

THE MOBILITY FORUM

THE MAGAZINE OF AIR MOBILITY COMMAND | SPRING 2022

**SAFETY
Is a Risk
Management
Program**

**Motorcycle Safety:
Put a Lid on It!**

**Brig Gen Daniel DeVoe Discusses
How the 618th Air Operations
Center Does Business**

**2021 Safety
Award Winners**



CONTENTS

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FROM THE TOP

- 3** Expeditionary Center Commander Maj Gen Camerer Speaks About Innovation and Adaptability
- 5** Brig Gen Daniel DeVoe Discusses How the 618th Air Operations Center Does Business

FLIGHT SAFETY

- 12** Safety Is a Risk Management Program
- 32** Check Your Ego at the Door if You Are Flying in Bad Weather

RISK MANAGEMENT

- 8** So, What Can I Do With MFOQA Analysis?

AMC NEWS

- 14** Accelerating Change Leads to National Safety Council Rising Star of Safety
- 18** FY21 Air Mobility Command Annual Safety Award Winners and Department of the Air Force Nominees
- 19** Safety Office of the Year
- 21** AMC's Annual Individual and Team Safety Award Winners

SAFETY CULTURE

- 16** Weapons Safety Managers Find the Best Solution Through Teamwork

SEASONAL CONSIDERATIONS

- 34** This Spring, Take a Hike—But Make Sure You Have These 10 Essentials With You


MOTORCYCLE CULTURE

- 36** Put a Lid on It!

REGULAR FEATURES

- 38** Mishap-Free Flying Hour Milestones
- 39** Quickstoppers
- 40** A Day in the Life

ON THE COVER

A C-17 Globemaster III from Joint Base Charleston, SC, deploys flares as part of a training event over the Atlantic Ocean in a military operating area outside Charleston, South Carolina, June 5, 2021. 


USAF photo by TSgt Chris Hibben



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Expeditionary Center Commander Maj Gen Camerer Speaks About Innovation and Adaptability

BY MS. CHRISTINE WALSH, STAFF WRITER

As the Air Force works toward developing and adopting a new force generation model, Maj Gen Mark Camerer, Commander of the USAF Expeditionary Center (USAF EC), shares insight on how this center for advanced expeditionary operations training and education will play a key role in helping Air Combat Command (ACC), Air Mobility Command (AMC), and others. The Air Force's Force Generation model, which is projected to reach initial operating capability in fiscal year 2023, ensures a sustainable force offering of Airmen and airpower to the Joint Force.

One of the USAF EC's newest courses is for Multi-Capable Airmen (MCA) who support Agile Combat Employment (ACE), a concept that envisions the use of agile operations to generate resilient airpower in a contested environment. ACE got a real-world test when MCA were deployed to support the massive Afghanistan evacuation and withdrawal operations last year.

When the operations began, the 621st Contingency Response Wing (CRW) Airmen were activated and went to Afghanistan to oversee airfield operations. They provided security alongside a contingent of Marines and command and control airport operations and were on the ground before the Fort Bragg Army teams arrived. Camerer noted that for years, CRW Airmen have been the epitome of MCA because of the standards to which they train, having capabilities

to execute jobs beyond their core Air Force specialty codes. In early August, Airmen assigned to Task Force Griffin were activated with the sole purpose of getting U.S. Army Soldiers assigned to the Immediate Response Force (IRF) deployed from Fort Bragg. They would typically depart from Pope Army Airfield (AAF), NC; however, its runway had been closed about six months for an extension and resurfacing project. They had to travel and transport all cargo by road to Joint Base Charleston, SC, for the rapid deployment to Afghanistan to provide security around the airfield.

The Department of State-led evacuation efforts in Afghanistan, known as Operation Allies Refuge, led to the evacuation of 124,000 people, making it the largest noncombatant evacuation operation ever conducted by air alone. Once the evacuation efforts were complete, the operation transitioned to the Department of Homeland Security, and became known as Operation Allies Welcome, which was comprised of eight U.S. task forces.

Task Force Liberty, one of the eight task forces, worked around the clock at Joint Base McGuire-Dix-Lakehurst, NJ, to support the Afghan refugees.

"We saw Airmen doing things beyond their normal jobs to help care for the Afghan personnel that were coming through their stations," Camerer said. "There is no CBT (computer-based training) on how to run an Afghan village or how to run a village mayor's cell."



Maj Gen Mark Camerer

“We saw Airmen doing things beyond their normal jobs to help care for the Afghan personnel that were coming through their stations. There is no CBT (computer-based training) on how to run an Afghan village or how to run a village mayor's cell.”



Camerer said their ability to hone a mission that had never been done before—at a moment's notice—speaks to how innovative, adaptive, and action oriented the Airmen are.

The USAF EC is integrating expeditionary operations and ACE across such major commands (MAJCOMs) as Global Strike Command and Pacific Air Forces to develop their war plans or concepts of employment, from which the MAJCOMs develop their concept of operation. The Expeditionary Center is working to integrate all the MAJCOMs' concepts of operations into a coherent and executable concept that can be practiced, developed, and then eventually executed.

"Another large exercise that will demonstrate ACE concepts we have coming up is NODAL LIGHTNING," Camerer said. "NODAL LIGHTNING is a readiness exercise designed to integrate geographically separated units, supporting national defense priorities by enabling Army, Marine, and Air Force deployments simultaneously throughout the area of responsibility. During this exercise, units demonstrate an ability to execute the mission during combat operations. NODAL LIGHTNING 22-1 will take place simultaneously in the Pacific and European theaters in early March of 2022."

There is also a proposal to bring Pope AAF, which is currently focused on National Mission Force (NMF) and IRF, to the level of a wing. They will continue to project MNF and IRF with an additional group there called the Mission Generation Group.

Additionally, the USAF EC is working to establish an expeditionary operations and training group at Pope AAF that would be tasked to support expeditionary operations. This group would be focused on developing tactics, techniques, and procedures; testing them; and then incorporating them into Air Force doctrine. The training group would employ that process for everything from a mobile training team to a large-scale multi-command exercise to help MAJCOMs integrate those procedures across the Air Force. If approved, the group would be at full operational capacity by the winter of 2023.

Camerer said to expect to see the Air Force doing more training where they are going to fight. He anticipates that AMC, ACC, and others will try to take their training to the Pacific and European regions in the future. For example, he said, the large-scale AMC Mobility Guardian exercises may move into the Pacific Theater for the next iteration.

Another example of this practice was with the recent AMC Phoenix Rally, which brings together all the commanders and command chiefs. One of the events was a deep dive into the war plans in the Pacific Theater, identifying what each of the AMC units would be doing to support different components of those plans. The commanders and command chiefs took that knowledge back to their individual wings so that they could train for those roles.


One of the assignments the EC was tasked to do was to support ACE through expeditionary skills training

TSgt Trevor Wells, 421st Combat Training Squadron Fieldcraft Contingency Response (FC CR) Contingency Skills Instructor, teaches his students tactical movements at Home Station Training Lane-West, Feb. 9, 2021, at Joint Base McGuire-Dix-Lakehurst, NJ. The students attended FC CR from Little Rock Air Force Base, AR, to share lessons learned with their units so they can provide feedback to the U.S. Air Force Expeditionary Center for the upcoming Multi-Capable Airmen course.

USAF photo by MSgt Ashley Hyatt

for MCA to support Central Command (CENTCOM) Areas of Responsibility (AOR). The new course developed would support ACE and MCA requirements. The USAF EC focuses not only on how to train people to go into hostile and uncertain environments in CENTCOM AOR but how to do that on a worldwide scale to support any operation anywhere. One of the ways they have accomplished that objective has been by training the trainers who would execute those operations at the wing level—a process that will be adjusted as requirements evolve.

Camerer added that the EC enables the power to be projected forward to foster the integration of the expeditionary operations not only at the Air Force level but at a joint force, enterprise-wide scale.

"What I'd like for us to remember is we are an expeditionary Air Force; we always have been," Camerer said. "We in the Air Force never want to fight on our home turf; we always want to fight on someone else's turf. And that's what the USAF EC is all about—advancing the tactics, techniques and procedures that will allow us to remain expeditionary into the future." 

Brig Gen Daniel DeVoe Discusses How the 618th Air Operations Center Does Business

BY MS. KIM KNIGHT, STAFF WRITER

For Air Mobility Command (AMC), 2021 was a monumental year that began and ended with the ongoing COVID-19 effort, resulting in the delivery of more than 50,000 vaccines to some of the hardest hit countries. In addition, 80 missions transported 340 patients in biocontainment systems for the well-being of all involved. In March, one of the first major operations was Octave Quartz, the repositioning of forces in United States Africa Command (USAFRICOM) and the movement of roughly 440,000 pounds of cargo in an effort to promote peace in Somalia. From April to July, AMC took the heavy lift of the retrograde in Afghanistan head-on, moving thousands of personnel and 16,000 pieces of equipment from the area. The “go to zero” equaled approximately 900 C-17s of cargo. Then in August, the gray tails of AMC’s mighty fleet were seen on every mainstream news media outlet across the globe during the 17-day record-breaking airlift of 124,000 refugees in a non-combatant evacuation operation (NEO) at Hamid Karzai International Airport (HKIA) in Kabul, Afghanistan called Operation Allies Refuge.

The numbers over the past year are staggering and a testament to the dedication and perseverance of AMC’s brave crews and dedicated support personnel. Each one of the many missions were planned, managed, and executed by the 618th Air Operations Center (AOC), Scott Air Force Base, IL, under the command of Brig Gen Daniel A. DeVoe.

In an interview with *The Mobility Forum*, DeVoe reflected on the many extraordinary efforts of those who rolled up their sleeves and worked tirelessly to

deliver hope to those in need—no matter how challenging or distant.

Looking forward, DeVoe was asked how he is shaping the organization to best meet the needs of the future fight. “Right now, as a Department of Defense, as a military, as a Nation, we are really focused on peer competition. Great power competition is fundamentally changing the global strategic environment and due to rapid advancements in technology and the proliferation of it, the low cost and ease of diffusion around the globe has really increased [the] reach, speed, and lethality of our potential adversaries’ capabilities—those who would challenge our place of primacy in the international order.”

He said, “In the INDOPACOM [United States Indo-Pacific Command] theater, China is our strategic competitor and has been doing a variety of things to intimidate neighbors and militarize features in the South China Sea. They are going to continue to challenge us.”

He discussed the friction in the United States European Command (USEUCOM) theater as Russia encroaches on the borders of nearby Nations in an expansion attempt. The rapid growth or technological advancement of near-peer adversaries has changed the way the 618 AOC does business.

“We can’t continue to do it the way we’ve done it the last 30 years,” DeVoe emphasized. “Going forward, we have to make some changes to meet the threat change, to meet the timing and tempo as it changes in conflicts across the full spectrum and, frankly, as war gets



Brig Gen Daniel A. DeVoe, Commander, 618th Air Operations Center

“

It's an exciting time to be part of the AOC because your days are busy making the mission happen. That mission can be anything from delivering combat power to delivering hope and building brighter futures as we saw with AOR for 124,000 people.”

618th AIR OPER

more complex, to be able to meet those demands and do what we do, which is to provide rapid global mobility to that warfighter on behalf of our Nation.”


As the 618 AOC celebrates 30 years of excellence on April 1, 2022, all focus will be on planning new operational concepts for the AOC of the future, or AOC 2030. With a solid foundation in place, the core competencies of plan, task, execute, and assess will be further refined for maximum efficiency and effectiveness in times of war and peace.

“That includes integrating global C2 [command and control] systems, across

echelons, not just at the strategic or operational level where decisions need to be made, but to enable those decisions to be made at any level, depending on time, space, and the existing circumstance,” DeVoe said.

To fully plan the processes and integrate the concept of distributed C2, the first step is conducting global exercises in which participants are either connected with C2 or completely disconnected in a separate scenario. The hands-on experience will help to build on tools in AMC’s vast inventory, plus the training will help to firmly establish the processes and procedures

that weave into the framework of the emerging concept.

DeVoe said, “It’s an exciting time to be part of the AOC because your days are busy making the mission happen. That mission can be anything from delivering combat power to delivering hope and building brighter futures, as we saw with AOR [Area of Responsibility] for 124,000 people. Then, at the same time, when you take a moment to breathe and think, we’re working really hard to make the defense transportation system move, to be agile, to be rapid, to meet the need of our joint war fighters, AND we’re going to shape the future.” 

618 AOC OVERALL FOOTPRINT

(Dec 1, 2020 – Nov 30, 2021)

Approximately **15,000** Missions and
50,000 Sorties



Roughly **300,000**
Short Tons Moved



More Than **100** Bomber
Task Missions Supported



760,000
Passengers
Airlifted



134 Million Pounds
of Fuel Transferred



More Than **200,000** Flying Hours



COVID-19 IMPACT

- **50,000+** Vaccines Shipped Worldwide
- **340** DoD Patients (infected or suspected to be infected with COVID-19)
- **More Than 80** Missions Using Biocontainment Units



TEXAS WATER CRISIS

- **700,000** Bottles of Water Delivered
- **11** Distribution Centers,
19 Airlift Missions Completed



AFGHANISTAN GO-TO-ZERO

- April to July, **900** C-17 Loads of Material
- Approximately **16,000** Pieces of Equipment
- **Hundreds** of DoD Personnel



ATIONS CENTER

AFGHANISTAN EVACUATION

- **124,000** Qualified Evacuees
- **75,000** Aboard AMC Aircraft
- Averaged **7,500** Civilians per Day
- **330** Total Departures Out of Kabul
- Approximately **250** AMC Aircraft and **500** Aircrews from Guard, Reserve, Active Duty Units



JOMPC* GROUNDBREAKING CEREMONY

- 30 Sept, Construction Begins
- Projected Completion: Late 2023
- **170,000+** Square-Foot Facility, **\$84M** Project



**Joint Operations Mission and Planning Center*

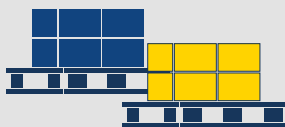
EXERCISE MOBILITY GUARDIAN

- Largest and Longest AMC Exercise
- **1,800+** Air Force Participants, **18** Mobility Aircraft
- **6** Operating Locations Across Michigan/Wisconsin



OPERATION OCTAVE QUARTZ

- **18** Airlift Missions, **440,000+ lbs** of Cargo Moved



AOC AVERAGES 200 FLIGHTS PER DAY, SO THEY COMPLETE THE PROCESS BELOW 200 TIMES EVERY DAY!

Q What is involved for the 618 AOC to task specific aircraft types on regular missions?

A Routine missions (otherwise known as channel missions) are submitted to the 618 AOC as validated mission requirements through United States Transportation Command (USTRANSCOM). Depending on the nature of the mission, the requirements are analyzed and passed down through the appropriate directorates, who task available mobility assets, populate a movement plan, and manifest a route and planning checklist before overseeing the flight movement in real time during mission execution.

- Step 1. USTRANSCOM provides the 618 AOC with validated mission requirements.
- Step 2. The mission requirements are analyzed by our team and passed to the appropriate directorate depending on the nature of the mission.
- Step 3. The directorate identifies available aircraft and tasks them with supporting the mission.
- Step 4. A movement plan is created.
- Step 5. A flight route is created.
- Step 6. Planning checklists are completed and reviewed.
- Step 7. The 618 AOC tracks the aircraft's movement in real time during mission execution.



So, What Can I Do With MFOQA Analysis?



BY MR. BILL KROUSE, OPS RAMS TEAM, UTRS MFOQA PROGRAM MANAGER

During a recent Safety Investigation Board (SIB), the Military Flight Operations Quality Assurance (MFOQA) Flight Data Analyst was asked, “What could MFOQA analysis provide to assist the investigation of a mishap?” Although this is not the first time the Ops Risk Assessment and Management System (RAMS) team has received this question, it highlighted the need to periodically refresh the aviation community, both crews and leadership, of the capabilities MFOQA analysis provides. Therefore, it is essential to review the uses of MFOQA analysis and associated restrictions and how crews can use analysis products as a preflight tool to improve situational awareness. The analysis can also provide insight into how SIB Investigation Officers can acquire in-depth aggregate information to determine if the mishap crew was operating within the current norms and how leadership can measure the risk exposure to their crews.

The two primary points to remember about MFOQA are—

- Point 1: The only limit to what MFOQA analysis can provide is your imagination of what you want to look at and whether your aircraft records the parameters required to define the event. (Adding new parameters to your Mission Design Series [MDS] is a story for another day.)
- Point 2: The MFOQA Task Force that established the framework that the MFOQA program

operates under firmly believed there were sufficient evaluation programs in place to ensure the crew force was proficient and ready to execute the National Defense Strategy.¹ Therefore, there was no requirement to use MFOQA analyses to monitor an individual Airman’s performance. Instead, the task force wanted a tool that could change anecdotal beliefs into statistical evidence highlighting what was happening in the field on an aggregate level. To be more precise, the overarching goal of the MFOQA program is to identify mishap precursors to allow leadership to develop mitigation options. To support their firm belief in crew proficiency, the task force created restrictions for the use of MFOQA analysis in both Department of Defense (DoD) and U.S. Air Force guidance. Although wording has changed and instructions renamed, the restrictions still follow the original intent of the task force. DoD Instruction (DoDI) 6055.19 states, “Data collected for, or analysis generated from, AHIRAPs [Aviation Hazard Identification and Risk Assessment Programs] must not be used to: (a) Monitor personnel performance to initiate qualification downgrade or decertification.”² Air Force Instruction (AFI) 91-225, *Aviation*

Safety Programs, further clarifies that “Data collected for or analyses generated from aviation safety programs shall not be used to initiate crew qualification downgrade, take adverse personnel action, or monitor personnel performance.”³ In addition, the AFI expounds on the definition of adverse actions.

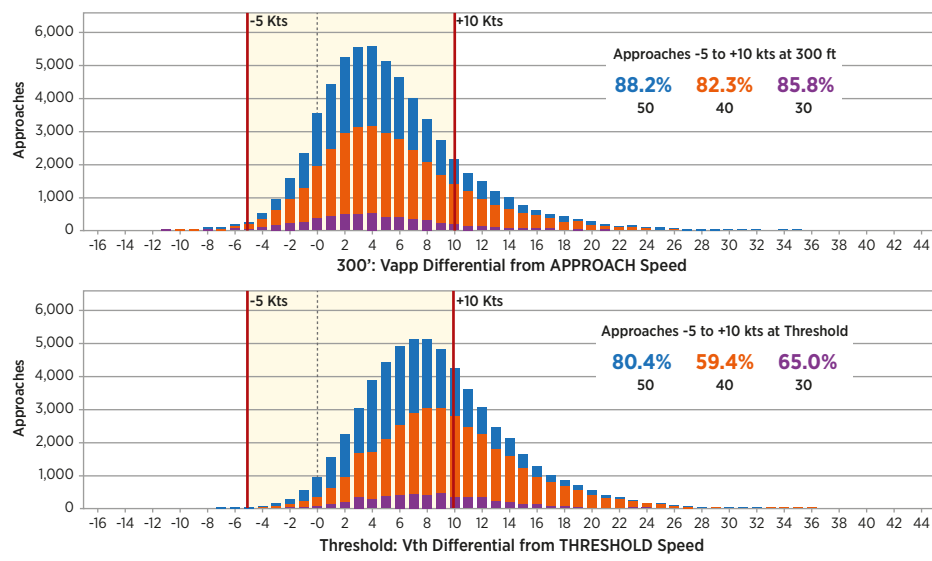
From inception, the goal of the MFOQA program was to look at flight operations from the aggregate perspective. Figure 1 highlights how MFOQA analysis can establish a baseline for how the community performs a specific task, and Figure 2 shows trends in unstable approaches. To accomplish this analysis, the MFOQA software relies on hundreds of points of interest (POIs), called Routine Operational Measurements. The MFOQA software also supports warning events (e.g., flap or MDS overspeed) and action points (e.g., configuration changes or touchdown points) to alert the team of unsafe situations. With your feedback and a little time, the MFOQA Software Development Team can add almost any POI analysis you may want to examine. Due to limits imposed by the parameters recorded by each aircraft, not all requests can be supported, but you will not know if you do not ask.

The following graphs are examples of how MFOQA analysis can be beneficial in showing statistical trends.

¹ <https://www.defense.gov/Explore/Spotlight/National-Defense-Strategy/>

² DODI 6055.19 Aviation Hazard Identification and Risk Assessment Programs (AHIRAPs), April 11, 2017, 3.2.e(2)(a)

³ AFI 91-225, Sep 2, 2019, Safety Programs. 1.2.3.3.



In addition, MFOQA analysis can measure the impact of seasonal changes and environmental influences at a specific location, such as the impact of spring thunderstorms on stable approaches (Figure 2) and the ground proximity warning system “Terrain Fly UP” warning received while on glideslope flying into Runway 23 at Spangdahlem Air Base, Germany (Figures 3 and 4).

Figure 1. Comparison of Modular Drive System (MDS) Speed Differential at 300' and Crossing the Threshold

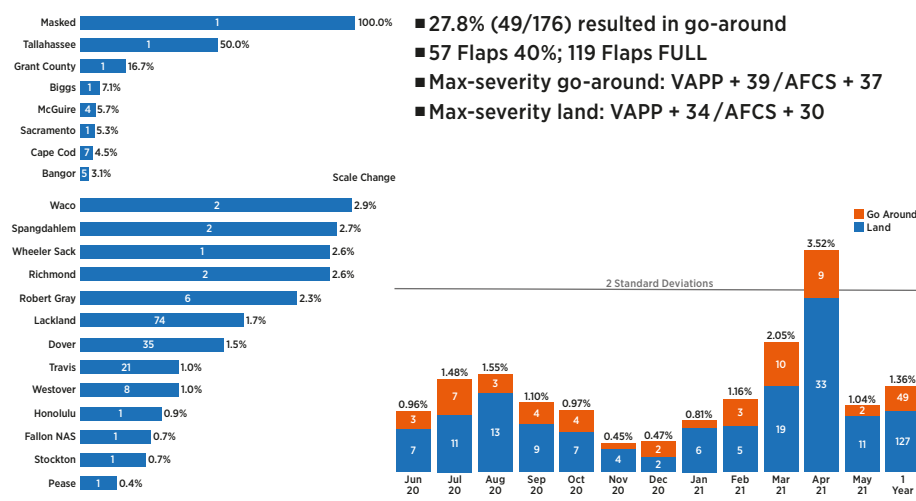


Figure 2. Unstable Approach Flight Safety Alert Below 300'

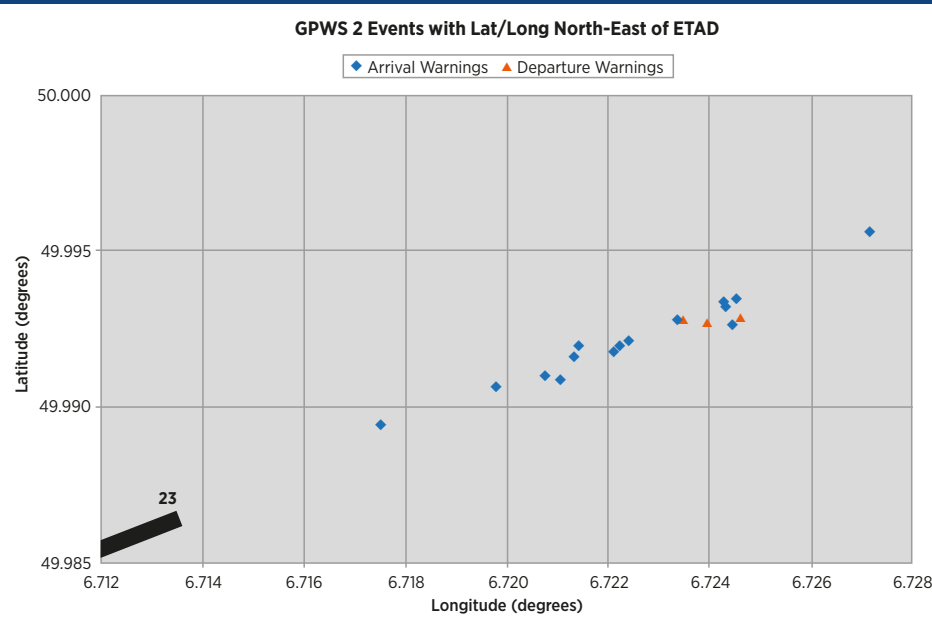


Figure 3. Ground Proximity Warning System (GPWS) Alerts at Spangdahlem Air Base (ETAD), Germany

Figure 5, on the other hand, shows how leadership can evaluate the success of mitigation efforts based on MFOQA analysis over an extended period.

Early in the life of the MFOQA program, it became apparent that the software developed for aggregate analysis could also examine a singular event (Figure 6), target a specific event (Figure 7), or show ground track and event location by overlaying data on a map (Figure 8).

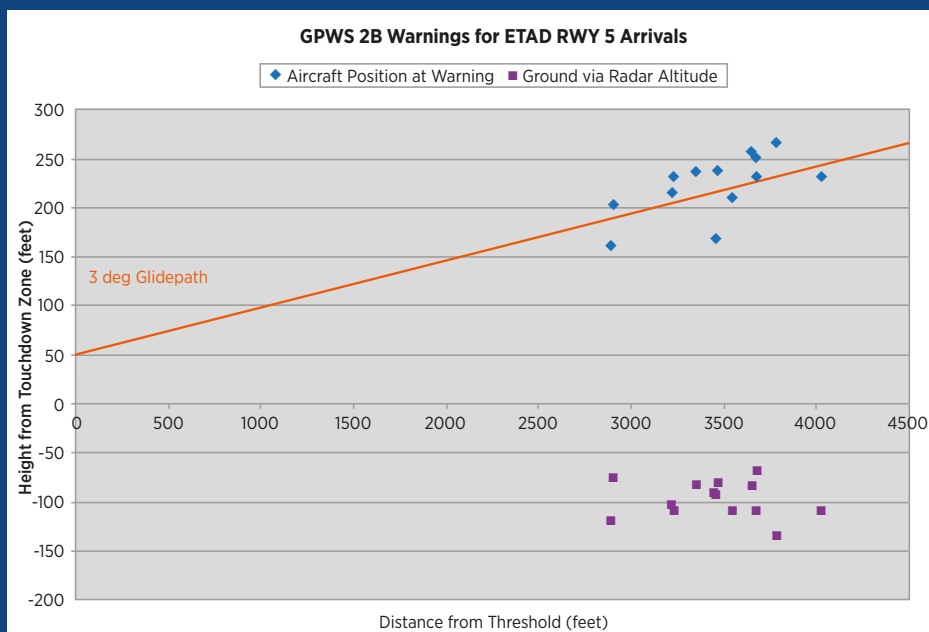


Figure 4. Ground Proximity Warning System (GPWS) Alerts in Relation to the Runway 23 Glideslope, Spangdahlem Air Base (ETAD), Germany

These statistics lead to an issue that is near and dear to me—two-way communication. It is imperative! MFOQA analysis only tells us what happened; it does not tell us why it happened. There are times when the analysts need to contact the aircrew to add context to an event. For example, the MFOQA software alerts the analysts when a KC-135 aircrew attempts to take off with the speedbrake handle out of the detent. After several of these events occurred, the analysts then contacted one of the involved aircrews. Interestingly, the aircrew stated that they were convinced the speedbrake handle was not out of the detent. Maintenance checked the sensor and found it to be defective. Therefore, this event was removed from the analysis database to prevent skewing aggregate analysis.

Crew protection from monitoring and initiating adverse personnel action is spelled out in DoDIs and AFIs. In addition, the MFOQA software is designed to look at variable POIs to provide a graphic

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Seasonal
Jan	19.7%	19.0%	15.6%	14.8%	14.2%	14.6%	9.7%	9.6%	8.7%	8.5%	7.4%	7.4%	7.6%	7.1%	9.8%
Feb	22.7%	21.7%	16.4%	14.0%	15.9%	12.7%	11.4%	9.3%	9.0%	8.4%	8.2%	7.8%	8.5%	7.8%	10.4%
Mar	21.8%	21.1%	18.9%	14.3%	14.7%	13.5%	10.7%	9.3%	9.7%	9.4%	9.6%	7.9%	7.2%	8.1%	10.6%
Apr	25.1%	24.7%	17.4%	16.6%	14.4%	14.4%	10.8%	9.9%	9.5%	9.0%	10.4%	7.9%	9.0%	9.7%	11.3%
May	24.0%	21.3%	16.6%	16.7%	15.2%	14.4%	11.6%	11.1%	9.0%	9.3%	8.3%	8.1%	10.3%	9.0%	11.2%
Jun	22.1%	19.3%	17.3%	14.3%	14.4%	14.4%	10.6%	9.0%	9.4%	8.7%	9.0%	7.4%	8.8%	8.0%	10.4%
Jul	22.7%	19.6%	16.6%	14.1%	14.9%	13.5%	10.5%	9.7%	8.7%	8.6%	9.6%	7.8%	8.5%	7.0%	10.3%
Aug	19.1%	21.8%	16.0%	15.7%	14.1%	12.8%	10.2%	8.8%	8.8%	8.2%	8.0%	8.5%	8.5%	8.1%	10.1%
Sep	19.6%	17.4%	14.9%	15.2%	12.7%	11.7%	9.1%	8.6%	8.1%	7.8%	8.2%	7.8%	8.5%		9.9%
Oct	23.0%	19.3%	15.2%	13.9%	12.8%	10.0%	8.5%	8.3%	7.5%	8.3%	7.1%	7.4%	8.5%		9.5%
Nov	18.9%	17.5%	15.0%	12.9%	12.0%	10.0%	8.1%	7.7%	7.8%	7.1%	7.5%	6.5%	7.6%		8.9%
Dec	20.4%	17.7%	15.7%	15.4%	13.7%	10.7%	8.8%	8.3%	7.4%	7.0%	7.2%	7.1%	7.4%		9.5%
Annual	21.7%	20.2%	16.2%	14.9%	14.1%	12.7%	10.0%	9.1%	8.7%	8.4%	8.3%	7.7%	8.4%	8.2%	

Figure 5. Unstable Approach Rate Since 2008

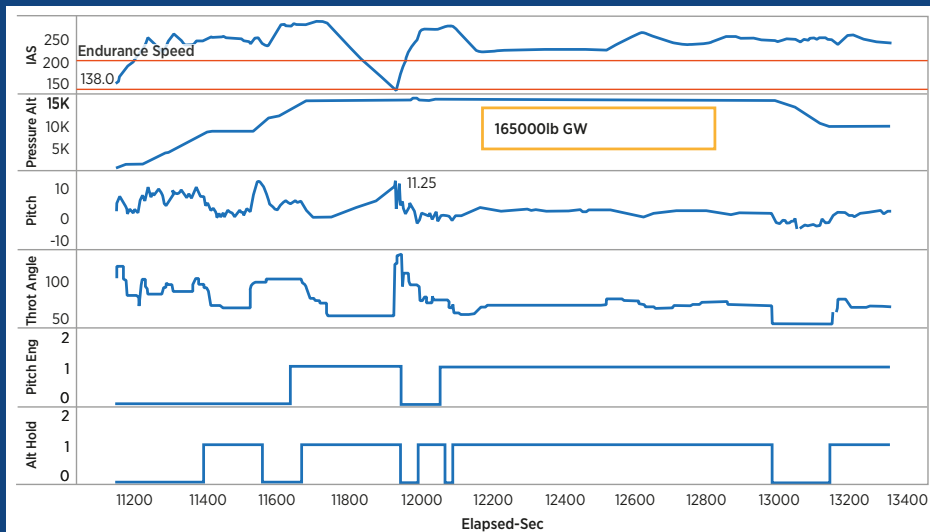


Figure 6. Single Sortie Analysis of Vbe-62 KIAS

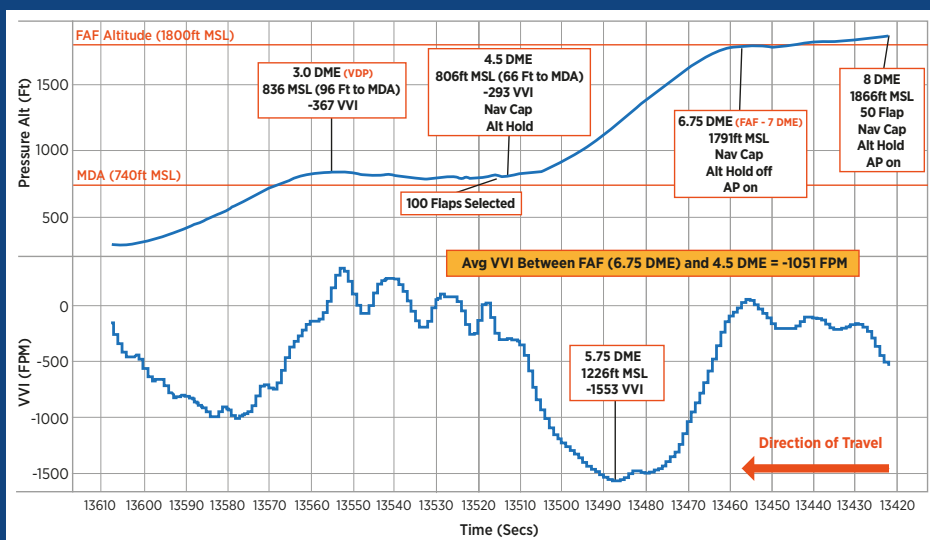


Figure 7. Dive and Drive Example

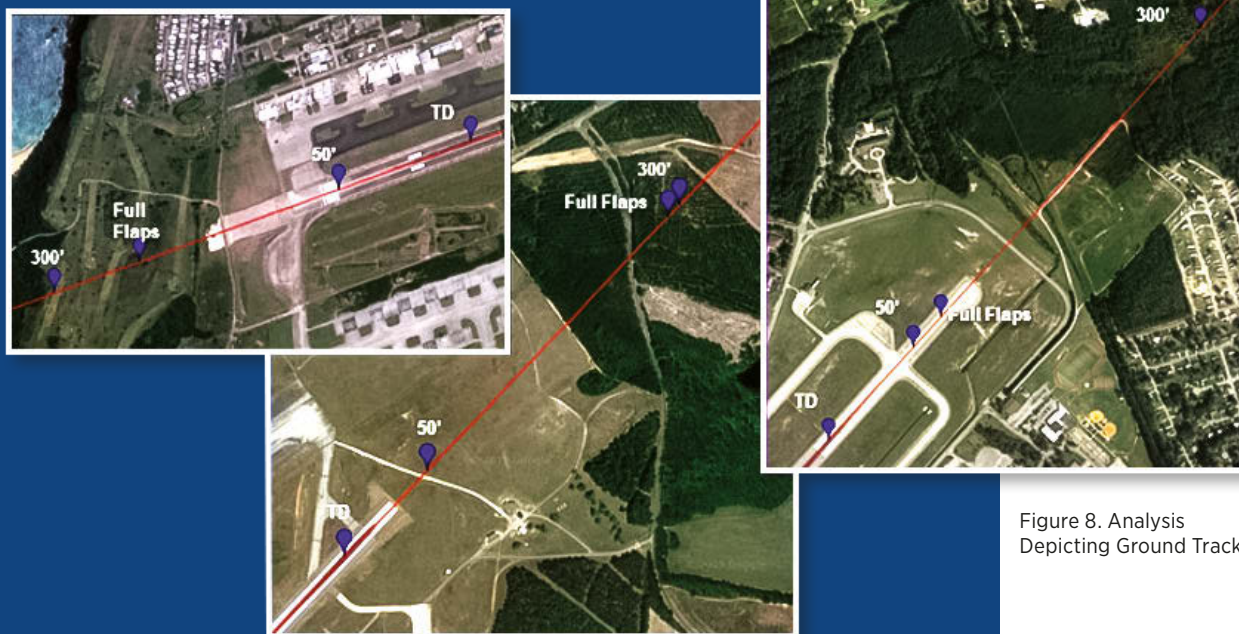


Figure 8. Analysis Depicting Ground Track

that can establish an operational baseline and support the investigation of specific locations during mission planning. The software also enables safety investigation teams to examine both aggregate and singular mission data sets to garner a better understanding of what might have caused a mishap and provides commanders at all levels with the capability to assess mission risk and crew proficiency. The MFOQA software allows commanders to measure mission creep to determine if crews are getting too comfortable with the risk associated with their mission and evaluate the success of mitigation efforts. Finally, two-way communication is essential to improving the analysis and providing the MFOQA analysts with issues that are important to the field.

Until we can meet in person,
Fly Safe! 🇺🇸

Safety

Is a Risk Management Program

BY MR. KEVIN SLUSS, CSP,
AMC RISK MANAGEMENT PROCESS MANAGER



Is safety a risk management program? Although many of you may have thought the opposite was true, the answer is “Yes,” according to an excellent presentation given by Eric Brenkert at the Air Force Academy earlier this year.¹ Essentially, everyone’s job is due to some type of risk management. We have legal risk, so we have a Staff Judge Advocate to manage it. We have operations risk, logistics risk, medical risk, and more—making it necessary for many people to have jobs and training in those areas to manage that risk. No matter how well you know the risk management process—the four tenets, the four goals, the five essential concepts, the four “does nots,” the four

principles, the two levels, the five steps (hopefully, you remember the five steps from the fundamentals video) it does not help if you do not use it.

Can you find ways to make risk management part of your daily job? We all accept risk, every day, in all our activities, but perhaps we are not aware of doing so. For leaders, the question should be, “Is risk being accepted at the appropriate level?” Are junior people making risk decisions for the sake of accomplishing the mission without the insight from higher levels of leadership or the resources those people can provide?

No one can remove all risk from activities; however, practicing sound risk management can instill confidence when one learns the skill of weighing benefits against

potential losses. Repeating the process improves decision-making skills. Often, presenting options or courses of action to leaders, detailing the risks involved for each, provides leadership with more informed decision-making abilities.


Some of the best practices I have seen in Air Mobility Command (AMC) units include the following: Commanders are involved, either by regular notifications or by signing the deliberate risk assessment worksheets. All or most worksheets are reviewed (not written) by the wing risk manager or alternate for thorough hazard analysis and effective controls. The wing risk manager keeps copies of the deliberate risk assessments as examples. The wing commander has established a general policy on risk management assessments that directs

¹ Mr. Brenkert’s presentation can be found at: <https://www.my.af.mil/gcss-af/USAF/content/usafarm>.

Using tools in the high-risk activities program can reduce risk to personnel, especially in off-duty activities.

group-level approval for medium-risk activities or when the event involves multiple squadrons and wing-level approval for high or extremely high risk. Risk assessments are completed by a process expert, typically the front-line supervisor.

Using tools in the high-risk activities program can reduce risk to personnel, especially in off-duty activities. Some examples of these activities include flying civil aircraft, hang gliding, skydiving, parasailing, white-water rafting, motorcycle and

auto racing, scuba diving, bungee jumping, bronco and bull riding, and extreme sports. Commanders should interview participants as they identify themselves and review the training in the activities to include safety procedures and personal protective equipment. AMC provides templates to aid and document discussion on our Risk Management page on the Air Force portal.² 

² AMC Risk Management page can be found at <https://www.my.af.mil/gcss-af/USAF/content/AMCRM>.

Risk Assessment Matrix				PROBABILITY				
				Frequency of Occurrence Over Time				
				A Frequent (Continuously experienced)	B Likely (Will occur frequently)	C Occasional (Will occur several times)	D Seldom (Unlikely; can be expected to occur)	E Unlikely (Improbable, but may occur)
SEVERITY	Effect of Hazard	Catastrophic (Death; Loss of Asset, Mission Capability, or Unit Readiness)	I	EH	EH	H	H	M
		Critical (Severe Injury or Damage; Significantly Degraded Mission Capability or Unit Readiness)	II	EH	H	H	M	L
		Moderate (Minor Injury or Damage; Degraded Mission Capability or Unit Readiness)	III	H	M	M	L	L
		Negligible (Minimal Injury or Damage; Little or No Impact to Mission Capability or Unit Readiness)	IV	M	L	L	L	L
				Risk Assessment Levels				
				EH = Extremely High H = High M = Medium L = Low				

Accelerating Change Leads to National Safety Council Rising Star of Safety

BY MS. JESSIE PERKINS,
AIR FORCE SAFETY CENTER PUBLIC AFFAIRS

On September 26, SMSgt Victorio Gutierrez, Wing Safety Superintendent, Spangdahlem Air Base, Germany, was one of 38 people recognized by the National Safety Council as a Rising Star of Safety for 2021.

The National Safety Council is a nonprofit organization whose mission is to eliminate preventable deaths at work, in homes and communities, and on the road through leadership, research, education and advocacy. The Council has given the award to one Air Force officer or enlisted member each of the 12 years since its inception.

According to the NSC, the program “showcases safety ‘stars’ with a proven track record of workplace safety, leadership and dedication to continuous improvement.” The NSC formally recognized Gutierrez’s contributions to safety in the September issue of *Safety + Health* magazine.



SMSgt Victorio Gutierrez, Wing Safety Superintendent, holds a falcon used by the base falconer to support the Bird and Wildlife Aircraft Strike Hazard program at Spangdahlem Air Base, Germany.

USAF photo courtesy of
SMSgt Victorio Gutierrez

When Air Force Chief of Staff Gen Charles Q. Brown, Jr. released his strategic approach of “Accelerate Change or Lose” and accompanying action orders in 2020, service members set their sights on shaping the future through rapid change in order to remain the most dominant and respected Air Force in the world. Gutierrez has embraced this ideology by making some big changes and revisions to the heart of road safety in Europe and beyond.

Gutierrez sticks to his daily motto of “Mission is our priority, safety is our value.”

“In the Air Force, priorities change rapidly due to mission accomplishment; values, on the other hand, do not change,” he said. “When a culture, wing, or Airman values

safety, then it continually supports the mission’s priorities.”

The NSC’s *Safety + Health* magazine stated in this year’s announcement, “Sgt Gutierrez values helping others become better professionals and Airmen. He understood the greatest hazard to Airmen living and working in Europe is driving. Under his leadership, he organized winter vehicle inspections and hands-on local driver’s improvement training for high-risk demographic Airmen, in addition to managing the USAF Europe’s only ‘Skid-Car’ training program, teaching new drivers techniques with

operating vehicles in icy conditions. The combined efforts have led to 1,500 airmen trained and reduced traffic-related mishaps by 22 percent."

Gutierrez began his Air Force career in aircraft maintenance seven years before cross-training into safety. "The most memorable part of my career was the day I got to cross-train into the safety career field," he said. "I didn't become an Airman until I cross-trained, then I really saw the bigger picture of the Air Force. In maintenance I was in my little world, safety opened every door for me."

In-addition to the Skid-Car program, another notable accomplishment that led Gutierrez to receiving the award included working with Airmen to create the command's first manual-transmission driver's course.

"For a period of time, there was an increase in privately owned and government vehicle mishaps due to lack of training in driving a manual transmission vehicle," Gutierrez said. "We took a used five-speed car, trained instructors to teach others, and then designed measurable training material."

He mentioned that this helped Airmen with learning the skill, giving them the ability to feel comfortable when operating a manual-transmission vehicle.


Part of the award also recognizes the real-life efforts of engaging peers to transform safety culture both on and off the job. During his deployment to Afghanistan, Gutierrez established a PersonVue test site to complete the Associate Safety Professional and Certified Safety Professional credentials, which afforded other safety professionals the capability to test in austere environments. He then mentored five subordinates to certification success by organizing study materials and methods, writing

articles, and creating training, which eventually led to Air Force funding of online credentialing opportunities for future safety professionals.

"Gutierrez is always bringing up the people around him," said CMSgt James Yerger, the major command safety functional manager, U.S. Air Forces in Europe and Air Forces Africa. "He was always the person I trusted and someone I could talk to in depth about anything."

Yerger said that he and Gutierrez "were each other's sounding boards," discussing everything from complex combat scenarios involving risk management during deployments to the intricacies of building relationships with other components of the Air Force.

"He is always the safety professional that brings more to the table, he always gave a unique perspective during all of our after-action reviews, and he is a great example for others to follow when looking at how to establish relationships with other components of Air Force in order to accomplish the mission," said Yerger.

"Being recognized by the NSC spotlights one of our many outstanding safety Airmen who exemplify what we look up to in the profession; it is always an honor to have Air Force safety leaders and their contributions recognized," said CMSgt Kevin James, the safety career field manager for the Department of the Air Force. "All of us here at the Air Force Safety Center and across the safety enterprise send our congratulations to SMSgt Gutierrez." 



SMSgt Victorio Gutierrez, working in aircraft maintenance before cross-training into safety.

USAF photo courtesy of
SMSgt Victorio Gutierrez



Jerry Winburn, a contractor at Bagram Airfield, Afghanistan, and MSgt Victorio Gutierrez talk with 455th Expeditionary Civil Engineer Squadron Airmen about the hazards of working in deep trenches and holes at Bagram Air Base, Afghanistan, June 24, 2017.

USAF photo by Capt Keenan Kunst



Weapons Safety Managers Find the Best Solution Through TEAMWORK

BY MR. FRANK ENDAYA, MR. JUSTIN TAYLOR, AND MR. LANCE FRASIER,
628TH AIR BASE WING WEAPONS SAFETY MANAGERS

It started with a phone call from the Logistics Readiness Squadron (LRS) Commander to Weapons Safety Managers (WSMs). The WSMs were on a fact-finding mission to assess if Joint Base (JB) Charleston, SC, could support the 82d Airborne Division (ABN) while the Pope Army Airfield, NC, flightline was under construction for repairs. The 82 ABN's mission is a Secretary of Defense initiative to strategically deploy the 82d to secure key objectives for follow-on military operations supporting U.S. national interest. JB Charleston and the 82 ABN team collaborated to assess if JB Charleston was a viable option and, consequently, through research, deemed it the best choice by the 82 ABN.

After conversations with the LRS/ Mission Support Group Commanders,

WSMs assessed explosive storage sites, operations sites, and explosive-cargo-loaded aircraft sites. JB Charleston is tightly encumbered by civilian development 360 degrees around the installation. The maintenance squadron's munitions storage area comprises only five multicubes and an operating facility limited to 48 lbs of hazard division (HD) 1.1. The Aerial Port Squadron's (APS's) munitions storage area comprises three butler buildings and an operating location, with a total explosive limit of 30K lbs of HD 1.1. The C-17 parking apron has 54 parking spots and is limited to HD 1.3 and 1.4. The APS munitions storage is limited to only two hot cargo pads (HCPs), each sited for 30K lbs of HD 1.1. Consequently, JB Charleston contains minimal explosives storage space.

To assess whether JB Charleston would be capable of temporarily supporting the 82 ABN, WSM considered (1) What type of munitions would need to be stored there—what are the National Stock Numbers (NSNs) or Department of Defense Identification Codes (DoDICs)? (NSN/DoDICs identify the type of ammunition that would need to be stored); and (2) How much of these assets are WSMs being asked to manage? The reason for those questions is to determine the total net explosive weight quantity distance (NEWQD). WSMs use NEWQD to determine potential quantity distance violations from potential explosive sites to exposed sites. During the fact-finding process, the answers to questions 1 and 2 changed several times because 82 ABN war planners were assessing potential targets. WSMs worked with the 82 ABN Munitions

This gesture of teamwork and comradery between the services was a key enabler moment in the success of the munitions storage process.



Accountability Systems Officer-equivalent responsible for inventory and movement of their munitions.

When the total NEWQD was finally determined, it was apparent that JB Charleston did not have enough explosive storage capability for the 82 ABN's needs. Thank goodness for Navy Munitions Command Atlantic (NMCLANT). NMCLANT is a tenant unit at Joint Base Charleston situated in a geographically separated location at Naval Weapons Station Charleston, and the primary user of the earth-covered magazines on the Weapons Station. NMCLANT agreed to work with the 82 ABN and 628th Air Base Wing WSMs to use nine earth-covered magazines. This gesture of teamwork and comradery between the two branches of the military was a key enabler moment in the success of the


munitions storage process. To help expedite the outload process of ammo, mixed ammo compatibility, WSMs redefined the earth covered magazines to basic load ammunition holding areas (BLAHAs). WSMs proposed the redefinition to BLAHAs (event waiver) to unit commanders and the 628 ABW Commander (CC). The package was drafted, coordinated, and signed by the 628 ABW/CC, and the 82 ABN bulk ammo storage sites were defined.

In addition to ammo bulk storage, the 82 ABN has the division ready cage (DRC) assets required to be in close proximity to outbound aircraft. WSMs worked with the JB Charleston airfield manager and the operations group (OG) to redefine HCP Spot-42 to house DRC assets. HCP Spot-42 was redefined, and an assessment was conducted to ensure established restrictive easements were not violated. The waiver was drafted, coordinated, and signed by the 628 ABW/CC, and the 82 ABN DRC storage site was defined.

The 82 ABN IIA (individual issue ammunition) site is where the Army issues ammo to their troops and loads their vehicles with explosives for the operating site. Personnel and vehicles are then loaded into an aircraft to complete their missions. Several options were considered during the IIA fact-finding process, and eventually, WSMs and commanders found a suitable site. For the IIA site to be a viable option, however, because of the potential hazard imposed by explosives, the risk mitigation was for only "mission-critical" personnel to report to JB Charleston during real-world operations and divert

non-82 ABN traffic to the front gate. JB Charleston back-gate traffic was restricted to the 82 ABN. WSMs drafted, coordinated, and presented the IIA event package to the 628 ABW/CC, the IIA package was signed, and the 82 ABN operations site was defined.

WSMs worked with the 82 ABN load planners to determine the "high-water mark" for explosives loaded onto aircraft to create the explosive loaded cargo aircraft site. That value was 1,708 lbs. WSMs rounded the amount to 1,710 lbs of NEWQD. As events unfolded and for the outload process to be more dynamic, WSMs defined the limiting factor (exposed site) and the aircraft explosives cargo parking area (AECPA) for 4K lbs of NEWQD of HD 1.1. AECPA had the cubic space to load four C-17s in the defined area. To give commanders other viable options to load explosives into aircraft, WSMs assessed HCP Spot-41. In addition, they assessed another explosive cargo aircraft spot on Taxiway Lima. The event waiver packages were drafted and coordinated through the 628 ABW/CC and the 82 ABN explosive cargo loaded aircraft sites were defined.

N-Hour is the Army's terminology for real-world operations start time. This point is the moment when the theories that were written into plans are executed and—because JB Charleston was blessed with talented individuals in key positions who were supported by outstanding commanders, and the plans were accomplished by exceptional Army, Navy, and Air Force personnel—JB Charleston was able to effectively perform as the Secretary of Defense projection platform for the 82 ABN in support of national interest. 

FY21 Air Mobility Command ANNUAL SAFETY AWARD WINNERS AND DEPARTMENT OF THE AIR FORCE NOMINEES

AMC Director of Safety Special Achievement

60 AMW Safety Office
Travis AFB, CA*

AMC Safety Civilian Professional of the Year

Mr. Hector S. Alcazar
436 AW/SE, Dover AFB, DE*

AMC Safety Noncommissioned Officer of the Year

TSgt Jessica M. Deal
19 AW, Little Rock AFB, AR*

AMC Safety Senior Noncommissioned Officer of the Year

MSgt Raymond Soto Rodriguez
92 ARW, Fairchild AFB, WA*

AMC Safety Officer of the Year

Maj Stephen W. Saam
436 AW, Dover AFB, DE*

Koren Kolligian Jr. Trophy

Capt Caitlyn M. Higgins
92 ARW, Fairchild AFB, WA*

AMC Director of Safety Aircrew of Distinction

Crew of RCH 871
6 AS, 305 AMW
Joint Base McGuire-Dix-Lakehurst, NJ*

AMC Director of Safety Aviation Maintenance Safety

437 MXS, Accessories Flight
Joint Base Charleston, SC*

AMC Flight Safety NCO of the Year (AMC-Level Award Only)

TSgt Sebastian J. Schmidt
43 AMOG/SEF, Pope Army Airfield, NC

Aero Club Safety Certificate

Dover Air Force Base Aero Club
Dover AFB, DE*

AMC Outstanding Achievement Award for Occupational Safety, Category II

92 ARW Occupational Safety
Fairchild AFB, WA*

AMC Outstanding Achievement Award for Occupational Safety, Category III

6 ARW Occupational Safety
MacDill AFB, FL*

AMC Outstanding Achievement Award for Occupational Safety, Category IV

89 AW Occupational Safety
Joint Base Andrews, MD*

AMC Director of Safety Weapons Safety Award

TSgt Michael T. Kohrs
19 AW/SEW, Little Rock AFB, AR*

AMC Risk Management Achievement Award (AMC-Level Award Only)

1 Lt Adrian C. Hall
92 ARW/SE, Fairchild AFB, WA

AMC Safety Office of the Year (AMC-Level Award Only)

62 AW Safety Office
Joint Base Lewis-McChord, WA

AMC RiderCoach of the Year (AMC-Level Award Only)

Mr. William N. Mace
92 ARW, Fairchild AFB, WA

AMC Distinguished Motorcycle Safety Award (AMC-Level Award Only)

436 AW Safety Office
Dover AFB, DE

**Denotes AMC Submission to Department of the Air Force Level*

SAFETY OFFICE OF THE YEAR



Front row left to right: Lt Col Nick Disney, Mr. Ken Heath, MSgt Trent Lackey, TSgt Anthony Cazares, Mr. Steve Lopez, TSgt Anthony Coleman, Maj Matt Dewey, Mr. Laurence Schafer, and MSgt Rob Harp. Back row left to right: Maj Doc Schumacher, Mr. Ryan Meeks, Mr. Bob Schoenberg, TSgt Seth Hansen, TSgt Lonnie Seale, Mr. Tom Thompson, and Maj John Harris.

62d Airlift Wing, Joint Base Lewis-McChord, WA

The 62d Airlift Wing (62 AW), Joint Base Lewis-McChord, WA, led by Col David A. Fazenbaker, has been awarded the 2021 Air Mobility Command (AMC) Safety Office of the Year recognition.

The 62 AW ensured no major mishaps while directing the flight safety for 2,500 missions transporting 80,000 tons of cargo and 170,000 passengers at AMC's busiest joint base (JB).

Overseeing AMC's only nuclear-capable unit, the 62 AW executed eight missions and airlifted 673,000 pounds of nuclear cargo, which was critical to AMC's strategic deterrence mission. The 62 AW aced its nuclear surety inspection with the lowest number of deficiencies in more than a decade. Three teams and six Airmen were recognized as superior performers, and 15 individuals received the

coveted Inspector General coin. The 62 AW's Nuclear Surety Managers conducted 10 annual and 79 spot inspections and identified or corrected 122 discrepancies.

Striving for a safer work environment, the 62 AW led 243 Occupational Safety Division unit and spot inspections, identifying 83 possible weaknesses. Aggressive tracking led to a 90-percent closed rate.



A1C Jovanna Asay, 4th Airlift Squadron Loadmaster, guides cargo onto a C-17 Globemaster III in support of Exercise Rainier War at Hill Air Force Base, UT, on April 26, 2021.

USAF photo by SrA Airman Zoe Thacker

The 62 AW executed 137 aviation investigations, evaluated \$7.3 million in damages, and delivered 10 recommendations. They investigated 127 ground mishaps, 23 of which were reportable. Their overall 5-year rolling average rate was reduced by 35 percent, crushing their reduction goal of 10 percent.

They created and coordinated \$10,000 in funds and equipment for a new Wing Staff Agency training room. By improving the training facility and its capacity, they were able to educate 200 personnel.

The 62 AW provided Class B Investigating Officer and Maintenance members, leading three Line Operations Safety Assessments (LOSA) Safety Investigation Boards, including the first aircraft maintenance LOSA in U.S. Air Force history.

Coordinating Bird Watch Conditions with the Operations Group and Endangered Species Act-compliant airfield maintenance with the

Directorate of Public Works and the United States Fish and Wildlife Service (USFWS), the 62 AW decreased bird strikes by 16 percent and earned the Air Force Chief of Safety Special Achievement Award.

The 62 AW ensured joint service explosives readiness by identifying and rectifying critical Explosive Ordnance Disposal response. They also managed 107 Explosives Site Plans, 12 explosives facilities licenses, and 153 munitions store sites and trained 22 additional Weapons Safety Representatives.

They conducted 42 spot inspections on four units, mended three program infractions, and enabled 62 AW units' uninterrupted munitions mission capabilities.

The 62 AW originated Air Force Instruction 91-202 Annual Program Management Review, analyzed 480 trends against four overall program goals, and were awarded the highest possible rating.

They delivered safety expertise vital to sustained joint force combat readiness by overseeing two Joint Special Operations Command Close Air Support ammunition exercises.

By revitalizing 62 AW Quarterly Safety Boards and Training Review Panels, seven briefs with mishaps, the Aviation Safety Action Program, and Bird/Wildlife Aircraft Strike Hazard (BASH) reviews, they decreased Aviation Ground Operation mishaps by 14 percent and injuries by 25 percent.

They developed Midair Collision Avoidance for Washington's major hotspot, trained 50 military and civilian engineers on C-17A operations, and deconflicted 433,000 aircraft.

Leading JB Biological Opinion, they represented the Department of Defense with USFWS, the Directorate of Public Works, and the Federal Aviation Administration. The 62 AW also validated a Concept of Operations, avoiding a \$20,000 BASH flaw. 🇺🇸

AMC's Annual Individual and Team Safety Award Winners

DIRECTOR OF SAFETY AIRCREW OF DISTINCTION



Top row, left to right: SrA Richard Johnson, Flying Crew Chief, 305th Aircraft Maintenance Squadron (AMXS); Capt Cory Jackson, First Pilot, 6th Airlift Squadron (AS); Capt Mark Lawson, First Pilot, 6 AS; SSgt Derek Laurent, Flying Crew Chief, 305 AMXS. Bottom row, left to right: AIC Nicolas Baron, Loadmaster, 6 AS; Lt Col Eric Kut, Instructor Aircraft Commander, 6 AS; and TSgt Justin Triola, Loadmaster, 6 AS.

REACH 871

6th Airlift Squadron, Joint Base McGuire-Dix-Lakehurst, NJ

THE CREW OF REACH 871, 6th Airlift Squadron, Joint Base McGuire-Dix-Lakehurst, NJ, executed the single largest evacuation in the history of the C-17 by safely flying 823 Afghan civilians out of the hostile Kabul International Airport (HKIA). Twelve hours later, the crew delivered 231 additional U.S. forces to HKIA and evacuated another 297 Afghans on their return leg, earning them the 2021 Air Mobility Command (AMC) Director of Safety Aircrew of Distinction Award.

The crew believed they were on a routine noncombatant evacuation mission to HKIA. Shortly after landing, however, the airfield perimeter was breached, and thousands of Afghan civilians flooded the field. Air Traffic and Ground Controllers directed all aircraft to evacuate, declared the field lost, and evacuated the control tower. In response, the crew executed the Ground Evacuation Checklist and secured all classified materials. As the crew attempted to evacuate the aircraft, thousands of Afghan civilians engulfed the C-17, seeking sanctuary amid gunfire and blocking all aircrew exits. Reach 871 immediately realized evacuation was not an option. The Aircraft Commander and Primary Loadmaster secured and organized the cargo compartment,

overflowing with 823 vulnerable Afghans. The copilots immediately secured the cockpit and readied the aircraft for engine start and evacuation. The crew quickly started the engines and assessed runway and airspace security. They maintained exceptional situational awareness, determined a safe window to take the runway, and executed a maximum performance departure using night vision goggles while avoiding small arms fire and mountainous terrain. The crew worked as a team to provide care and comfort for the Afghans while coordinating security and medical support at their destination.

The crew evacuated 1,120 people during two missions. Their record-breaking transport of 823 Afghans directly led to the AMC Commander increasing future floor loading operations from 300 to 450 personnel, ultimately resulting in the historic evacuation of 123,000 Afghans, Americans, partners, and allies. The crew's compassion demonstrated toward their passengers was captured when a photograph of a loadmaster's blouse covering an Afghan child went viral, changing the strategic narrative of the evacuation for the American public and garnering significant support for the U.S. military operation.

AMC DIRECTOR OF SAFETY SPECIAL ACHIEVEMENT AWARD



Left to right: Mr. Michael Jeffery, MSgt Daniel Torrio, Lt Col Brandon Stock, SSgt Alan Villegas, SSgt Victor Gould, Capt Andrew Parris, and Mr. Billy Sewell.

60th AIR MOBILITY WING SAFETY OFFICE

Travis Air Force Base, CA

THE 60th AIR MOBILITY WING SAFETY OFFICE, Travis Air Force Base, CA, led by Col Corey A. Simmons, earned the 2021 Air Mobility Command (AMC) Director of Safety Special Achievement Award.

The team's safety program safeguarded AMC's largest wing, supporting 57 units, 278 buildings, 445 riders, 16,000 personnel, 58 aircraft, 27,700 flight hours, and a \$12 billion base.

They earned the highest Unit Effectiveness Inspection rating when their performance, compliance, and readiness were evaluated.

The team was selected for the first-ever C-17 Line Operations Safety Audit Safety Investigation Board. They bolstered the Airman Safety Action Program for 30,000 maintenance members and developed 27 recommendations for the Mobility Air Force (MAF) fleet, which the AMC combat capability program adopted.

They directed a \$363,000 Bird/Wildlife Aircraft Strike Hazard Plan rewrite and synchronized it with the United States Department of Agriculture, the Navy, and 16 squadrons, ensuring Joint Chiefs of Staff alert missions and safeguarding four Mission Design Series fleets worth \$8.5 billion.

They oversaw AMC's first drone safety program and codified the process, management, and oversight for the \$100,000 program, setting the MAF small Unmanned Aerial Vehicle integration standard.

They conducted 39 Motorcycle Safety Representative Hazard Identification Tactics, Techniques, and Procedures and developed a brief for 445 bikers, increasing Travis Air Force Base's compliance by 33 percent.

The team captured 328 hours of professional development and mastered 100 percent Continuing Education Units. As a result, safety readiness surged by 95 percent and saved \$369,000.

They steered "Focus Month," crafting a 16-point plan, leading 323 trainings for 4,300 Airmen and mitigating 238 risks.

The team oversaw Aviation Operational Risk Management, enabled Rapid Global Mobility, and delivered 3,484 passengers in support of Operation Allies Refuge.

The team pioneered a new Supervisor Safety Training lab, certified three instructors, and mentored 11 peer wings; the program was adopted by the Air Force Safety Center. They validated \$85 million in contracts and enabled eight Central Command priorities with a 40-percent risk reduction.

The team led three Occupational Safety and Health Administration (OSHA) inspections, benchmarked the first COVID-19 National Emphasis Program, and hosted three OSHA Training Institute courses.

AMC DIRECTOR OF SAFETY AVIATION MAINTENANCE SAFETY AWARD



Left to right: TSgt Levi J. Lehfeldt, Aircraft Fuel Systems Section Chief; MSgt Tyler D. Miller, Aircraft Electrical and Environmental Section Chief; MSgt Gerardo Valdez Jr., Accessories Flight Chief; Capt Christopher W. Puckett, Accessories Flight Commander; SMSgt Griselda Z. Criddell, (former) Accessories Flight Superintendent; MSgt John W. Bennett, Aircraft Hydraulic Systems Section Chief; and SMSgt Joshua Boor, Accessories Flight Superintendent

437TH MAINTENANCE SQUADRON, ACCESSORIES FLIGHT Joint Base Charleston, SC

THE 437th MAINTENANCE SQUADRON, led by Major Ian F. Mazerski, Joint Base Charleston, SC, has won the 2021 Air Mobility Command (AMC) Director of Safety Aviation Maintenance Safety Award.

The team led 85 personnel for 64 Home Station Checks, corrected 425 pilot reported discrepancies, performed 4,000 maintenance actions, and keyed 9,000 missions, supporting 13,000 cargo tons and 28,000 flight hours.

They safeguarded 49,000 AMC Airmen with updated fleet standard operating procedures, revamped the fleet's safety program, overhauled Job Safety Training Outlines, and aligned 14 action items with Occupational Safety and Health Administration standards, achieving zero defects when reviewed.

They partnered with Edwards Air Force Base, CA, to author a B-21 confined-space program and primed the Air Force's newest bomber.

The squadron partnered with the AMC A4 Logistics, Engineering, and Force Protection Directorate to develop the first entry plan, which was adopted fleetwide.

In liaison with Boeing, they led the Nose Wheel Steering Time Compliance Technical Order (TCTO) process and repaired 38 aircraft, averting further nose landing gear failures. They amended TCTOs, optimizing procedures and safety directives, reducing fleet downtime by 16,700 hours.

The team created a hydro filter cart model, eliminating lifting mishaps and earning them a Spark Tank 2021 nomination.

They resolved safety-of-flight concerns and coordinated a logistics team with the Tanker Airlift Control Center. The team recovered Air National Guard C-17s within 4 hours and resolved the vulnerabilities of 229 C-17s.

They maximized airfield operations, supported 96 mishap-free C-17 missions, transported 3,000 82d Airborne infantrymen, resealed Kabul International Airport, and evacuated 124,000 personnel.

As safety warriors for the 379th Air Expeditionary Wing, they scrutinized repeat cabin pressure in-flight emergencies, identified pilot checklist ambiguities, and avoided urgent technical order changes. Responding to the Secretary of Defense's mission, the team keyed bilateral talks with the Afghan president and replaced a shorted fuels breaker to avoid an in-tank fire.

They liaised with Boeing, performing root cause analysis for recurring compressor fails, thereby increasing onboard inert gas generating system reliability.

They won the Lance P. Sijan Leadership Award and the Wing Airmen and Noncommissioned Officer Federal Employee of the Year for their training of first responders and conduction of fire suppression foam evacuation exercises.

AMC DIRECTOR OF SAFETY WEAPONS SAFETY AWARD

TSGT MICHAEL T. KOHRS

19th Airlift Wing,
Little Rock Air Force Base, AR

TSGT MICHAEL T. KOHRS, Wing Weapons Safety Manager, 19th Airlift Wing, Little Rock Air Force Base, AR, has received the 2021 Air Mobility Command Director of Safety Weapons Safety Award.

Kohrs led the only wing weapons safety program, oversaw 11 squadrons with zero mishaps, and guarded \$1.2 billion in assets and a \$510 million munitions stockpile. He mastered Senior Enlisted Joint Professional Military Education, raised joint knowledge and operational readiness, and ingrained safety doctrine during a Combined Joint Task Force-Horn of Africa site visit.

He managed the Air Force Safety Automated System, closed 14 inspections, and cleared two hazards.

Kohrs oversaw combat aircraft parking apron event waiver (EW), managing risk for a \$2 million apron and hangar project. He published the Manda Bay Airfield, Kenya, EW plan and liaised with the Army Ground Force Commander to remove high explosives.

He facilitated the first Contingency Support Location Explosive Site Plan, analyzed explosive safety siting quantity-distance requirements, and sited 16 explosive operating locations in four countries plus six forward operating locations (FOLs).

Kohrs synchronized with the 86th Airlift Wing's GeoBase team and supplied explosive arcs, routes, and net explosive weight for potential explosive sites. He created the first base explosive map for Air Forces Africa.

He verified the Nuclear Certified Equipment program, validated Master Nuclear Certification List status for



37 vehicles and four countries, certified \$5.4 million in Africa Command assets, and had no Dull Sword reports.

Kohrs drove a Master Hazard Abatement Plan Environmental, Safety, and Occupational Health Council brief and executed \$10.4 million in civil engineering projects.

He fixed SharePoint and synchronized weapons programs. He protected counter-violent extremist organization operations for Africa.

Kohrs fueled the wing weapons safety (SEW) program and trained 24 additional duty weapons safety representatives. He also partnered with Civil Engineer Readiness Division geographers and calculated explosive arc distances for three FOLs, synchronizing plans with SEW rules.

He revitalized the electromagnetic radiation safety survey, protecting an \$8 million defensive arsenal.

Kohrs hand picked the wing risk manager and advised of threats. He enabled 3,000 safe missions, 31,000 fleet hours, and one enemy killed in action, guarding 1,500 warriors.

SAFETY OFFICER OF THE YEAR

MAJ STEPHEN W. SAAM

436th Airlift Wing,
Dover Air Force Base, DE

MAJ STEPHEN W. SAAM, Flight Safety Officer, Dover Air Force Base, DE, was named the 2021 Air Mobility Command Safety Officer of the Year.

As the acting Chief of Safety, Saam led an eight-person occupational, weapons, and flight safety team through three exercises, solidifying the wing commander's safety program.

He led the National Commission on Aviation Safety visit, helping to inform the Department of Defense regarding their budget of more than \$700 billion. He protected 2,000 personnel and aircraft valued at \$8.4 billion by identifying a maintenance mishap increase, clearing a hazard backlog, and briefing a trend analysis to Maintenance Group leadership.

Saam directed the development of a motorcycle mentorship program, managed the Wing Flight Safety Program, and crafted the wing's Safety Investigation Board plan.

He developed a no-notice mass flight safety brief, directed 12 airfield inspections, corrected 15 flight hazards, and overhauled an airfield driving program. He prevented future aviation mishaps by supervising 51 flight investigations and issuing eight recommendations with two technical order changes.

Saam was the key lead in negotiating a \$256,000 wildlife management contract with the United States Department of Agriculture, addressing the threat from



900,000 migratory geese for an \$8.4 billion fleet, and guided an osprey removal project.

He led Wing Fly Safe briefs and addressed six Class A mishaps and Military Flight Operations Quality Assurance and Airman Safety Action Program trends. He created 629 multi-capable Airmen by steering a safety review for the wing's first combat training course and advising on weapons and chemical gas deployment risk management (RM).

Saam was the lead investigator for 10 mishaps worth \$1.5 million; supervised a hazard abatement program, identifying 27 hazards worth \$15.5 million in contracts; and closed five Risk Assessment Codes, securing \$270,000 for aging infrastructure.

He coordinated a high-priority Allied Forces North Europe tasking and surveyed and advised a combat aircraft parking area site for 10 fighter aircraft, priming the 436th Airlift Wing for presidential security operations.

He averted biological hazard exposure by initiating an Afghanistan evacuation C-17 cleanup process and coordinating RM with five units to create a master entry plan addendum.

FLIGHT SAFETY NCO OF THE YEAR

TSGT SEBASTIAN J. SCHMIDT

43d Air Mobility Operations Group,
Pope Army Airfield, NC

TSGT SEBASTIAN J. SCHMIDT, Flight Safety Noncommissioned Officer (NCO) of the 43d Air Mobility Operations Group, Pope Army Airfield (PAAF), NC, has been named the 2021 Air Mobility Command (AMC) Flight Safety NCO of the Year.

While deployed to Africa, Schmidt revamped three base safety programs and fortified the building partnership capacity with the Niger Armed Forces.

PAAF's runway will reopen on time after a \$91 million runway replacement project, thanks in part to a safety program Schmidt led for AMC's second-busiest airfield.

He directed three wing-level program assessments at Naval Air Station Sigonella, Italy, identifying two deficiencies and four hazards. Schmidt wrote six recommendations, correcting a 2-year delinquency in the process.

Schmidt elevated airfield depredation capability by 50 percent when he built a weapons safety program forging standard operating procedures.

He guided three 82d Airborne Division deployment readiness exercises, supporting 277 missions with 636 cargo tons and 12,000 passengers.

Schmidt tackled three programs and 28 tasks, overseeing occupational and flight safety, eliminating a 50-percent manpower deficit.

He instructed a training class about C-17s, C-130s, and C-5s, provided system training for 27 fire department personnel and elevated emergency procedure qualification by 36 percent. He taught three maintenance Bird/Wildlife Aviation Safety



Hazard reporting courses, enabling 132 Special Assignment Airlift Missions and 497 Joint Airborne/Air Transportability Training missions.

Schmidt advanced a \$166 million Army Special Operations Aviation Division mission and was key to the safe execution of 656 intelligence-surveillance-reconnaissance deployments.

He revitalized the geographically separated unit flight safety inspection program. He identified deficiencies and coordinated six memoranda of agreement with two host installations, tripling their evaluation rates.

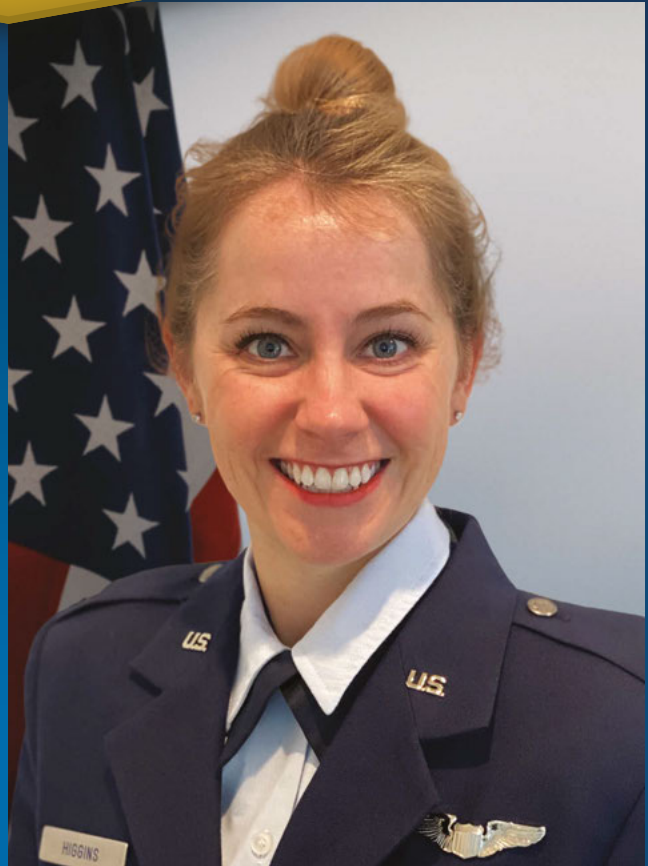
Schmidt earned 11 credit hours for completing five Community College of the Air Force courses. He graduated from the 40-hour Senior Enlisted Joint Professional Military Education I course, maintaining a 3.8-grade point average as he worked toward his completed degree.

He led the Crash Damaged or Disabled Aircraft Recovery response for a disabled C-208 and crafted a nose landing gear support brace to reset the international airport to be fully mission capable in less than 2 hours.

KOREN KOLLIGIAN JR. TROPHY

CAPT CAITLYN M. HIGGINS

92d Air Refueling Wing,
Fairchild AFB, WA



CAPT CAITLYN M. HIGGINS, 92d Air Refueling Wing, Fairchild Air Force Base, WA, is the Air Mobility Command Koren Kolligian Jr. Trophy recipient for 2021.

During multiple compounding emergencies on a flight to deliver a KC-135R Stratotanker to depot maintenance, Higgins showed great poise and leadership under pressure in leading her crew. An electrical system malfunction became apparent on the takeoff roll. The aircraft had just passed the point of no return and the crew was committed to taking the stricken aircraft airborne. Normal and emergency technical procedures were executed as the crew worked through the multi-aircraft-system electrical failure. The control panel indicated the loss of the No. 3 bus tie breaker, disconnected No. 1 and No. 2 generator circuit breakers, and inoperative horizontal situation indicators and attitude directional indicators (ADIs).

Higgins reacted quickly by directing the crew to set up a circular orbit and maintained visual reference to the field, relying solely on the standby compass and ADI. During the establishment of the orbit, the pilot attempted to clean up the aircraft, leading to the copilot's immediate recognition of a possible split flap situation, preventing the aircraft from entering an uncontrolled rolling flight control configuration. After manually lowering the flaps, the boom operator discovered pooling hydraulic fluid in the boom sighting window, leading to an evaluation of whether the crew would be landing with working hydraulics. The crew executed a visual approach to the runway and safely landed at a full stop. Higgins' in-depth systems knowledge and decision-making skills ensured that no crew members were injured and that the aircraft was recovered to its home station without incident.

RIDERCOACH OF THE YEAR

MR. WILLIAM N. MACE

92d Air Refueling Wing,
Fairchild AFB, WA



MR. WILLIAM N. MACE, Fairchild Air Force Base, WA, was named the Air Mobility Command (AMC) RiderCoach of the Year for 2021 for his work in ensuring motorcycle safety.

Mace was the lead instructor for the world's largest tanker base of 4,600 Total Force Integration (TFI) members, trained 12 Motorcycle Safety Foundation (MSF)-certified coaches, and expanded AMC's top two-wheeled private motor vehicle (PMV-2) program. He molded the TFI program and incorporated civil and Air National Guard instructors with a joint driving range. He also enabled onsite motorcycle training to eliminate a 150-mile drive for trainees.

Mitigating 25-percent overdue training, Mace restored the Basic Rider Course 2 Updated (BRC2U) to pre-COVID-19 standards and

coordinated and assisted with three courses, clearing a backlog of 29 riders awaiting training.

Mace optimized safety distribution, ensured the execution of critical preseason briefing, and dominated the Air Force Safety Center's 100-percent contact campaign goal.

Averting \$36,000 in outsourcing training costs, Mace led instructor certification courses, resulting in six Rider Coaches becoming MSF-certified and secured BRC2U courses on base.

A safety operations defender, Mace keyed in proper Tires and Wheels, Controls, Lights and Electrical, Oil and Fluids, Chassis and Side stand procedures to Rider Coaches and student riders. A total of 35 motorcycles were inspected, and there were zero training mishaps.

DISTINGUISHED MOTORCYCLE SAFETY AWARD



The members of the Occupational Safety Team are (from left) Ms. Lorie Bellamy, Occupational Safety Manager; Mr. Tim Hahn, Occupational Safety Specialist; TSgt Bryanna Dahl, Occupational Safety Craftsman; and TSgt Brittany Nowell, Occupational Safety NCOIC.

436TH AIRLIFT WING SAFETY OFFICE

Dover Air Force Base, DE

THE 436th AIRLIFT WING (AW) SAFETY OFFICE, Dover Air Force Base (AFB), DE, led by Col Matthew S. Huseman, garnered the Air Mobility Command's 2021 Distinguished Motorcycle Safety Award.

Their motorcycle safety efforts included innovative training with no Class A or B mishaps.

The office directed the 16th Annual Motorcycle Safety Day and coordinated a runway ride, fortifying training for 113 attendees and increasing training statistics by 20 percent, and hosted a Delaware state trooper, increasing safety awareness for more than 100 riders.

They launched the wing's first motorcycle mentorship program, reducing mishaps from Fiscal Year 2020. They were lauded for developing selection criteria for squadron mentors and conducted a mentorship-morale ride during Safety Down Day, training more than 150 riders. The wing developed a comprehensive mentorship guide, trained 24 motorcycle training representatives on program elements, and created a cadre to prevent future mishaps. They established a mentorship ride risk assessment process, integrated risk management principles at the squadron level, and ensured safe routes for mentorship events.

The office promoted information sharing and safe riding by inspecting 18 squadron programs for 178 riders, identifying 35 deficiencies, and issuing 15 recommendations.

The office worked with the Delaware Department of Motor Vehicles on rider courses and provided three additional Basic Rider Course 2 courses for Dover AFB members, decreasing a 175-rider, 2-year training backlog.

They organized a best motorcycle contest for more than 500 attendees, inspiring enthusiasm for the wing's safety programs.

The office advanced the learning and safety education continuum by guiding the 50-member Green Knights motorcycle club and providing four tutor rides. The 436 AW was lauded for crafting a thorough preseason training program with the Green Knights that reached 178 riders.

They partnered with the State of Delaware to validate training, ensured immediate mishap response, and armed leadership with timely information.

The office revamped the motorcycle safety representative training, providing a unique one-stop shop, enabling 46 representatives to boost Motorcycle Unit Safety Tracking Tool usage from 70 to 90 percent.

The office orchestrated a Tires, Controls, Lights, Oil, Chassis, and Stand demonstration and prepared more than 100 riders for an organized ride, equipping Airmen to inspect bikes.

AMC SAFETY SNCO OF THE YEAR

MSGT RAYMOND SOTO RODRIGUEZ

92d Air Refueling Wing,
Fairchild AFB, WA

MSGT RAYMOND SOTO RODRIGUEZ, Flight Safety Superintendent, 92d Air Refueling Wing, Fairchild Air Force Base, WA, is the 2021 Air Mobility Command Safety Senior Noncommissioned Officer of the Year. He championed safety at the world's largest tanker base, leading a flight safety program for two wings, four major weapon systems, a Total Force Integration team of 4,600, and a \$4 billion fleet.

Rodriguez, the wing's Interim Safety Board Officer Performance Reporter, directed safety investigations supporting 63 KC-135R and T tankers, four UH-1N helicopters, and one C-26 aircraft.

Rodriguez authored an aviation maintenance safety program proposal and certified safe practices for aircraft hot-pit refueling operations.

He oversaw the education of 400 aircrew members in Hazardous Air Traffic Reports, examined a 20-ship minimum interval takeoff plan, and briefed crews on emergency and abort procedures.

He restored the Mid-Air Collision Avoidance program, published the wing's mission pamphlet for civilian pilots, and honed airspace deconfliction with 17 airfields and 110 aircraft.

Rodriguez managed the Airfield Driving Training Program and certified Wing Staff Agency, civilian, military, and U.S. Department of Agriculture (USDA) personnel on airfield operations. He directed a Bird/Wildlife Aviation Strike Hazard plan, reducing bird strikes by 33 percent from Fiscal Year 2020.



He validated Occupational Safety and Health Administration and Department of Defense standards and coordinated assessment for \$170,000 in airfield repairs and \$14 billion in KC-46 support projects. He was awarded Wing Staff Agency Senior Noncommissioned Officer of the Quarter honors for the first quarter for his efforts.

Rodriguez authored 42 resident advocate safety briefings for the Nuclear Staff Assistance Visit and Titan Fury exercises and ensured the wing's successful Nuclear Operational Readiness Inspection execution.

Rodriguez has been the primary Government Purchase Card gatekeeper; he procured \$30,000 in equipment and supplies for wing safety. There were no errors on the Fiscal Year 2021 account surveillance audit.

He counseled a Counter-Small Unmanned Aircraft Systems working group on flight and ground safety requirements.

An Aviation Safety Program Management professional, Rodriguez aced a Research Methods master's degree in science course and applied his skills to safety investigations. He sustained Fairchild's global tanker support.

SAFETY CIVILIAN PROFESSIONAL OF THE YEAR

MR. HECTOR S. ALCAZAR

436th Airlift Wing,
Dover Air Force Base, DE

MR. HECTOR S. ALCAZAR, Explosives Safety Specialist for the 436th Airlift Wing (436 AW), Dover Air Force Base, DE, has been recognized as the 2021 Air Mobility Command Safety Civilian Professional of the Year. His vision for the 436 AW is to make it the "World's Premier Airlift Wing."

He has been a key advisor on Combat Arms Training and Maintenance range ballistics hazards. He secured \$188,000 in repairs and enabled 1,600 personnel to obtain weapons qualifications; he was coined by the 436th Airlift Wing Commander for his efforts.

Alcazar was the safety lead for the wing's first combat training course, charting risk for training weapons and chemical gas deployment. He enabled a 10-hour course for 5,100 Total Force Airmen.

He verified 68 Nuclear Certified Equipment items valued at \$7.3 million on two installations and helped keep 18 Prime Nuclear Airlift Force missions fully intact.

Alcazar conducted 10 annual and 24 weapons spot inspections, mitigating risks to 6,100 personnel and 31 aircraft valued at \$8.4 billion.

He steered chemical weapons recovery, resulting in the safe demolition of 3,775 chemical warfare materials.

Overseeing the Department of Defense's largest aerial port, Alcazar was in charge of delivering and storing



10.3 million tons of munitions with zero mishaps in 2 years. He was the sole Weapons Safety Manager in the 436 AW and governed the delivery of more than 10 million pounds of cargo.

Alcazar facilitated a nuclear surety training plan and tracked 94 Security Forces Squadron personnel security requirements, with zero disparity in Major Command Medical Readiness Office nuclear readiness. He managed the wing's Additional Duty Weapons Safety Representative program, trained 32 representatives, and issued 10 explosive facilities licenses.

He led a Hazard of Electromagnetic Radiation to Ordnance survey and secured the primary and alternate routes for 10.3 million pounds of munitions cargo.

Alcazar designed three Above Ground Magazine site plans and justified a gain of \$275,000 and 9 acres. He developed an Air Force Civil Engineering Center facility design and gained a \$4 million project budget.

Alcazar primed 436 AW for presidential security operations by coordinating high-priority Allied Forces North Europe tasking.

A C-17 Globemaster III takes off before a tropical storm enters the area at Joint Base Charleston, SC.

USAF photo by SrA Dennis Sloan

Check Your Ego at the Door if You Are Flying in Bad Weather

BY MS. BETTY NYLUND BARR,
STAFF WRITER

It takes a particular type of person to become a pilot. Beyond enjoying the total flying experience, pilots have to be confident of their skills and training; after all, they hold the lives of themselves and their passengers—not to mention a very expensive vehicle—in their hands. A 2008 article in *Wings* analyzed why pilots choose to fly in bad weather.¹ “Pilots are, by nature, optimistic risk-takers with a high commitment to task completion,” according to Paul Harris, manager of flight operations at the Pacific Flying Club in Delta, British Columbia. “Pessimists don’t get into airplanes.”

The very qualities that make one capable of becoming a pilot, however,

may be the same qualities that bring down his or her plane in bad weather.

Everyone stepping aboard an airplane wants to believe that the person operating that flying machine is well trained, competent, and, yes, confident. People need to forget the physics law they learned in ninth grade stating that objects fall at about 32 feet per second. Instead, they need to place their faith in the people in the cockpit who guide the machine that will take them to their destination; so, yes, pilots must be confident. A time will come, however, when confidence must take a back seat to caution and reason, such as when a riled Mother Nature decides to come along for the ride.

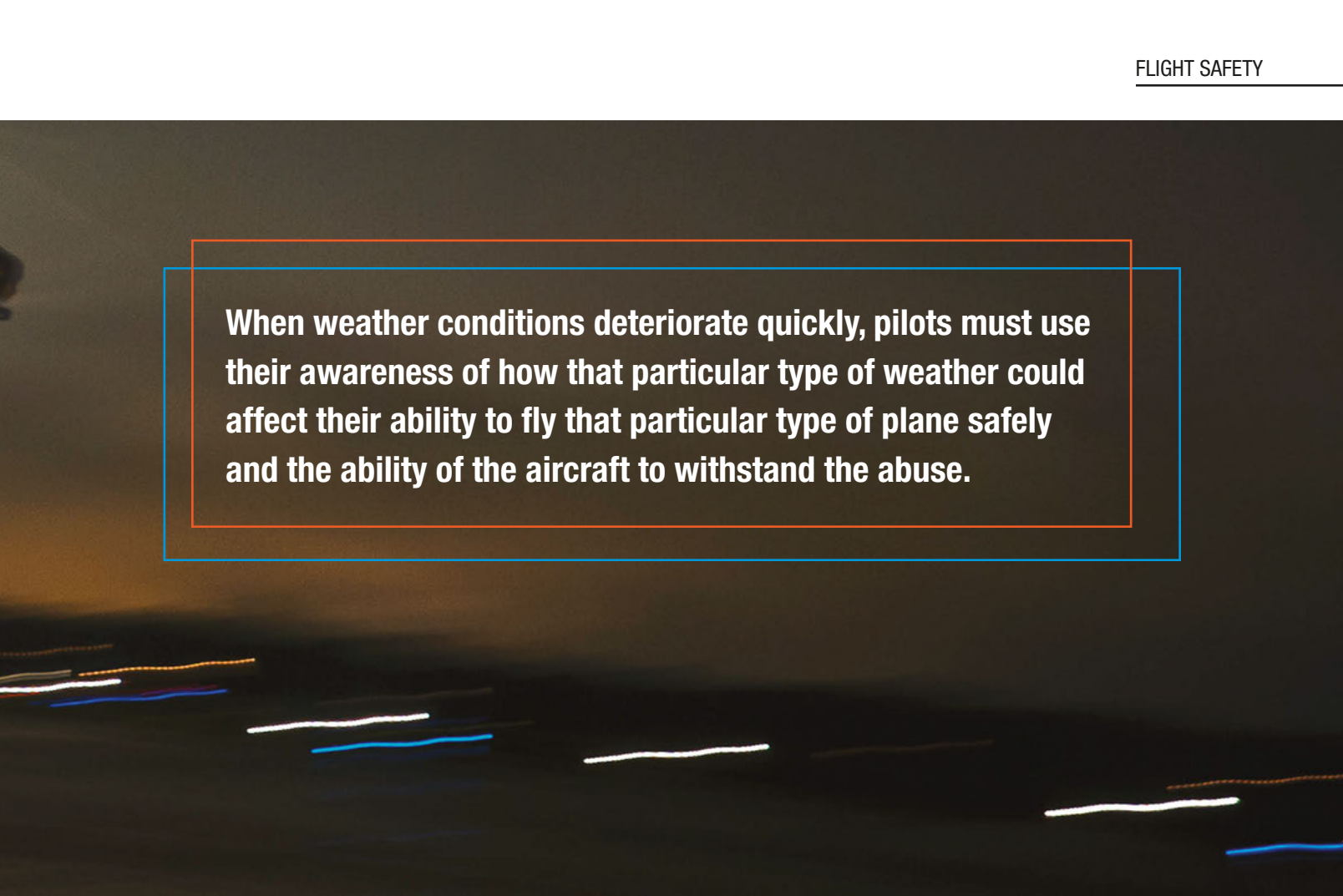
Cited in the *Wings* article mentioned previously is a safety study conducted in 1990 by the Transportation Safety Board of Canada (TSB), which revealed startling statistics. The study

analyzed the occurrence of visual flight rules (VFR) in instrument meteorological conditions (IMC)² involving registered aircraft in Canada from 1976 to 1985. VFR in bad weather was responsible for only 6 percent, or 352, of the 5,994 accidents, but it accounted for 26 percent of fatalities. More recent statistics, from 1996 to 2005, determined that more than 36 percent of fatal accidents resulted from controlled flight into terrain³ mishaps.

² Wikipedia gives the definition of IMC as “a flight category that describes weather conditions that require pilots to fly primarily by reference to instruments, and therefore under instrument flight rules [IFR], rather than by outside visual references under visual flight rules [VFR].”

³ “In aviation, a controlled flight into terrain [CFIT] is an accident in which an airworthy aircraft, under pilot control, is unintentionally flown into the ground, a mountain, a body of water, or an obstacle. In a typical CFIT scenario, the crew is unaware of the impending disaster until it is too late.” https://en.wikipedia.org/wiki/Controlled_flight_into_terrain.

¹ Marsala, James. 2008. “VFR in IMC: Why Good Pilots Fly in Bad Weather,” *Wings*, January 30. <https://www.wingsmagazine.com/vfr-in-imc-why-good-pilots-fly-in-bad-weather-1122/#>.



When weather conditions deteriorate quickly, pilots must use their awareness of how that particular type of weather could affect their ability to fly that particular type of plane safely and the ability of the aircraft to withstand the abuse.

What causes a pilot to take on treacherous weather conditions? Inexperience? Recklessness? Harris does not think so. More likely, he said, the pilot thinks that the weather will improve and decides to continue the flight, perhaps in IMC. According to the TSB study, nearly 20 percent of VFR in bad weather involved pilots with more than 3,000 hours of flying experience. Many other factors could play into a pilot's decision to persevere when staring a dangerous weather situation in the face: overconfidence, a conviction to complete the mission, the natural desire to get home, or the awareness that plans made for after the flight may have to be postponed or even canceled, which sometimes results in a financial loss and certainly disappointed companions.


Pilots experience considerable pressure to complete their mission.

Wayne Nyman, a licensed Aviation Medical Examiner, commercial pilot, and air traffic controller, said, "If a pilot says no to a flight and it turns out he could have gone, then everyone's a judge." Also, the belief in the industry is that if a pilot is reluctant to fly a plane in bad weather, then another pilot will likely step up and make the flight.

Harris teaches pilots "Dispassionate Decision-Making," emphasizing that their first loyalty must be to the airplane, not the company, agency, or military division. Harris points out that good decision-making entails setting aside emotions and outside motivations and letting the circumstances determine the course of action.

Pilots are trained to handle aircraft in all types of meteorological conditions and, of course, not to bail

unnecessarily at the first sign of bad weather. They know the capabilities and limitations of their aircraft, and they handle those enormous vehicles masterfully. When weather conditions deteriorate quickly, however, pilots must use their awareness of how that particular type of weather could affect their ability to fly that particular type of plane safely and the ability of the aircraft to withstand the abuse. They have to make an informed judgment call and decide whether to proceed with the flight because, *in their opinion* as highly trained pilots, the conditions are likely temporary and navigable—or the danger to human lives and their multimillion-dollar aircraft are just not worth the risk. The trick is setting aside that confidence, that ego, to responsibly make the latter call when it is the right one.

Too much is at stake. 

This Spring, Take a Hike—But Make Sure You Have These 10 Essentials With You

BY MS. BETTY NYLUND BARR, STAFF WRITER

What a gorgeous country we live in! To know and appreciate the beauty of our homeland, however, we need to get out and walk—up a mountain, through woodlands, or on the shores of one of the myriad bodies of water. Wherever you hike, it is vital to gear up properly before you go, especially if you choose to walk through the wilderness or a sparsely populated area, starting with the 10 essentials of hiking.

The first 10 essentials list was compiled in the 1930s by The Mountaineers, a nonprofit

organization based in the Pacific Northwest, dedicated to helping people learn about and enjoy the outdoors. The list was formalized and included in the third edition of *Mountaineering: The Freedom of the Hills*, released in 1974. The list contained 10 items: (1) a map, (2) compass, (3) sunglasses and sunscreen, (4) extra clothing, (5) headlamp or flashlight, (6) first-aid supplies, (7) fire starter, (8) matches, (9) knife, and (10) extra food. The list has evolved into a list of 10 essential systems. The following limerick provides a way to remember them (the systems are in bold type; other punctuation is the author's):

THE MOUNTAINEERS TEN ESSENTIALS LIMERICK¹

By Steve McClure

To **navigate**, **head** for the **sun**
With **first aid** and **knife** on the run.
Bring **fire** and **shelter**;
Extra food is a helper—
But **water** and **clothes** weigh a ton.

¹ This limerick is from the Mountaineers website: <https://www.mountaineers.org/blog/what-are-the-ten-essentials>.



THE MOUNTAINEERS TEN ESSENTIAL SYSTEMS

Items in brackets [] can be shared by a group; text in italics added by the author.

1. **Navigation:** map, altimeter, compass, [GPS (global positioning system) device, personal locator beacon (PLB), satellite communicator, or satellite phone, plus extra batteries or battery pack]—*Consider downloading an app that provides detailed information about the terrain you will be hiking.*²
2. **Headlamp:** plus extra batteries. *Using a headlamp leaves your hands free, but consider taking a small, powerful flashlight and batteries as well.*
3. **Sun protection:** sunglasses, sun-protective clothes, and sunscreen. *Do not forget a hat! A sunburned scalp can be extremely painful.*
4. **First aid:** including foot care and insect repellent (if required). *Make sure to include plenty of appropriate-size Band-Aids in case you get blisters.*
5. **Knife:** plus repair kit. *A multi-tool that includes a knife would be ideal.*
6. **Fire:** matches, lighter and tinder, or stove as appropriate. *One person can be elected to carry the stove.*
7. **Shelter:** carried at all times (can be a lightweight emergency bivy). *Some bivies, or bivouac sacks, weigh as little as 6–10 ounces.*
8. **Extra food:** beyond minimum expectation. *Make sure to pack calorie-dense food, such as nuts and energy bars.*
9. **Extra water:** beyond minimum expectation, or the means to purify. *Take at least one liter of water per person for every 2 hours of hiking.*
10. **Extra clothes:** sufficient to survive an emergency overnight. *A change of clothes would be most welcome if you get drenched in a rainstorm or slip into a stream. Walking in wet clothes can cause blisters or chafing, and it can even lead to hypothermia once night falls—and it feels quite uncomfortable.*

Those are the essentials. Other items that you may want to take (keeping in mind that each item adds weight to your backpack) include a good pair of binoculars; a whistle in case you get separated from each other; a warm hat (remember: a lot of body heat escapes from the head); and a camera. The Mountaineers

website recommends including a physical topographic map in a resealable plastic bag: “It is not fragile, needs no electricity, and provides both backup and the ‘big picture’ about a region that cannot be replicated by written descriptions or a tiny screen.” Please do not rely solely on your cell phone, which will eventually run out of charge, rendering it useless for your trip.

Use sunglasses while the sun is out, even if the day is cloudy. According to the Mountaineers website, “The eyes are particularly vulnerable to radiation, and the corneas of unprotected eyes can easily burn before any discomfort is felt, resulting in the excruciatingly painful condition known as snow blindness. Ultraviolet rays penetrate cloud layers, so do not let cloudy conditions fool you into leaving your eyes unprotected.”

Wear moisture-wicking clothes and appropriate footwear with good traction, support, and protection. Also, dress in layers so that if the temperature soars, you can shed the extra clothing—and, of course, if the temperature drops, you can add back layers.

So go outside and appreciate the beauty that America has to show you. Just follow the Scouting motto and “Be Prepared”! 

²Churchill, a hiking and backpacking guide, recommends downloading an app such as Topo Maps+ before hiking a new route. “The app lets you download detailed hiking maps of any trail and see your location on those maps offline.” <https://www.wikihow.com/Hike>.



Put a Lid on It!

BY MS. BETTY NYLUND BARR, STAFF WRITER

Most people who ride motorcycles realize the value of wearing a helmet to protect their gray matter—and their life. A significant number, however, apparently do not heed the expert advice and sobering statistics that exist to prevent catastrophic injury or death.

Yes, the wind in your face and whipping through your hair contributes to the overall feeling of freedom experienced when riding a motorcycle, but all it takes is a distracted or drunk driver losing control of his or her vehicle to send you flying through the air. A wet or icy patch of road, an unseen obstacle, or insufficient sleep the night before could result in your hitting the pavement, a tree, or another vehicle. Such an occurrence graphically illustrates how fragile the human body and head really are.

The National Highway Traffic Safety Administration (NHTSA) states unequivocally that “If you are ever in a serious motorcycle crash, the best hope you have for protecting your brain is a motorcycle helmet.” Motorcyclists are already vulnerable without the metal of a vehicle around them as the first line of defense against bodily harm. Why take unnecessary risks?

In 2015, NHTSA published the following compelling, factual assessment of the high physical cost to victims of motorcycle accidents:

In cases of serious injury or death, medical care cannot fully restore victims to their pre-crash status, and the human capital costs fail to capture the relatively intangible value of lost quality-of-life that results from these injuries. In the case of death, victims are deprived of their entire remaining lifespan. In the case of serious

injury, the impact on the lives of crash victims can involve extended or even lifelong impairment or physical pain, which can interfere with or prevent even the most basic living functions.¹

If you need further convincing, consider these facts compiled in an online document by the Centers for Disease Control and Prevention:²

- Helmets saved an estimated 1,859 lives in 2016.

¹ NHTSA information source: National Center for Statistics and Analysis. 2015. *Estimating Lives and Costs Saved by Motorcycle Helmets with Updated Economic Cost Information*. Traffic Safety Facts Research Note. Report No. DOT HS 812 206. Washington, DC: NHTSA. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812206>.

² Centers for Disease Control and Prevention. n.d. *Motorcycle Safety*. Atlanta, GA: CDC. <https://www.cdc.gov/transportationsafety/mc/index.html>.

- If all motorcyclists had worn helmets in 2016, 802 more lives could have been saved.
- Each year, the United States could save more than \$1 billion in economic costs if all motorcyclists wore helmets.
- Helmets reduce the risk of death by 37 percent.
- Helmets reduce the risk of head injury by 69 percent.

Wearing a helmet seems to be a no-brainer—to keep *you* from becoming a no-brainer!

So you agree that the smart thing to do is to buy a helmet—but what to buy? On its website, NHTSA advises, “Always wear a helmet that meets U.S. Department of Transportation (DOT) Federal Motor Vehicle Safety Standard (FMVSS) 218.... DOT-compliant helmets sold in the United States must have a label on the back that contains the following wording and information: manufacturer and/or brand, model designation, DOT, FMVSS No. 218, CERTIFIED. Labels on certified helmets made before May 13, 2013, simply read DOT.” Some helmets may also have labels inside the helmet indicating that the helmet meets the standards of the Snell Foundation or ANSI (American National Standards Institute), two private nonprofit organizations.

Before you start looking for a helmet, figure out the shape of your head. NHTSA explains that heads can be intermediate oval—the most common head shape—round oval, or long oval. Proper fit depends on buying the right helmet for your head shape; have someone look at your head from above to determine yours.

Next, determine the circumference of your head. Using a cloth tape, measure around your head above

your eyebrows in front and at the broadest area in the back. A helmet that fits will be slightly tight, with no uncomfortable pressure points. Helmets may be sold with removable pads so you can adjust the interior of the helmet for fit and comfort.

Finally, avoid buying a novelty helmet; it will not protect your head, which is, after all, the reason for wearing a helmet. Steer clear of helmets advertised as being light or thin. NHTSA stresses that a helmet that meets federal safety standards weighs about 3 lbs., is at least an inch thick, and has a stiff foam liner. It will have sturdy chin straps and solid rivets. Also,

nothing should extend from the surface of a helmet more than 2/10 of an inch.

Armed with this information, you should be able to find a comfortable, well-fitting helmet that will protect what is inside! 🇺🇸

TSgt Romell Rogers, 9th Maintenance Group Maintenance Operations Center Superintendent, displays a helmet he was wearing during a motorcycle crash March 23, 2018, at Beale Air Force Base, CA. Romell believes his equipment saved his life and encourages others to make sure they have the right equipment.

USAF photo by A1C Tristan D. Viglianco





MISHAP-FREE FLYING HOUR MILESTONES

6,500 HOURS

171 ARW, Pittsburgh, PA

Col James M. Swanik
Lt Col Timothy T. Waugaman

3,500 HOURS

171 ARW, Pittsburgh, PA

Lt Col Deryck Castonguay
Maj Robert J. Guerriere
Maj Skyler C. Smith
Maj Dana S. Stockton

2,500 HOURS

60 AES, Travis AFB, CA

Lt Col Jerry M. Earl Jr.

171 ARW, Pittsburgh, PA

Maj Ty B. Schott
Capt Brandon M. Rader

A KC-46 Pegasus assigned to the 931st Air Refueling Wing, McConnell Air Force Base, KS, refuels an F-15C Eagle while an F-16 Fighting Falcon and F-15C assigned to Eglin AFB, FL, fly alongside over the Gulf of Mexico, Nov. 18, 2021.

USAF photo by SSgt Betty R. Chevalier



TO SUBMIT MISHAP-FREE FLYING HOUR MILESTONES:

Send your request to: mobilityforum@us.af.mil

HQ AMC/SEE, 618.229.0927 (DSN 779)

Please submit as shown in the listings above (first name, last name, sorted alphabetically within rank).

QUICKSTOPPERS

How Many Gs?

BY MR. DJ HERNANDEZ III, AMC SE/SEF

The accelerometer shows nearly 3.5 positive Gs¹ and 0.4 negative Gs. What happened?

The training exercise was to fly to a local proficiency base for some copilot right seat touch-and-go landings, two left seat pilot maximum effort landings, and then back to the home station for a two-ship night vision goggle formation flight.


Start, taxi, take off, arrival, and touch-and-go landings at Dobbins Air Reserve Base, GA, were all uneventful. My first max effort landing, however, had several errors. The landing was on the centerline and in the zone at ~ 450 feet. The aircraft's main landing gear touched down first, and the aircraft bounced ~ 5 feet. The main landing gear touched down again at ~ 550 feet, with the nose wheel touching down at ~ 600 feet. The aircraft was slowed down to taxi speed with ~ 500 feet of Veda landing zone (LZ) remaining.

The landing was faulty due to the visual illusion of the airstrip. The terrain sloped down toward the LZ, but the LZ was up-sloping. I thought I was too steep on the glide path and had tried to correct it. The vertical velocity indicator (VVI) was ~ 450-500 feet per minute on the bounced landing. The loadmaster stated that some of the emergency exit lights flashed on and then off. No lights remained on, so I proceeded with my next max effort landing. This landing was considerably better than the first one. It was on speed, centerline, ~ 300-400 VVI, ~ 250 feet in the zone, and no bounce.

¹ "A 'G' is a measurement of force that is equal to the force of gravity pushing down on a stationary object on the earth's surface. Gravitational force actually refers to an object's weight (Force equals Mass times Acceleration, or $F = ma$).\" https://www.aviastar.org/theory/basics_of_flight/index.html



I took off and headed back to Maxwell Air Force Base, GA, for the formation portion. On the climb out to altitude, the engineer noticed the accelerometer was reading ~ 3.5 Gs. After discussing the situation with the crew, we decided to continue with the mission.

During the debriefing with maintenance, we asked them to pull the digital flight data recorder (DFDR) information. The DFDR showed that the most Gs the aircraft sustained was 2.47, not the 3.5 Gs shown on the climb out. As the Dash-1 (the aircraft's instruction manual) states, the accelerometer is designed for inflight use only and does not accurately measure G forces during landing. 

A DAY IN THE LIFE



Airman Legea Howard, 384th Air Refueling Squadron Boom Operator, performs preflight checks for the Black History Month diversity and inclusion flight at Fairchild Air Force Base, WA, Feb. 18, 2021. In addition to minority representation and diversity inclusion, the flight provided a chance for young boom-operator Airmen to obtain qualification training and improve mission readiness.

USAF photo by SrA Ryan Gomez