyone. By the time I got back to her after all my searching, she was back to talking."

It was the thought of others that initially compelled Brunwasser's line of questioning.

"Even though I checked, I wanted to make sure," Brunwasser said. "'Was there anyone else,' I asked. 'Were you the only one?' They were the type of questions you hoped only had one answer."

Thankfully, Brunwasser hoped right. "No" and "yes," respectively, were her answers, although she was limited in her ability to speak English.

"I know some Spanish, but it is not something I am about to write on a resume," Brunwasser laughed. "I tried my best, and between her best and mine, we were able to reach an understanding. It eventually came in handy."



SrA Max Brunwasser, 660th Aircraft Maintenance Squadron Combat Navigation Journeyman, looks at an irrigation canal off Highway 113 in Dixon, CA, Oct. 6, 2020, where he saved the life of a woman after her car lost control and landed in the canal.

USAF photo by SrA Christian Conrad

**“It is less a testament to who I am as a person and more about the culture we foster in the Air Force.”**

First responders showed up soon after a concerned passerby reported the accident.

“I translated for the first responders and we were able to get the driver the medical attention she needed,” Brunwasser said.

“True to his work ethic, Brunwasser still showed up to his shift that morning,” said TSgt Michelangelo Cortez, 660th Aircraft Maintenance Squadron Communications/Navigation Noncommissioned Officer in Charge.

“It is true to the Airman he is,” Cortez said.

“Leave it to Brunwasser to save a life and still show up for morning roll call,”

Cortez chuckled. “The morning he came in, we were like, ‘Holy crap, are you okay?’ but he just kind of brushed it off. To him, it is always what he can give, never what he can get.”

Brunwasser, he explained, was not outside his normal tendencies when he pulled over that morning.

“Even on the flight line, it is always (Brunwasser) who is saying, ‘How can I help? What else is needed?’,” Cortez said. “Hearing about this [incident] was just more confirmation that he is a stand-up Airman—someone other junior enlisted and ... even other members of the force can look to for inspiration.”

But for Brunwasser, what he did was not necessarily heroic but

something ingrained into the ethos all military members subscribe to—a concern for others.

“Put any other Airman in the position I was in, and the same thing would have happened,” said Brunwasser, who last month was given a line number for Staff Sergeant, his next rank. “It is less a testament to who I am as a person and more about the culture we foster in the Air Force.”

Now on his way to work, Brunwasser still passes the irrigation canal he jumped in. He takes stock in his good fortune—that he was there and able to help save his fellow motorist. 🇺🇸

# A Look at the New “Flying White House” and Its Crew

BY MS. ALLISON ELLIOT, STAFF WRITER

On February 15, 2021, National Geographic released a behind-the-scenes look at the new Air Force One jets that will replace the current jets in 2024. The documentary, *The New Air Force One: Flying Fortress*, goes into the details behind the transformation of two Boeing 747-8 jets into the presidential “Flying White House” and its spare.

The home of the current Air Force One is Joint Base Andrews, located 10 miles southeast of Washington, D.C., in Maryland. The 89th Airlift Wing, based at Joint Base Andrews forms the prestigious crew for Air Force One.

“It is very exciting for the new Air Force One to come online. It is an opportunity for our team to take that level of service that we provide to the Flying White House and ensure it exists for another 2 to 3 decades,” said the Air Force One Presidential Pilot.

The current Air Force One has been operating for 30 years, starting with President George H.W. Bush, Sr. The first Air Force One, in the long tradition of presidential transports, began with President Franklin D. Roosevelt for the Yalta Conference in the 1940s to discuss the end of World War II.

It is moments from history as well as modern technology that are shaping the future Air Force One. For instance, new features will update the galley, medical bay, and communications areas on the aircraft.

The Air Force One Communications Officer is looking forward to new communications equipment. One of the communications modifications that will be made to the new Air Force One will allow the President to address the nation live in emergencies. This change was taken from a lesson in history on

September 11, 2001. President George W. Bush, Jr. was in Florida when hijacked planes struck the World Trade Center and the Pentagon, and for his safety he was transported to a secure location via Air Force One. Due to the lack of technology to cut through the high volume of communications traffic during that flight, President Bush was unable to address the country during the national tragedy.

The new Air Force One, like the current jet, will need to defend the President of the United States. Just as President George W. Bush, Jr. visited Baghdad, Iraq, in 2003 using Air Force One, the new jet may be called on to enter future war zones. For that reason, the defense system on the new Air Force One will also be upgraded to better defend against advanced modern weapons. According to the documentary, the upgrades will include decoy burning



Photo by CPL Roman Gray, USMC



## The project of updating Air Force One is a massive undertaking and will produce one of the most advanced jets on Earth and in the sky above.

flares to deflect heat-seeking missiles and guided lasers to destroy guided missiles. The new jet will be heavily shielded, which will add to its weight and require wiring that can withstand the electromagnetism.

All the new equipment, most of it shrouded in secrecy for security reasons, will make the new \$5.3 billion jumbo jet able to defeat missiles, withstand nuclear radiation, and serve as a flying command center, with secure encrypted communications capabilities for the President.

Modifications to the jet will also increase the comfort of the President, his staff, his guests, and the crew. For instance, the new Air Force One will have two galleys that are bigger than the current galley. The medical bay will be equipped not only for advanced diagnostics but for emergency surgical procedures should the need arise. The presidential physician will make use of that equipment to protect the life of the President and monitor his health while on board. The interior of the jet—including the presidential bedroom, office, and conference room—will see a complete redesign, making use of the 20-percent-more floor space (a total of 5,000 square feet) in the new jet. The exterior will have a new paint job as well.

“One of the things we are looking forward to in the new airplane is actually having brand new equipment,

and with that brand new equipment, hopefully being able to improve our customer service and take care of our passengers even better,” said the Chief Flight Attendant.

The project of updating Air Force One is a massive undertaking and will produce one of the most advanced jets on Earth and in the sky above. The new jet will measure 250 feet in length, making it the longest passenger plane in the world. Its four General Electric next-generation engines, with 17 percent more power than the previous jet, will also make it the fastest passenger-jet aircraft in the world. Its 224-foot wingspan—made of carbon fiber, saber-shaped wingtips angled at 37.5 degrees—will enable the jet to fly faster and take off and land on short runways. Modifications to the engines, which will require more energy, will enable it to use less fuel, provide 266,000 pounds of total thrust, and carry it to a range of 8,800 miles. A new design element also will reduce aircraft noise.

For the Deputy Presidential Pilot, one of the biggest changes to the jet will be in the cockpit. In the documentary, he works with a flight simulator to adjust to the all-digital display controls that will replace the analog system in the current Air Force One cockpit. Among the improvements to the flight deck are a military GPS system, enhanced terrain mapping, and controls for the defense systems. The current flight

crew of four will be reduced to two with those enhancements.

The Presidential Pilot says the current jet requires “stick and throttle flying,” or “the sort of flying we grew up with.” Thus, flying the new Air Force One may take adjustments. Luckily, he and the Deputy Presidential Pilot will have time to make those adjustments before the new jet takes off in 2024 after 2 years of flight testing.

As for the current Air Force One, with its age comes a degree of charm and, of course, memories.

Among those memories are trips such as the one the crew took when, in 2018, President George H.W. Bush, Sr. passed away. Air Force One transported his remains to Washington, D.C. for viewing and then back home to Texas.

“The fact that President Bush was the first to receive this aircraft and that she was the one to take him to his final resting place is just very touching,” said a Flight Attendant.

With the new Air Force One will come new memories and historic moments.

“What can we do with the next flying White House with a larger airplane and the latest technology? I think it is a good prospect for the nation and for the next President,” said the Presidential Pilot. 🇺🇸



SSgt Tyson L. Meendering



A1C Dustin W. Gallegos



# AIR FORCE WELL DONE AWARD

Presented to SSGT TYSON L. MEENDERING and A1C DUSTIN W. GALLEGOS, 62d Munitions Flight, 62d Maintenance Group, 62d Airlift Wing, Joint Base Lewis-McChord, WA

The Air Force Well Done Award is presented to Staff Sergeant Tyson L. Meendering and Airman First Class Dustin W. Gallegos, 62d Munitions Flight, 62d Maintenance Group, 62d Airlift Wing, Joint Base Lewis-McChord, Washington. While serving in the Munitions Maintenance Storage Element on 7 February 2020, the Airmen identified a major safety hazard during a LAW-66mm M72 High Explosive Anti-Tank rockets storage operation. They discovered that a LAW-66mm M72 was in a “ready-fire-position” in the fully extended configuration with both the front and rear port covers in the “open” position while mixed with expended tubes. These two issues placed munitions handlers and munitions custodians at risk. A1C Gallegos elevated his concerns through the Noncommissioned Officer in Charge of the operation. SSGt Meendering elevated his concerns through the Production Superintendent, leadership and ultimately safety channels to Explosive Ordnance Disposal personnel via the Munitions Emergency Accident/Incident Checklist to highlight the situation of a potential explosive mishap while adhering to safety guidance in the item technical order. The Airmen remained calm, applied sound judgment, and relied on training throughout the entire incident. Their dedication and relentless efforts to make safe the munitions and personnel involved prompted an immediate safety alert notification to all applicable base agencies. The safety awareness and risk management contributions of SSGt Tyson L. Meendering and A1C Dustin W. Gallegos reflect great credit upon their squadron, Air Mobility Command, and the United States Air Force. 



Left to right: SSgt Christopher Dickey, Flying Crew Chief, 860th Aircraft Maintenance Squadron, Travis Air Force Base, CA; Capt Ryan Bench, Pilot; SSgt Emily Cannon, Loadmaster; Capt Charles “Chuck” Cummings, Evaluator Pilot; Capt Tyler Moore, Pilot; and SSgt Logan Rackers, Instructor Loadmaster, all 21st Airlift Squadron, Travis Air Force Base, CA.



# AIR MOBILITY COMMAND WELL DONE AWARD

Presented to **CAPT CHARLES CUMMINGS**, 21st Airlift Squadron, Travis Air Force Base, CA

The Air Mobility Command Well Done Award is presented to Captain Charles Cummings in recognition of outstanding achievements in flight. As the aircraft commander of Reach 444, Captain Cummings demonstrated the highest quality of Airmanship, leadership, and decision-making, resulting in the preservation of 25 lives and a C-17A Globemaster III aircraft. On 16 July 2020, Cummings and his crew departed the Philippines carrying three United States Navy sailors who had fallen seriously ill with COVID-19. The sailors' condition had deteriorated to a point where they required immediate aeromedical evacuation to Travis Air Force Base, CA. Just after takeoff, the crew heard a violent bang accompanied by a forceful right-hand yaw and a THRUST LOSS caution annunciation caused by a compressor stall in the #4 engine. Cummings immediately corrected the aircraft's track and directed his crew to scan the affected engine and run the appropriate checklists. Cummings' quick reaction avoided a departure from controlled flight, as well as prevented further damage to the aircraft. Despite the engine malfunction, Cummings made the difficult decision to continue across the ocean to Joint Base Pearl Harbor-Hickam, HI, given the serious condition of the infected sailors. While still enroute over the ocean, smoke suddenly began filling the cargo compartment. Cummings ordered all occupants to don emergency oxygen and oversaw the process of locating and extinguishing the source of the smoke. Upon their successful arrival in Hawaii, Cummings took preemptive action to coordinate maintenance for the aircraft. His actions resulted in expedited return to service, and the follow-on aircrew tasked with transporting the sailors from Hawaii to California departed on time with no delay to the aeromedical evacuation timeline. The distinctive accomplishments of Capt Charles Cummings reflect great credit upon himself, Air Mobility Command, and the United States Air Force. 



# AIR MOBILITY COMMAND WELL DONE AWARD

Presented to SSGT KALEB T. HAMRAC, 30th Air Mobility Squadron, Yokota Air Base, Japan

The Air Mobility Command Well Done Award is presented to SSGT Kaleb T. Hamrac in recognition of cunning ingenuity as an Aerial Port Expediter Load Director by implementing a novel and safe transload method for an MQ-1C Gray Eagle Unmanned Aerial System. Before starting download operations, Hamrac utilized real time risk management by analyzing specific loading instructions that outlined the use of multiple aircraft reconfigurations, manual lifting techniques of heavy wooden shoring, as well as performing several winching operations. This analysis decreased occupational risk for the 10 load team members and potentially eliminated a mishap. He developed a plan to transfer the oversized 3.5-ton item by utilizing the container's caster wheels to roll it onto the 60K Tunner Loader. Hamrac did this by attaching the C-17's winch to the container, which provided stability during the slow and controlled movement. Additionally, he designed a rolling shoring pattern across the aircraft floor and loader that enabled this complex weapon system to be offloaded from the C-17, staged on the equipment, and safely reloaded onto the C-130J. This method reduced the average load time from 4 hours to 1 hour, a 75 percent decrease. Importantly, this loading technique safeguarded a \$222 million aircraft and 10 Airmen from high-risk winching operations that produce a potential crushing hazard. This ground-breaking transportation procedure was reviewed by Higher Headquarters for evaluation and adoption, in an effort to streamline this new mobility tactic for the acceleration of agile combat employment. The safety awareness and risk management steps used reflect great credit on SSGT Hamrac, Air Mobility Command, and the United States Air Force. 🇺🇸

# “Safety First” Protects Airmen, Resources

MSgt Robert Radford, 375th Air Mobility Wing Flight Safety Noncommissioned Officer in Charge, inspects the lines of a C-21 Learjet at Scott Air Force Base, IL, Sept. 09, 2020.

USAF photo by A1C Shannon Moorehead

BY SRA GREG ERWIN,  
375th AIR MOBILITY WING PUBLIC AFFAIRS

**Y**ou may have seen these signs around your base: “CAUTION: WATCH YOUR STEP,” “DANGER: HIGH VOLTAGE,” or even “CONSTRUCTION AREA: AUTHORIZED PERSONNEL ONLY.”

But what you may not have seen are the efforts of the men and women of the 375th Air Mobility Wing’s (AMW) Safety Office who are responsible for protecting the personnel and resources of Scott Air Force Base (AFB) in Illinois.

“What we are trying to do is safeguard personnel,” said Thomas Kelly, the wing’s Occupational Safety Manager. “And we want to protect every resource on the installation ... to ensure there are no mishaps.”

Safety’s primary mission is to analyze mishaps and accidents, from minor cuts to fatalities—and everything in between. When analyzing each incident, they trace what caused the accident to occur. Once the issue is identified, they suggest changes in procedure to prevent those mishaps from occurring again.

“The most common mishap we have seen at Scott [AFB] are slips, trips, and falls,” Kelly said. “One difference between DoD [Department of Defense] safety programs and OSHA [Occupational Safety and Health Administration] in the civilian sector

is that we track all mishaps, whether on or off duty. So, when we identify an occupational hazard or deficiency, knowing that it could prevent someone from being seriously hurt or even killed is really gratifying ... and makes me proud of the mission we do.”

Another aspect of occupational safety is inspecting all facilities, and although the COVID-19 pandemic caused some disruptions, he said they are now able to continue the inspection component of their mission.

“Our annual inspections are not just an Air Force mandate—it’s a public law requirement. Now that we are back to a more standard operational tempo, we are getting those agencies that we have missed over the past couple of months scheduled for inspections so we can get caught up,” explained Kelly.

Safety also encompasses flight and weapons safety. Although occupational safety covers most items around the base, from facility inspections to industrial operations, flight and weapons safety are more specific, according to TSgt Christopher Knight, Weapons Safety Manager.

“Anybody who is handling, storing, or maintaining munitions falls under the wing’s weapons safety program. We check the lesson plans and operating instructions to make sure that they are current with regulations and that they are compliant,” Knight said.

He said there has been an increase in readiness and mobility since he has been in this role.

Knight continued, “Between the additional exercises and training, the level of involvement and visibility in those types of programs has increased, and we have been able to make some good strides in weapons safety.”

MSgt Robert Radford, 375 AMW Flight Safety Noncommissioned Officer in Charge, said that, because Scott has a unique mission, their main focus is not maintenance safety but other safety programs, such as the Bird/Wildlife Aircraft Strike Hazard program and the Mid-Air Collision and Avoidance program. These programs prevent the loss of life and limb of Airmen, not just at Scott AFB but throughout the Air Force.

Mishap data collected from the entire Air Force are analyzed and disseminated by the Air Force Safety Center to prevent similar mishaps from occurring elsewhere. This critical information can prevent the loss of life, limb, or eyesight, said Radford.

“Safety first means ‘Think before you act.’ It is taking the first step to ensure the scene is safe before taking action. It has been proven throughout history that safety—whether it is occupational safety, weapons safety, or flight safety—can help to save someone’s life,” said Radford. 🇺🇸

# Florence Nightingale:

## The Lady With the Statistics

BY MS. KIM KNIGHT, STAFF WRITER

“Statistics is the most important science in the whole world: for upon it depends the practical application of every other science and of every art: the one science essential to all political and social administration, all education, all organization based on experience, for it only gives results of our experience,” said Florence Nightingale.

For many, Florence Nightingale’s name is synonymous with the famous image of the “Lady with the Lamp,” who tirelessly nursed wounded soldiers in grim conditions during the Crimean War. Many are unaware, however, that she was also a brilliant statistician. Born into privilege in 1820, she was first educated in statistics but said a higher power called her to become a nurse, which was not seen as a proper career for a lady in society at the time. Breaking the mold, she excelled in her duties and is believed to be among the first women on the battlefield, where she led a team of nurses.

On the war front, conditions in the rat-infested field hospitals were atrocious. Wounded soldiers brought from the battlefields faced filthy, unsanitary conditions, and many died in blood-soaked bedding without sterile bandages, supplies, or medication to properly heal their injuries. Drinking water was contaminated by sewage



Florence Nightingale. Portrait by Henry Hering (1814-1893)

run-off and animal remains. In cramped wards, infection and diseases such as typhus, typhoid, and cholera spread rapidly. It was estimated that “16,000 of the 18,000 deaths were not due to battle wounds but to preventable diseases, spread by poor sanitation.”<sup>1</sup>

During the war, it was evident that a vast amount of important information was not being recorded and tracked. Sadly, at the time, not all deaths in

battle were documented, plus there were extremely unhealthy issues in the medical profession, such as sanitation and nutrition. Nightingale documented, analyzed, and applied those lessons learned and radically reformed the rudimentary healthcare profession. It is stated that she reduced the hospital mortality rate from 42 percent to 2 percent. Ironically, the decline in death rates was not from care but was due to operational changes. She said, “Administration saves more patients than the best medical science.”

<sup>1</sup> <https://www.bbc.co.uk/teach/florence-nightingale-saving-lives-with-statistics/zjksmfr>

Her unwavering compassion brought her fame, and she used it along with statistics to make advancements in operations. She understood the power of the written word and worked tirelessly on media campaigns to advocate needed change and solidify support from her peers and the public. Her tactics proved to be successful when the war death rates made newspaper headlines in Britain.

Long before graphic design was used to present statistics in a visually appealing manner, Nightingale effectively used engaging infographics, such as her polar area graph, to display the hard-hitting data. The charts were broken down to show death by battle injury, by accident, and the largest majority, by preventable disease.

Based on official war records, the data analysis compared cross-sectional data with longitudinal data. It was only when the data were gathered methodically that clear patterns emerged. The information once buried in files became the foundation for a data-based decision process.

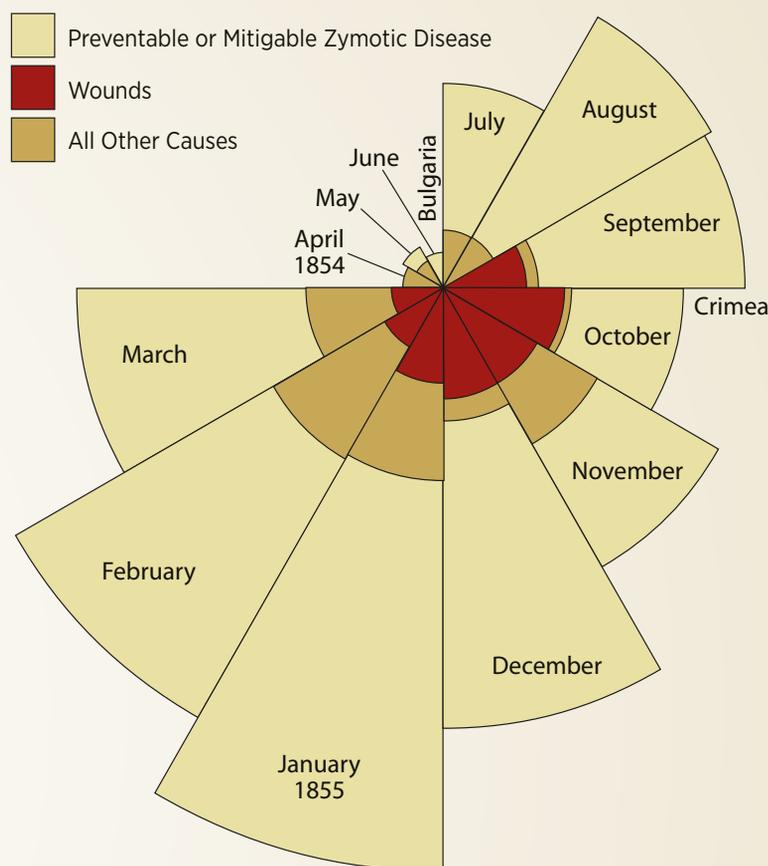
<sup>2</sup>The Nightingale Method:

- Get the best information available
- Use government reports and statistics
- Read and interview experts
- If the information available is inadequate, collect your own:
  - Draw up questionnaire
  - Consult relevant practitioners

Nightingale's quest to modernize healthcare did not stop after the war. She recognized a need to restructure wards because, at the time, they

<sup>2</sup> <https://www.gresham.ac.uk/lectures-and-events/florence-nightingale-and-her-crimean-war-statistics-lessons-for-hospital-safety->

### Diagram of the Causes of Mortality in the Army in the East



The black line across November 1854 marks the boundary of the deaths from all other causes during that month. In October 1854, the black coincides with the red.

Florence Nightingale  
1856

contained large rooms with up to 100 beds, crowded together for maximum efficiency. She redesigned hospital architecture with fewer patients per room and windows for ventilation to combat cross-contamination of germs. Her methods of frequent hand-washing and distancing patients to avoid contamination and even the need to ventilate spaces is fitting when compared with the virus we have all experienced in recent history.

For those who take the time to look back in the archives of *The Mobility Forum*, first published in 1954, it is

easy to see many great advancements in aviation safety. Those advancements were largely based on meticulously gathering information during mishap or fatality investigations, analyzing the data, and identifying trends or patterns to make changes and prevent similar occurrences. Today, we are in the midst of a technological revolution with vast amounts of information at our fingertips that could be further analyzed or merged to improve operations or help to prevent fatalities. If we dig into the information further, will we make startling discoveries like Nightingale? Only time will tell! 🇺🇸



A rider stands next to his parked motorcycle before the start of the Fall Motorcycle Mentorship ride on Scott Air Force Base, IL, Oct. 9, 2020. Participants were given the opportunity to practice motorcycle safety in a real-world environment.

USAF photo by A1C Shannon Moorehead

## Sometimes It Is *Not* “Like Riding a Bike”

BY MS. LAUREN SCHATZ, STAFF WRITER

Getting around on the open highway is a pastime shared by motorcyclists of all ages; however, this adventurous lifestyle can come to a painful end.

According to National Highway Traffic Safety Administration (NHTSA) data, the top two age groups involved in motorcycle fatalities are those younger than 30 and older than 40.<sup>1</sup>

What is the similarity between these two groups? The common denominator is their overconfident attitude in which they approach motorcycle safety. Staying safe while

riding a motorcycle is an ongoing endeavor, and riders must be vigilant. The following are a few ways to stay on top of things—sometimes literally.

### TAKE A MOTORCYCLE SAFETY COURSE

Whether it is for beginners or a refresher for those “re-entry” riders—those who took a long break from motorcycle riding—a motorcycle safety course (mandatory for active duty Airmen) can help all riders be better equipped for roadway hazards, as well as stay informed on traffic laws, which NHTSA states is a key step in safe motorcycle riding. Your base safety office can connect you to an appropriate training program that fits your schedule. According to GEICO, “Forty-seven states currently use the curriculum developed by the nonprofit Motorcycle Safety Foundation, an organization dedicated to rider education and

safety training. Typically, this course involves 5 hours of classroom instruction and at least two riding sessions, usually totaling 10 hours.”<sup>2</sup>

### OBTAIN OR RENEW A MOTORCYCLE LICENSE

Taking a motorcycle course is often the first step to obtaining or renewing a motorcycle license, which is typically a necessity. According to NADAguides, “There are rare concessions to the rule, but generally speaking, in most of the United States you must possess a current and valid motorcycle license to ride a motorcycle if you are registering one and plan to ride it.”<sup>3</sup>

<sup>1</sup> Insurance Institute for Highway Safety, Highway Loss Data Institute. n.d. “Fatality Facts 2019: Motorcycles and ATVs.” Arlington, VA: Insurance Institute for Highway Safety, Highway Loss Data Institute. <https://www.iihs.org/topics/fatality-statistics/detail/motorcycles-and-atvs>.

<sup>2</sup> Yarm, Mark. n.d. “How To Get a Motorcycle License.” Chevy Chase, MD: GEICO. <https://www.geico.com/living/driving/cycle/motorcycle-license/>.

<sup>3</sup> National Automobile Dealers Association (NADA). n.d. “Can You Register a Motorcycle Without a License? Find Out!” NADAguides. Tysons, VA: NADA. <https://www.nadaguides.com/Motorcycles/shopping-guides/can-you-register-a-motorcycle-without-a-license>.

## CONDUCT SAFETY TESTS AND MAINTAIN YOUR BIKE

Whether it is your first bike or an old one that you are pulling out of storage, it is important to give the bike a once-over. Best Motorcycle GPS Guide recommends adjusting the throttle cable, checking the air intakes for leaks, checking the spark plugs in the ignition system, looking at the air pressure and condition of the tires, and inspecting the sprockets and chains for missing teeth or rust.<sup>4</sup> Up-to-date gear is important too. Young adults may not have the funds to secure the proper helmet, clothing, and boots for safe riding, and older adults may pull out their older and less safe gear for a ride.

## SHOP SMART

Modern motorcycles often have much more power and speed than older ones, and they may handle differently

in general. Both young and re-entry riders stepping onto a dealership lot may find themselves behind the handlebars of a much different machine than they are used to riding. It is important to recognize those differences and treat all motorcycles like the powerful and fast machines that they are.

## CHECK YOUR SPEED

What are the speeding risks? All riders face the same risks; the difference in those two groups of riders, once again, is attitude. Whether you are young and like to take risks or an older adult who underestimates the power of a new bike, you may be prone to speeding. According to the Insurance Institute for Highway Safety, 48 percent of motorcycle fatalities in 2010 involved speeding.<sup>5</sup>

## NEVER DRINK AND RIDE

Alcohol was a factor in 42 percent of motorcycle fatalities in 2010, according to the same data.<sup>6</sup> Young riders who may have recently reached the legal age to drink alcohol, but do not yet have the experience of knowing how it affects their body and judgment are most at risk, as are older adults who may have a decreased tolerance for alcohol, but who feel confident riding because “they have done it for years.”

Whether you are a novice or a veteran motorcycle rider, prioritizing safety while riding is really a no-brainer; the consequences of overconfidence can be deadly. Approach motorcycle safety with a willingness to continue learning and an appreciation for safety, and you will be able to enjoy riding that bike for many years to come. 

<sup>4</sup> Goldman, Lucy. n.d. “Motorcycle Maintenance Tips for Safe and Trouble-Free Riding.” Best Motorcycle GPS Guide. Blog. Tysons, VA: NADA. <https://www.bestmotorcyclegpsguide.net/motorcycle-maintenance-tips-safe-trouble-free-riding/>.

<sup>5</sup> Safety 1st Driving School. n.d. “9 Motorcycle Safety Tips for New Drivers.” Irvine, CA: Safety 1st Driving School. <https://safety1stdriversed.com/2015/06/9-motorcycle-safety-tips-for-new-drivers/>.

<sup>6</sup> Safety 1st Driving School, “9 Motorcycle Safety Tips.”



A student of the Basic Riders Course makes a turn while performing the instructed route at Altus Air Force Base, OK, June 11, 2020. Motorcycle education courses taught on base are managed by the Wing Safety Office to ensure member safety on and off duty.

USAF photo by SSGT Cody Dowell

# Vacation

## in the Time of Social Distancing? It Is Possible!

BY MS. ALLISON ELLIOT, STAFF WRITER

**COVID-19** restrictions have made travel and vacation places difficult to find, but it is summer, and you are probably looking for ideas to entertain yourself and your family and friends safely.

Socially distant options where you can get out and explore with plenty of places to go on foot, on bike, or by car are not difficult to find. For instance, consider going for a drive on one of America's 800 scenic byways.<sup>1</sup> These secondary roads are tourist destinations with cultural, historical, or other significance. If you are planning an extended road trip, you could rent an RV and hit the highway.

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<sup>1</sup> <https://scenicbyways.info/>.

In the United States, there are 63 national parks<sup>2</sup> and 10,234 state parks<sup>3</sup> to explore, and many are discounted or free for service members. They offer the opportunity to hike, mountain bike, go rock climbing, and camp. Be sure to check out the parks online ahead of time to ensure that you follow their COVID-19 protocols, and try the lesser-known parks to avoid the crowds.

Many states have a version of “Weird New Jersey,”<sup>4</sup> an online guide to lesser-known attractions across the state, such as haunted houses and sunken ships. Consider looking up local legends and unusual attractions in your state or in neighboring states for a fun day trip.

In this technological and highly connected age, virtual tours are available for lighthouses and museums that allow you to have an informative and entertaining visit for little or no cost. Apps are available to download for many such places.

If you do not want to venture that far, city parks also offer options for getting out and enjoying nature. You can roll out a picnic blanket and eat from a charcuterie board, trying different cheeses, meats, nuts, and other foods. From geocaching (using GPS to find hidden containers) to scavenger photo hunts to walking tours, you can find many ways to entertain yourself with online resources. Cities also tend to have

botanical gardens or sculpture gardens that are interesting to visit. Zoos are fun if you find one that is less frequently visited or one that has good COVID-19 precautions in place. If you can find a larger park or green area, playing frisbee allows you to stay socially distanced and have fun.

Some safe activities for enjoying the warm weather of summer include riding a bike or entertaining in your backyard. Have a barbecue and play croquet or other lawn games. At night, you can make s’mores around a firepit. The Centers for Disease Control and Prevention recently updated their guidelines for mask wearing and social distancing depending on vaccination status<sup>5</sup>, and it is important to take that into consideration when planning activities with friends.

Glamping, a trend of camping that is more luxurious than sleeping in a sleeping bag in a tent, is an option. Whether you find an isolated place or you simply set up in your backyard on a dry night, glamping allows you to try something exciting without risk or discomfort. Research online to find different ways of making this experience more “glamorous.”

Airbnbs are another great option for going on a vacation while avoiding hotels. Airbnb allows you to search for the entire house, cabin, bungalow, and so forth, and search for locations with a private entrance and electronic check-in.

Those factors are important to avoiding contact with other people. If you do not have a backyard, consider searching for a location with a hot tub or a private dock to a river where you can go canoeing, kayaking, or fishing.

Nighttime in the summer offers the chance to get out of the house and go to a local drive-in movie theater or simply stare up at the stars. When taking in a movie, keep your windows rolled up and park at least 6 feet away from other cars to stay safe. According to **space.com**,<sup>6</sup> among the top skywatching events in 2021 are the “ring of fire” solar eclipse of the moon on June 10 and the Perseid meteor shower on August 10–11. Free apps such as SkyView allow you to aim your smartphone to the sky and identify different constellations, planets, and stars.

For some people, summer is not summer unless they hit the beach. For those people, private beaches are a safe option. Research the beach beforehand to learn its guidelines for COVID-19—and then plan a trip.

Whether you decide to travel out of state or to your backyard, it is possible to have fun this summer while following COVID-19 precautions. Do plenty of research, and do not be afraid to search for ideas online. Stay safe! 🇺🇸

<sup>2</sup> <https://www.travelandleisure.com/trip-ideas/national-parks/how-many-national-parks-are-there>

<sup>3</sup> <https://www.stateparks.org/>

<sup>4</sup> <https://weirdnj.com/>

<sup>5</sup> <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html>

<sup>6</sup> <https://www.space.com/39231-top-skywatching-events-this-year.html>



# Staying Cool at the Beach

BY MS. JESSICA SMITH, STAFF WRITER

**W**hen the weather is hot, some people head for the mountains whereas others head for the beach. If you are in the latter group, we have some tips to ensure your beach trip is safe and enjoyable.

The sun is most dangerous for our bodies in the summer because exposure to sunlight tends to happen for longer periods. Sunscreen, sunglasses, and hydration are key to protecting your skin and eyes and preventing heat exhaustion. According to the Illinois Department of Public Health website,<sup>1</sup> more than 90 percent of skin cancer is caused by exposure to the sun.

The Centers for Disease Control and Prevention has tips for sunscreen use:<sup>2</sup>

- Use UVA- and UVB-blocking sunscreen with SPF15 or higher
- Apply every two hours
- Reapply after sweating, swimming, or towelng off
- Wear a hat and protective clothing when possible

If you are not a regular beachgoer, you may be surprised by the sole-burning sun-baked sand if you stroll barefoot along the beach. It is not the romantic scene fiction writers make it out to be. Beach-friendly footwear, such as sandals that strap to your feet, will not only prevent burns but will also protect against rocks, seashells, broken bottles, and other hard and sharp bits in the sand. If you go swimming, you might consider hard-soled water shoes to safeguard your feet from hidden hazards. Flip-flops seem like good beachwear on the outside, but walking

through the sand with them is a nightmare. It is best to leave those at home.

Many people like to enjoy alcoholic beverages when they go to the beach, but there are several things to consider when drinking while out on the sand. For starters, alcohol can dehydrate you, so it is important to chase anything alcoholic with plenty of water. Second, alcohol can make you less cautious, which is especially dangerous when near the ocean or in the sun. You may feel the urge to go for a swim when it is not advised, or you may neglect to apply sunscreen. Also, according to an article by National Public Radio,<sup>3</sup> a German study found that drinking in the sun can also lead to a faster sunburn.

How about food? Beach trips can be day-long affairs, so bringing a cooler

<sup>1</sup> <http://www.idph.state.il.us/cancer/factsheets/skin.htm>

<sup>2</sup> [https://www.cdc.gov/cancer/skin/basic\\_info/sun-safety.htm](https://www.cdc.gov/cancer/skin/basic_info/sun-safety.htm)

<sup>3</sup> <https://www.npr.org/sections/thesalt/2019/07/14/741063881/mixing-alcohol-and-sun-beware-a-buzz-begets-a-faster-burn>



with food makes sense. Make sure the refrigerated items are kept properly cold and do not spoil in the hot sun. Salty snacks are advised to help you retain water, which is also important for combating dehydration. Bring a bag for trash, and try to bring foods that do not produce a lot of garbage—for the safety of the animals who live in the environment.

For those who like to swim in the ocean, it is important to remember that ocean swimming can be much different from swimming elsewhere. First, many beaches do not have lifeguards, so your safety is up to you. Also, there are harmful creatures in the ocean. The National Oceanic and Atmospheric Administration lists the five most dangerous animals at the beach:<sup>4</sup> jellyfish (which tend to

like the warmer water in bays), sea urchins, lionfish, stingrays, and sharks. The important tip for avoiding these creatures is to look for them, either swimming in the water or hanging out on the ocean floor. If you see one, back away and alert the employees at the beach immediately. If stung or bitten, seek help as soon as possible.

Day trips to the beach are often easy family outings, but keep their safety in mind, too. It is important to start kids off in the water slowly. Ocean swimming is different, from the salt content to the waves and the uneven ocean floor. Waves can knock you off your feet, even if you are standing. Whereas a wave might come up to your knee, for a kid, that can be chest high. For that reason, it is best to be in the water with them while they are swimming.

Crowded beaches pose many dangers. Even if there is a lifeguard, he or she can watch only so many people at one time. Also, kids might have a hard time finding your “camp” at the beach if you let them go swimming without an adult. Waves can drift you laterally away from where you went into the water. Especially at a crowded beach, but at all beaches, stay with your kids to ensure their safety.

Dogs are especially fun at beaches; most like to swim and play fetch. They can get dehydrated, though, just like humans, so providing them freshwater as an alternative to ocean water is vital. They may also be unfamiliar with sea creatures, and, as they are curious animals, they may poke one—with harmful consequences. As with any pet in a public space, make sure they are wearing a collar in case they get lost. Just like with kids, keep a close eye out for your dog and what it is doing.

Other people at the beach can pose problems for you and your crew. If they decide to get rowdy, it is best to give them a wide berth to prevent any problems. Theft can be an issue as well. Try to hide your valuables or leave them at home, and keep a person with your things at all times, if possible. You can buy armbands or packs to wear to keep your keys and credit cards on your person while you go for a swim. Consider a waterproof case for your phone.

As the pandemic continues, it will be important to research your beach before you go. Some beaches were closed in 2020, and others opened with restrictions. Follow the local health department’s guidelines for COVID-19 safety at the beach.

Going to the beach is relaxing and fun! Just remember these tips to stay safe while you are there. 🏖️

<sup>4</sup> <https://oceanservice.noaa.gov/news/july15/sea-creatures-to-avoid.html>



# MISHAP-FREE FLYING HOUR MILESTONES

## 6,500 HOURS

**7 AS, JB Lewis-McChord, WA**  
MSgt Steven M. Van Ert

## 5,000 HOURS

**7 AS, JB Lewis-McChord, WA**  
Lt Col Daniel R. Godwin  
Lt Col Matthew A. Sartori  
Lt Col Brandon J. Tellez  
Maj Nicholas A. Coblio  
SMSgt Brian S. Castillo  
MSgt Daniel R. Denman  
TSgt Michael J. Solly  
TSgt Michael J. Tubbs  
TSgt Joseph T. Wright, Jr.

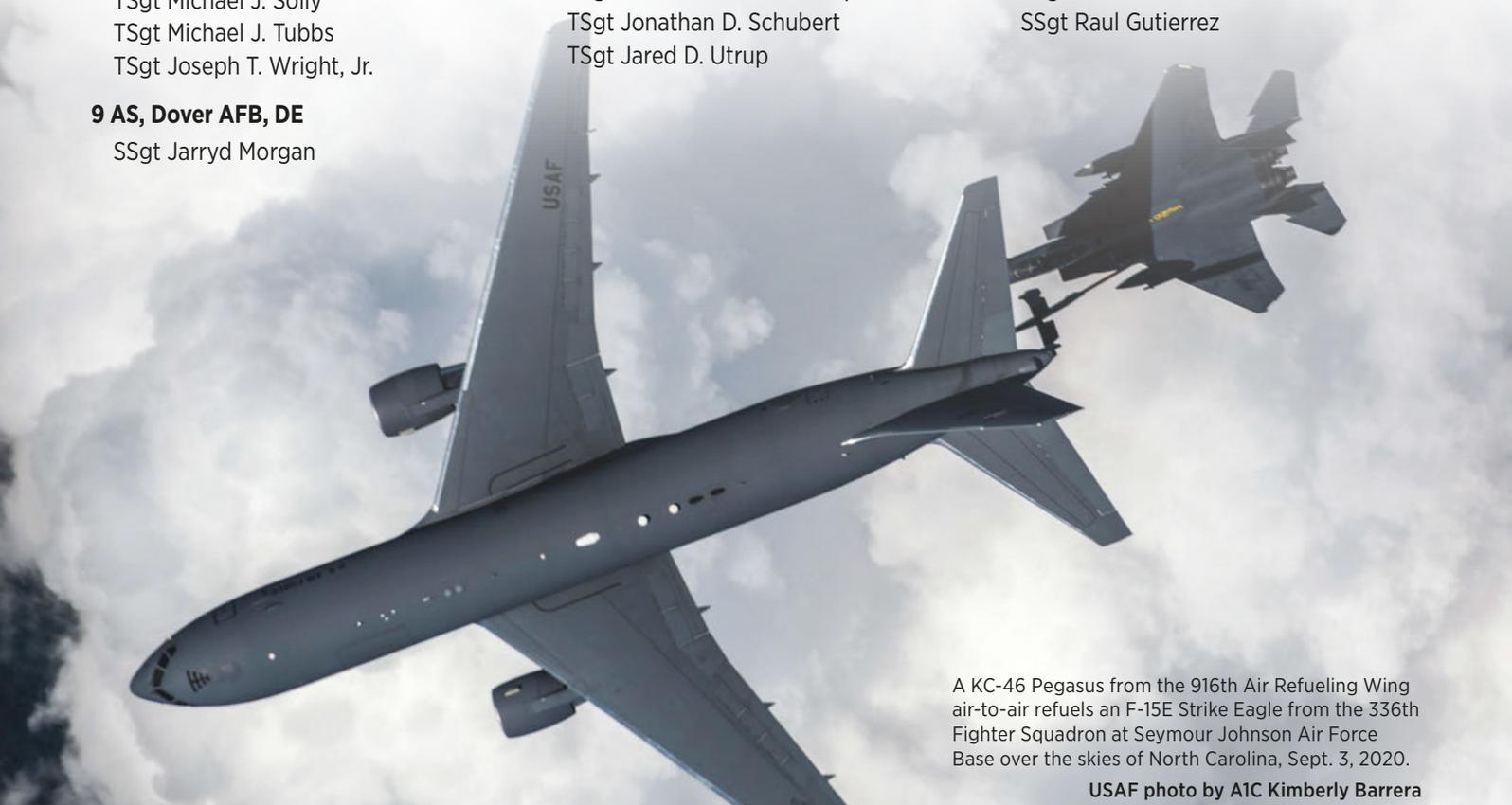
**9 AS, Dover AFB, DE**  
SSgt Jarryd Morgan

## 3,500 HOURS

**7 AS, JB Lewis-McChord, WA**  
Lt Col Judd W. Baker  
Lt Col Susanne L. Lonsberry  
Maj Thomas A. Bender  
Maj Colin J. Huber  
Maj Patrick J. Leahy  
Maj Patrick B. Sauncy  
Maj Celine M. Ziobro  
MSgt Jeremy S. Arvizu  
MSgt Anthony R. Leonard  
TSgt Clayton J. Horne  
TSgt Ricardo Sanchez-Crespo  
TSgt Jonathan D. Schubert  
TSgt Jared D. Utrup

## 2,500 HOURS

**7 AS, JB Lewis-McChord, WA**  
Maj Timothy J. Bent  
Maj Nicholas S. Burke  
Maj Wade G. Gallup  
Maj Geraldo F. Garza  
Maj Jeffrey M. Gosselin  
Maj Jacob B. Jensen  
Maj Brett P. Troutman  
Capt Thomas J. Browning  
Capt Aaron I. Payomo  
MSgt Liam P. McPhail  
TSgt Xavier J. Rosa  
SSgt Raul Gutierrez



A KC-46 Pegasus from the 916th Air Refueling Wing air-to-air refuels an F-15E Strike Eagle from the 336th Fighter Squadron at Seymour Johnson Air Force Base over the skies of North Carolina, Sept. 3, 2020.

USAF photo by A1C Kimberly Barrera



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# QUICKSTOPPERS

## The National Commission on Military Aviation Safety 2020 Report

BY LT COL ADAM KING, CHIEF OF AMC FLIGHT SAFETY

The National Commission on Military Aviation Safety (NCMAS) was established by Congress in the fiscal year 2019 National Defense Authorization Act to examine and make recommendations with respect to U.S. military aviation mishaps. As part of that effort, NCMAS team members reviewed aviation mishap data across all the services and visited more than 200 aviation-related military and civilian organizations, to include many Total Force Air Mobility Command (AMC) installations and organizations. The final report was submitted to the President and Congress on December 1, 2020. The entire report can be found at [https://www.militaryaviationsafety.gov/report/NCMAS\\_Final\\_Report.pdf](https://www.militaryaviationsafety.gov/report/NCMAS_Final_Report.pdf).

The NCMAS report shares critical and surprisingly candid perspectives from the flightline and addresses safety concerns that many aviators and maintainers shared. The NCMAS findings and recommendations focused primarily on talent management and the proficiency of pilots and maintainers, necessary improvements in aviation data, and consistent military aviation funding. NCMAS summed up the goal simply as, “Pilots should fly; maintainers should maintain; data can save lives; and funding should be consistent.”

The NCMAS also stated that they “came away from our visits impressed with the patriotism, dedication, and level of effort throughout the ranks of America’s military aircrews and maintainers. We also came away deeply troubled by the chronic fatigue we saw among these brave service members. The current operations tempo is leading to unsafe practices and driving experienced aviators and maintainers out of the force.” Among the many recommendations of NCMAS are increases in retention bonuses and schooling, as well as proactive safety programs already employed within AMC (such as Military Flight Operations Quality Assurance, Airman Safety Action Program, and the Line Observation Safety Audit). The Secretary of Defense—in coordination with the Service Secretaries—has 120 days from the submittal of the report to provide a response to the Senate and House Armed Services Committees. To what extent the NCMAS report will affect USAF and AMC is uncertain, but it is worth the time to read. If you are short on time, read the three-page executive summary!



# A DAY IN THE LIFE



Airmen from the 721st Aerial Port Squadron (APS) walk into a C-17 Globemaster III aircraft to retrieve a pallet at Ramstein Air Base, Germany, Feb. 2, 2021. The Defense Logistics Agency requested a shipment of more than 400,000 masks to ensure U.S. forces in Germany are compliant with host nation requirements. The 721 APS plays an important role in the distribution of masks and other COVID-19 protective equipment.

**USAF photo by SrA Thomas Karol**