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OCTOBER/NOVEMBER 2021

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Contents

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ON THE COVER: Award-winning airshow performer, Skip Stewart of Lakeland, Tennessee, flying "Prometheus," which is part Pitts S-2S and the rest the vision of the pilot. The aircraft is equipped with a 400 hp engine, three-bladed prop, and rear-canted landing gear, and can climb at 4,000 fpm. Its paint scheme yells "street rod!" The recipient of top awards for showmanship, and gold medals in aerobatic competition, Skip Stewart is invited to perform at the largest airshows in the country, including EAA AirVenture Oshkosh. Among his acts, Stewart was the first pilot to fly an airplane under a jumping motorcycle. He also flies with several other performers including the renowned "TinStix of Dynamite." For additional information, visit http://www.prometheusbiplane.com.

Photo taken at the Rockford Airshow in 2015 by Mike Nightengale (MGNphoto).

HEADLINES

COLUMNS

FEATURES

SECTIONS

21

28

33

48

New & Exciting Educational Opportunities In Aviation For Young People

by Dave Weiman

The opportunities for young people to train and get into aviation careers, are many, thanks to the cooperative efforts of aviation organizations, colleges and universities, and industry.

For instance, it was announced at EAA AirVenture Oshkosh July 26, 2021, that United Aviate Academy has selected Boeing (NYSE:BA) to provide a comprehensive suite of training tools, materials, and digital solutions to develop the next generation of pilots for United Airlines.

The comprehensive training package of courseware and multimedia materials spans Boeing's portfolio of service offerings, including its Jeppesen and ForeFlight solutions, and provides United Aviate Academy with the tools to help cadets master key concepts and information needed to fly aircraft confidently and safely.

Also introduced at AirVenture was "EAA AeroEducate," which features interactive, educational, and engaging experiences for young people ages 5 to 18 through web-based resources. The program provides clear, age-appropriate pathways to aviation and aerospace engagement.

The General Aviation Manufacturers Association (GAMA), Southern Illinois University, Delta Air Lines, Purdue University, Minnesota Aviation Career Education Camp, and Whirly-Girls International are also to be commended for their efforts to provide and enrich the educational opportunities available for our youth. See articles elsewhere in this issue. ❑

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Tips For Responding To FAA's Office of Aerospace Medicine

by Gregory J. Reigel

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Greg Reigel

As you may know, the process for obtaining a Special Issuance Medical Certificate, or renewal of a special issuance, can be daunting. Depending on the condition, or set of conditions, an airman may be able to provide the Aviation Medical Examiner (AME) with the necessary information to be submitted in connection with an application. Alternatively, the airman may need to submit information directly to the FAA's Office of Aerospace Medicine in response to a specific request.

The FAA's new Federal Air Surgeon, Susan Northrop, M.D., recently provided some tips for both airmen and AMEs when submitting information to the FAA. Here are some of those tips for airmen, along with my own recommendations:

- First, do your homework. Review the FAA's Guide for Aviation Medical Examiners online before you submit your application. For most conditions, the AME guide will identify not only how the FAA will treat the condition, but also what information it will require to issue a medical certificate.
- Second, if you are going to submit information directly to the FAA, make sure you read everything before you send the information to the FAA. If you see something in the records that could raise other flags for the FAA, you will then have the opportunity to proactively address the issue, rather than having to respond to a follow-up request from the FAA. For example, if the records reveal something that should have been disclosed on prior applications but wasn't, determine what additional information may be necessary to address the non-disclosure. You should then submit that additional information to the FAA. This will help avoid the delays of back-and-forth correspondence with the FAA.
- Third, make sure every page is legible, and contains at least your name and a date. Any letters from treatment providers need to have an actual signature from the provider. However, clinical notes and records do not require signatures. If you have the information in PDF format, you may also want to use a header or footer, if possible, in which you include your name, PI #, and App ID # (you will find the latter two on any correspondence you receive from the FAA). That way if any pages get separated before your package is scanned into the FAA's Document Imaging Workflow System, the FAA will know to which file they belong.
- Fourth, make sure you provide the FAA with each item requested. A partial submission will only result in further delay as the FAA sends a follow-up letter repeating its request for any missing items. A complete package will ensure that the FAA can proceed with its review of your application.
- Fifth, include your correct contact information, including phone number, so the FAA can contact you if needed.
- Sixth, if you are unable to obtain the requested information within the time allotted (usually 30 or 60 days), request an extension. You can do so by contacting the Airman Medical Certification Division or your Regional Flight Surgeon's Office. In most instances, the FAA will grant a limited extension.
- Finally, when you send information, use a delivery method that provides you with tracking information and proof of delivery. And keep a copy of everything you send to and receive from the FAA. It isn't unheard of for a package to be misdelivered or for the FAA to misplace it once received. If you have copies, it will be easy enough to re-send if necessary.

Following these tips will not guaranty that the FAA approves a medical application and issues you a medical certificate. However, these steps will minimize unnecessary delays and the time required for the FAA to review, process, and make a decision regarding your application.

If you have questions regarding the medical application process or need assistance in responding to FAA requests for information, please feel free to contact me. I'm happy to assist.

EDITOR'S NOTE: Greg Reigel is an attorney with Shackelford, Melton, McKinley & Norton, LLP, and represents clients throughout the country in aviation and business law matters. He has more than two decades of experience working with airlines, charter companies, fixed base operators, airports, repair stations, pilots, mechanics, and other aviation businesses in aircraft purchase and sales transactions, regulatory compliance including hazmat and drug and alcohol testing, contract negotiations, airport grant assurances, airport leasing, aircraft-related agreements, wet leasing, dry leasing, and FAA certificate and civil penalty actions. For assistance, **call 214-780-1482, email: greigel@shackelford.law, or Twitter @ReigelLaw (www.shackelford.law).**

Are You Fit To Fly?
Well, that depends on what kind of flying you do.

by Bob Worthington

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Bob Worthington

Recently, the world has been watching the 2021 Summer Olympics. The media has shown us every aspect of what athletes must do to win the Gold. We have seen what it takes to be a champion and glimpses of the training required to win against the best. Also witnessed was the mental downfall of Olympian Simone Biles. Now what does this have to do with being fit to fly? I will explain.

Athletes train to succeed in a specific sport. Football players do not train like track stars or boxers. Each athlete must train to gain expertise in his or her activity, different from fellow athletes in other sports. The training consists of physical exercise, as well as mental (psychological) preparation. When the world's best gymnast, Simone Biles, dropped out of most of the Olympic competition, physically she was in perfect form, but mentally she was unable to compete. Here is an example of specialized training for one sport.

In my 20s, I was a full-time professional athlete, a competitive pistol shooter. We trained during the week and competed across the country on weekends. Bullseye pistol competition required holding a 3-pound pistol, in one hand, stretched out full length to shoot at bullseye targets. The courses of fire are slow fire, timed fire, and rapid fire at distances of 50 and 25 yards. Winning scores require stamina, hand strength, accuracy, trigger control, and mental focus. Training consisted of normal cardio running and weightlifting. Additionally, specific stamina strength training for holding the pistol involves practice shooting (dry firing without bullets in the gun) with the weight of a bottle of water tied to the pistol, and handgrip strength exercises. Accuracy and trigger control comes with hours of live and dry fire practice. Trigger control also comes by placing a coin on top of the front sight and dry firing without dropping the coin. Mental preparedness derives from actual competition and learning proper sight-target focus, trigger control, and the ability to concentrate on taking each shot, while ignoring all surrounding interferences.

Obviously, much of the training to become a world-class shooter is of little use to someone desiring to be a Gold-medalist in swimming. Being fit for competition is not limited to action sports. Grandmaster chess players also participate in their own training programs to include cardio exercises, diet and nutrition, sleep control, playing chess, and other physical regimens to combat the mental and physical stress of 10-day chess tournaments. Even champs who sit, have their fitness routines.

Each different sport requires a specific training activity designed to enhance success in that sport. To be the best, training must be tailored to allow the person to become as perfect as possible, physically and mentally, to excel in that sport. The U.S. Air Force recently recognized how sport-specific training of professional athletes minimizes injuries and maximizes performance. Understanding that its pilots are human weapons systems, the Air Force considers them as sports-specific athletes, except the sport is flying fighter jets.

A major physical and mental concern flying fighters is the 9 Gs of force pilots are subjected to during aerial combat maneuvers. To counter this, the Air Force Air Combat Command has contracted with LMR Technical Group to create and manage a physical fitness program using athletic trainers, strength coaches, and massage therapists to help relieve some symptoms from flying. LMR Tec is a small business founded by service-disabled Air Force special warfare airmen to develop and deliver training and development to solve warfare requirements. In short, the Air Force is providing fitness training programs for fighter pilots, like what professional athletes receive.

How does this relate to general aviation flying? Read on.

A pair of Brazilian professors conducted a 2019 study of pilot performance and sleep deprivation on a sample of Brazilian airline pilots. What they found is that performance, flying airliners, decreased with less sleep. Less sleep could be attributed to stress in and out of the cockpit. During this study, the researchers also found that those pilots who exercised less than 2½ hours each week, suffered most from lack of sleep. Those pilots who exercised more than 2½ hours per week reported less fatigue and better sleep resulting in better pilot performance.

Is fatigue also a problem with GA pilots?

Eighty (80) percent of GA accidents are caused by the pilot. Between 15 to 20% of GA fatal accidents are caused by fatigue. Most GA aircraft are single-pilot flown, so there is no copilot to fly if the pilot succumbs to fatigue or stress. So, yes, fatigue is a hazard for GA.

The need to be in top physical and mental condition and the stress of military pilots results in their reaching their peak performance in aeronautical abilities and skills in their early 40s. Airline pilots fare better (airline flying is less stressful than military) in which they reach peak performance in their mid-50s. GA pilots (those of us who fly single-engine aircraft for our own use) have no defined peak age because there is no organization controlling how we perform as pilots (yes, there are some FAA physical exam requirements and a check-ride every 24 months). So maybe, each GA pilot should evaluate their personal aviation missions, and like the Air Force, create their own fitness program, tailored for how and what they fly.

I had an acquaintance, a former Air Force fighter pilot, in his 80s. He owned a light sport aircraft which he spent an hour each week doing touch and goes. Our airport is uncontrolled, and most times only has a single plane in the pattern. My frail friend was quite challenged getting his plane in and out of his hangar. But in the air, his radio protocol was precise and FAA perfect. His performance as a pilot resembled him and his plane flying as a single unit. His fitness requirements were much different than the pilot who flies a high-performance, complex aircraft IFR across the country, much of the time during the night.

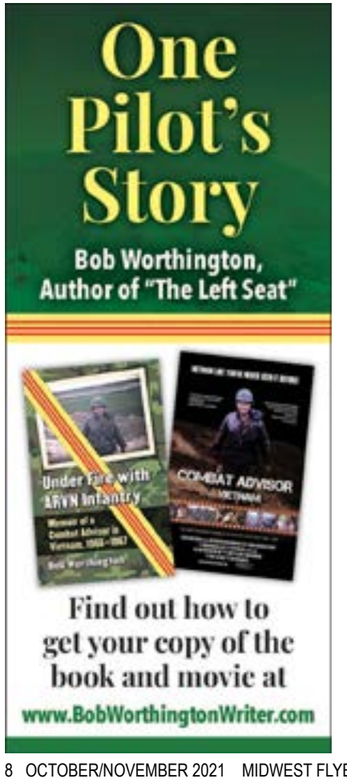
Another friend, holding a commercial certificate with instrument rating, flew his twin all over North America (and once to Europe). Unfortunately, he did not exercise, gained too much weight, developing well-being issues. At times he encountered difficulty focusing when flying and soon lost his medical due to poor health.

So, how do you fly? Once a week, VFR, in the pattern or thousands of miles on long and difficult inclement weather trips? Is your physical and mental fitness appropriate for the flying you do? Are you wide awake, refreshed, and relaxed, when beginning a flight? If you are tired, stressed, or psychologically unprepared, do you cancel the flight or do you depart anyway, hoping things will get better for you, enroute?

Like world-class athletes, we should strive for perfect performance, every time we step into a plane. Doing less may lead to ending in the 80% column. Examine your flying habits and construct a personal fitness program that enhances your performance as a pilot. Air Force pilots, who are being trained in their human weapons system training program, report it does make a difference, saying they are better, safer pilots. You can replicate this.

EDITOR'S NOTE: Pilot, Viet Nam veteran and former university professor, Bob Worthington of Las Cruces, New Mexico, is the author of "Under Fire with ARVN Infantry" (https://mcfarlandbooks.com/product/Under-Fire-with-ARVN-Infantry/), and producer of the 2019 film "Combat Advisor in Vietnam" (www.borderlandsmedia.com). Facebook: Bob Worthington Writer. Website: www.BobWorthingtonWriter.com. Worthington has placed excerpts about combat flying in Vietnam (from his books) on his website. Here is a direct link to those excerpts: www.BobWorthingtonWriter.com/combat-flying-in-vietnam/. Every couple of months he will add another excerpt.

DISCLAIMER: The information contained in this column is the expressed opinion of the author only, and readers are advised to seek the advice of their personal flight instructor, mechanic, attorney and others, and refer to the Federal Aviation Regulations, FAA Aeronautical Information Manual and instructional materials before attempting any procedures or following any advice discussed herein. ❑



Susan E. Northrup, M.D.
FAA's Federal Air Surgeon

Dr. Susan E. Northrup, M.D. was appointed the Federal Air Surgeon of the Federal Aviation Administration (FAA) in January 2021. She succeeded Michael Berry, who held the position since January 2017.


Dr. Susan E. Northrup, M.D.

In this capacity, Dr. Northrup leads the Office of Aerospace Medicine in Washington, D.C., providing strategic management of the FAA's aviation medical programs, which oversee all pilots. This includes the development and establishment of airman medical certification, the air traffic control specialist medical qualification policy, the application of that policy in medical decision-making, the medical appeals process, and the oversight of aviation industry drug and alcohol testing programs.

In addition, Dr. Northrup oversees the FAA's aeromedical education programs, the planning and conduct of aerospace medical and human factors research, and the investigation of aircraft accident medical factors.

Dr. Northrup is a Senior FAA Aviation Medical Examiner (AME). In 1985, she earned a Bachelor of Arts Degree in Chemistry with Honors at Ohio State University, and her medical degree in 1989. In addition, she was awarded a Master's in Public Health from the University of Texas in 1994.

Dr. Northrup is a past president of the American Society of Aerospace Medicine Specialists and of the Civil Aviation Medical Association, and vice-president for the Aerospace Medicine Association. She spent nine years (2007-2016) as a trustee for the American Board of Preventive Medicine, is on the adjunct faculty for the USAF School of Aerospace Medicine and is a Fellow of the Aerospace Medicine Association.

Dr. Northrup is a private pilot, and a retired U.S. Air Force Colonel. She is board certified in aerospace medicine and occupational medicine, an acknowledged expert in aviation, and has authored several scientific papers on accident investigation, the use of sleep aids by pilots, cabin air quality, and bioterrorism. While serving in the Air Force, she was the U.S. Head of Delegation to the North Atlantic Treaty Organization's (NATO) aeromedical working group. ❑

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Human Factors & Instrument Flight A Decade Ago

by Michael J. "Mick" Kaufman

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Michael Kaufman

I have been quite active during the summer months doing accelerated instrument training and reviewing and updating my PowerPoint presentations for my BPT Seminars. I was amazed at the changes that have occurred in how we fly on instruments, which has occurred because of the advent of the GPS, and the sophisticated navigators we now have. In some cases, the way we get established and fly approaches has gotten easier, but some have gotten harder.

We need to know the proper way to set up an approach in a navigator, which menu to use and which button/buttons to press. If we have touch screen technology, turbulence can require us to make several attempts to get the right approach and the right waypoints loaded in the box.

Several weeks ago, while attempting to program my GPS navigator during a flight in turbulence, I came close to becoming an example of CFIT (controlled flight into terrain). I was flying on autopilot and had it programmed for a descent while attempting to make a route change. It took me three or four attempts to spell out the identifier of the waypoint, and I missed my level-off altitude by a large margin. This was definitely a pilot error, and human factors were major contributors as well.

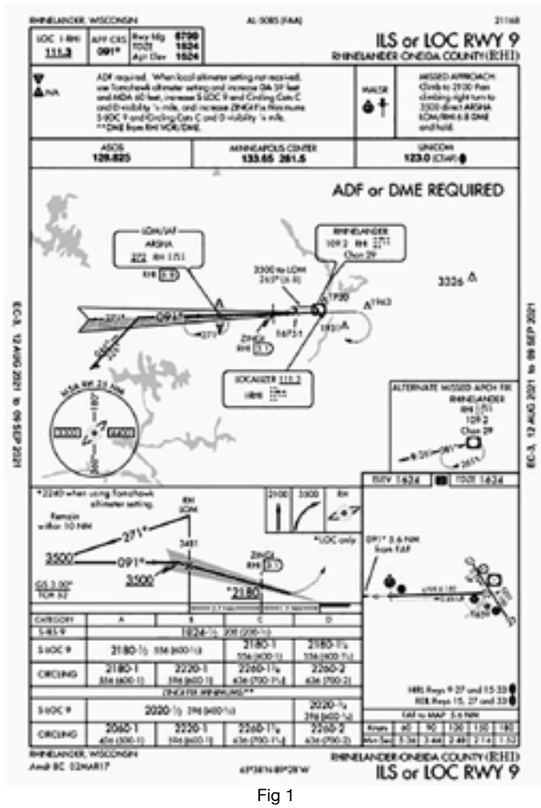

Fig 1

What could I have done differently? I should have kept a scan going on my instruments and pushed altitude hold on the autopilot when reaching my level-off altitude. Some may say, why didn't you use altitude preselect? I did not have one, and even if I did, I would not use it as I have seen too many glitches – mostly in incorrect programming by the pilot. The human factor here was that I was getting extremely frustrated for not being able to get the waypoint in the navigator; my frustration overcame good judgment. I prefer hard keys and knobs to twist when programming a route change on a navigator.

We have seen tremendous breakthroughs in voice technology in recent years. I have become a geek to my Amazon Alexa device: "Alexa, open airport weather… Get Kilo, Echo, Golf, Victor" (KEGV, Eagle River Union Airport, Eagle River, Wisconsin). I am hoping the next generation of aviation navigators will encompass voice recognition for programming. Who will be the first to have this feature? "Dynon, load the GPS 36 approach for Kilo, Oscar, Sierra, Hotel?" (KOSH, Wittman Regional Airport, Oshkosh, Wisconsin).

When we fly an approach today, most of us will use some feature of a GPS navigator, even though it may not be a GPS approach.

For example, if I were doing the ILS 09 approach to Rhinelander-Oneida County Airport (KRHI), I would use the GPS navigator to call the shots until I was established inbound 2 miles outside the final approach fix (FAF). I thought it would be fun to do that approach, as I haven't done it in recent years (Fig 1). For the sake of nostalgia in this article, I will portray this scenario as it would have been done 30 years ago. A note of interest: this approach has not changed much over that period time.

Some 30 miles south of the Rhinelander airport, I received a call from Minneapolis Center: "Bonanza N9638Y, current Rhinelander weather is 600 overcast, visibility 2 miles, light rain, wind calm, altimeter 29.76. What approach would you like?"

I replied: "I would like the ILS 09 approach with the Rhinelander VOR transition."

Minneapolis Center: "You can expect that. Proceed direct to the Rhinelander VOR."

I have a King KX175 nav/com, an ADF and a marker beacon receiver in my airplane. I already have the Rhinelander VOR frequency of 109.2 MHz in the NAV side of my KX175, the VOR indicator is set to 350 degrees, and the CDI is centered. I am now 10 miles from the VOR at 5,000 feet.

Minneapolis Center: "Bonanza N9638Y, you are 10 miles from the Rhinelander VOR. Maintain 4,000 until established on a segment of the approach. You are cleared for the ILS 09 approach to the Rhinelander airport. Cancel IFR on the ground through flight service. Switch to advisory frequency approved."

I replied: "4,000 until established. Cleared for the ILS 09 to Rhinelander." Note, ATC needs more than a "ROGER" on an approach clearance. Your readback should include altitude and the name of the approach.

I begin my descent to 4,000 and continue to track the VOR to the airport. Note the small arrow on the approach chart to the left of the VOR symbol. This is the transition arrow showing the radial of 265 degrees and 6.8 nm, taking us to the initial approach fix (IAF) of "ARSHA," also the published altitude of 3500 feet as a published segment. Arriving over the VOR, I use the "Five T's:"

Turn
Time
Twist/Track
Throttle
Talk

Turning the aircraft to a heading of 265 degrees, nothing to time, twist my VOR to 265 degrees and (turn) slightly to intercept the 265-degree radial to my outbound course (track), reduce power (throttle) to descend to the 3500-foot published altitude, and announce my position (talk) on the airport advisory frequency. Looking at the approach chart, I see there is an ADF/LOM (Locator Outer Marker) at the ARSHA fix, and I have both and my ADF is tuned to 272 kHz. I notice my ADF is pointing to ARSHA, and I have identified the Morse Code on the ADF, as I had done previously with the Rhinelander VOR.

Upon crossing ARSHA, which is shown by the marker beacon light, the marker sound and the ADF pointer reversing, I again use the "Five T's" and make a slight turn to 271 degrees, followed by a twist, but this time the twist is changing the radio frequency to the localizer frequency of 111.3 MHz, followed by a start of the timer to track outbound for approximately 2 minutes. Note, the switch to the localizer frequency should be done here, and we must remember tracking outbound on a localizer front course has reverse needle sensing (no HSI) on the CDI, and we need to identify the Morse Code for the localizer.

After approximately 2 minutes, our approach plate tells us to begin the procedure turn to the left of approximately 45 degrees or a 226-degree heading. Again, the "Five T's" come into play with timing of about a minute and spinning the VOR or HSI needle to the inbound course of 91 degrees. After the timer expires for a minute, we do a 180-degree turn to 46 degrees, double check with our "Five T's" to see what we forgot and watch for the localizer needle to come alive. At this point, we turn in to capture the CDI and we are inbound to ARSHA, waiting for the glideslope (GS) needle, and our approach now becomes identical to what we would have seen had we been flying using a GPS navigator.

In review, what we did and how we did it more than a decade ago, was not that hard. We did not need to select an approach on our navigator or choose our initial approach fix (IAF) or transition and go through a bunch of button-pushing in turbulence. On the flip side, the autopilot could have flown the entire approach with almost no pilot input, except power, once we had it loaded, had we used a GPS navigator.

On your next instrument training flight or proficiency check, challenge yourself and go back 30 years and see if you can still remember how to fly an ILS approach this way.

Until the next issue of *Midwest Flyer Magazine*, always fly safe!

EDITOR'S NOTE: Michael J. "Mick" Kaufman is a Certified Instrument Flight Instructor (CFII) and the program manager of flight operations with the "Bonanza/Baron Pilot Training" organization. He conducts pilot clinics and specialized instruction throughout the U.S. in many makes and models of aircraft, which are equipped with a variety of avionics. Mick is based in Richland Center (93C) and Eagle River, Wisconsin (KEGV). He was named "FAA's Safety Team Representative of the Year" for Wisconsin in 2008. Readers are encouraged to email questions to captmick@me.com or call 817-988-0174.

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Avoiding Runway Incursions... Make Your Taxi Decisions Part of Your Cross-Country Planning

by Richard Morey

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Richard Morey

Runway incursions are on the rise. Much of this increase is associated with almost a year's inactivity by many general aviation pilots. The shutdown is largely over, and now rusty pilots are flying again.

All skills are perishable, but flying skills seem more perishable than most. The longer you go without practice, the less skill you have.

Rusty pilots are distracted pilots. Distractions can lead to runway incursions. These potentially fatal occurrences are easily preventable. With a little planning and task management, you can simply and easily minimize your risk of missing a hold short line.

So, what is a runway incursion? The FAA defines a runway incursion as "any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and takeoff of aircraft."

Let us focus on aircraft, specifically the aircraft you are pilot-in-command of not inadvertently straying onto the protected surface of an active runway.

Task Management: Don't Taxi Distracted!

Most runway incursions occur during taxiing. The causes vary but generally at controlled airports are associated with communication failure, pilot disorientation, and misinterpreting ground controls instructions. Uncontrolled airports have different challenges. Taxiing in front of a landing aircraft is probably the most common runway incursion at an uncontrolled (non-towered) airport.

Why do pilots end up where they should not be? Runways are clearly marked with signs and hold short lines. Airport diagrams are readily available and easily printable. Many GPS units have airport diagrams, and the navigation software programs such as Foreflight have various safe taxi features depending on your subscription level.

If we are paying attention as pilots, we should not miss these obvious clues. The key concept here is paying attention! Another way to say this is, to maintain situational awareness, we must pay attention to our surroundings. Distractions degrade our ability to do so. How do we minimize distractions to maximize our situational awareness?

Eliminate Self-Imposed Distractions

Setting up your radios, GPS, iPad and the like should not be attempted while taxiing. Let me say that again… Setting up your radios, GPS, iPad and the like should not be attempted while taxiing. Yes, it is that important. Multitasking is a myth. We can do several things quickly in succession, but our performance in doing so is degraded. More importantly our ability to notice what is around us – our situational awareness – is reduced. Anytime the aircraft is taxiing, the pilot's attention should be outside the cabin, not inside!

We have more and more technology available to us in the flight deck. It is not unusual to have at least one panel-mounted GPS and an iPad or the like with ADS-B in to set up prior to your flight. DO NOT set yourself up for failure. Take the time to set up everything you need prior to taxiing. Yes, I know that you are being charged by the hour for the aircraft. Yes, fuel is expensive. But, as easy as you think taxiing is, taxiing while distracted is a recipe for disaster. I have observed that even simple tasks performed while taxiing will cause pilots to drift off center line… GPS's and iPads can absorb your attention, leaving little or no time for other tasks.

At uncontrolled airports, you cannot depend on hearing other aircraft make position reports in the pattern. Pilots have been known to have the wrong frequency tuned in, forget to make transmissions or their transmission may have been stepped on by someone else. Non-radioed aircraft are becoming increasingly rare but are still encountered. It is essential that prior to crossing any runway or taxiing onto a runway for departure, you look

carefully for traffic. This is not possible if your attention is inside the cabin.

Disorientation

Knowing where you are on an airport is critical. If you do not have an airport and taxiway diagram in sight prior to taxiing, you are setting yourself up for failure. Prior to taxi, familiarize yourself with the diagram and consider routes to the active runway or runways. If at a controlled airport, copy down the taxi instructions, and then visualize the route as depicted on the diagram.

I would encourage pilots to request "progressive taxi instructions" whenever they are at an unfamiliar airport. With progressive taxi instructions, the ground controller will give you only one direction at a time. For instance, you might be told to "turn left out of the ramp," then when the ground controller sees you are complying with their instructions, you get the next instruction, i.e. "take a right on alpha." The ground controller essentially takes you by the hand and leads you to where you need to go.

If you still believe you can multitask while taxiing out for takeoff, try this simple test. With another pilot in the right seat, attempt to stay on centerline while setting up a GPS, an iPad or the like. Have your safety pilot note what happens when your attention goes from outside where it should be, to inside. I pretty much guarantee that you will not be able to hold centerline. Now imagine doing this at a strange airport while listening to ground control, trying to read back instructions, and copying a clearance. As you can imagine this test is best performed at a quiet uncontrolled airport.

Speaking of copying and reading back clearances for instrument pilots, do not try to copy your clearance while taxiing. If asked, let the helpful ground controller know that you "will copy at the end," which means I will write down and read back the clearance when you are holding short of the runway and no longer taxiing. Again, do not add distraction to your taxiing!

Proper Planning Prevents Poor Performance

How many of you have meticulously planned out a cross-country only to be caught flat footed by ground control? The scenario goes something like this. You have just executed a nice landing on the active runway of a busy tower-controlled airport you have never been to before. You exit at the first convenient taxiway and contact ground control. (Pilot) "XYZ ground, bug smasher N12345 at taxiway alpha." (Tower) "N12345, where are you parking?" (Pilot) "Ummmm, the FBO?"

Too often flight planning begins at takeoff and ends at landing. Most likely you know which FBO you want to go to at your destination. It is useful to familiarize yourself with the airport and taxiway diagram, note where the FBO you wish to go to is located, and plan likely routes from various runways. In planning this, take into account your aircraft's landing distance, and decide which taxiways you are most likely going to be in a position to make. Have the name of the FBO written on our airport diagram. It is surprisingly easy to forget. Having that information easily at hand will eliminate or minimize disorientation, and the associated distraction and embarrassment of not knowing where you are going.

In Summary…

1) Set your aircraft radios and electronics prior to taxi.
2) Keep your attention outside the cabin while taxiing, not inside.
3) Especially at uncontrolled airports, look for traffic prior to crossing or taxiing onto any runway.
4) Always have an airport and taxiway diagram out and visible while taxiing.
5) Delay reading back a clearance until after you are no longer moving.
6) Familiarize yourself with your location and probable route of taxi.
7) Plan your route of taxi on landing.
8) When in doubt, ask for progressive taxi instructions.

By following these simple steps, you will minimize distractions, disorientation, and make it far more likely that you will not be the cause of a runway incursion.

Much of the subject matter in this article is from personal experience. Much is from several online safety seminars conducted through the Wisconsin and Minnesota Safety Teams.

DISCLAIMER: The information contained in this column is the expressed opinion of the author only, and readers are advised to seek the advice of their personal flight instructor and others, and refer to the Federal Aviation Regulations, FAA Aeronautical Information Manual, and instructional materials before attempting any procedures discussed herein.

EDITOR'S NOTE: Richard Morey was born into an aviation family. He is the third generation to operate the family FBO and flight school, Morey Airplane Company at Middleton Municipal Airport – Morey Field. Among Richard's diverse roles include charter pilot, flight instructor, and airport manager. He holds an ATP, CFII, MEII, and is an Airframe and Powerplant Mechanic (A&P) with Inspection Authorization (IA). Richard has been an active flight instructor since 1991 with over 15,000 hours instructing, and almost 19,000 hours total time. Of his many roles, flight instruction is by far his favorite! Comments are welcomed via email at Rich@moreyairport.com or by telephone at 608-836-1711. (www.MoreyAirport.com) ❑

Off-Airport Landings... Cornfields Not Recommended!

by Pete Schoeninger

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Pete Schoeninger

Q: What is a thumb compression check? I note that it is mentioned frequently in accident reports.

A: After an airplane accident, if a pilot reports engine failure, an investigator may do two things initially to verify if the engine failed, or not. The first check that is completed will be to turn the engine and see if it turns freely. The second check is often a thumb compression check. That is done by removing a spark plug from a cylinder and putting your thumb over the spark plug hole. Then you turn the engine until the cylinder you have "thumbed" is coming up on compression. Your thumb will feel air trying to escape IF the cylinder is intact. But if there is internal damage, then probably there will not be any compression.

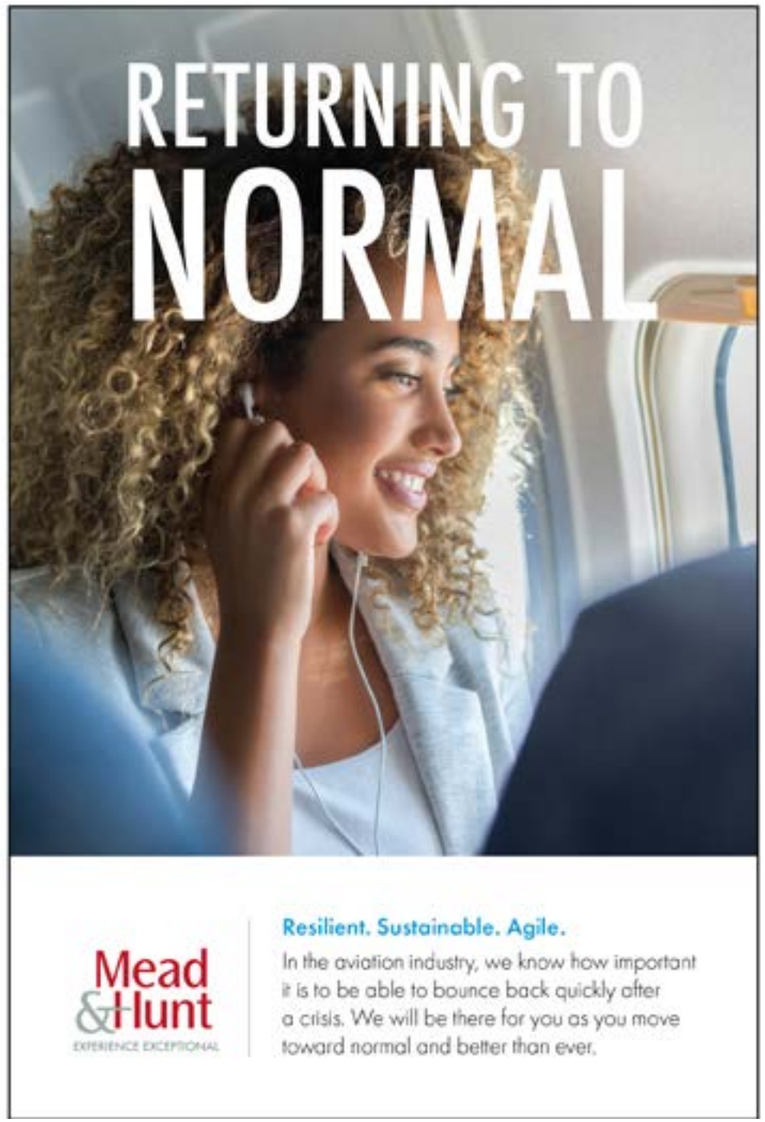
Q: Do you remember 80 Octane fuel, and can you tell me anything about it?

A: 80 Octane aviation gasoline, dyed red, was used by airplane engines with relatively low compression. Its demise was in the early 1980s for lack of demand. With the approval of non-leaded car gas as aviation fuel (available downtown for less $$ than aviation fuel), the demand for 80 Octane dropped. Another reason, beginning in about 1978 and from then on, both Piper and Cessna put engines requiring 100LL octane in their entry level airplanes, which further lessened the demand for 80 Octane.

Q: I heard about a guy in a remote area who does an annual inspection in one hour. Are there regulations that would prohibit a "quickie" annual inspection like this?

A: There is no minimum time specified in the Federal Aviation Regulations (FARs) to do an annual inspection, but find the required items (more than 50) at www.faa-aircraft-certification.com/43-appendix-d.html. In my opinion, no one can do all these items in one hour.

Q: I recently rode in a Cherokee Six which has four fuel tanks. About 10 minutes after takeoff, the pilot selected another tank for 5 minutes, then the third, then the



fourth. I forgot to ask him why. Why run 5-10 minutes out of each tank shortly after takeoff?

A: If an airplane's fuel tank(s) is filled full with cool fuel, and then that tank is exposed to heat like the sun shining on it, the fuel will expand, and vent overboard. If you take just a bit off the top of each tank, you may prevent this loss of fuel. Fans of Charles Lindbergh (like me) will remember that on his non-stop flight from New York to Paris, he burned about 15 minutes out of each tank before settling into his routine of an hour or two out of each tank as his flight progressed.

Q: A heard an old-timer tell a young pilot, if you have an emergency requiring an off-airport landing, do NOT land in a field with tall corn. Is this true, and if so, why?

A: Yes. From the air, a field of lush green tall corn looks like a perfect place for a gentle landing. But you may flip nose down violently on contact with the corn and smack the ground nose-first at a high rate of speed, which has seriously injured and killed people. If possible, try and touch down somewhere which will allow reasonable, instead of instant, deceleration.

EDITOR'S NOTE: Pete Schoeninger is a 40-year general aviation veteran, starting out as a line technician as a teenager, advancing through the ranks to become the co-owner and manager of a fixed base operation, and manager of an airport in a major metropolitan community. He welcomes questions and comments via email at PeterSchoeningerLLC@gmail.com.

DISCLAIMER: The information contained in this column is the expressed opinion of the author only, and readers are advised to seek the advice of others, and refer to aircraft owner manuals, manufacturer recommendations, the Federal Aviation Regulations, FAA Aeronautical Information Manual and instructional materials for guidance on aeronautical matters. ❑

Born In Ohio...
Aerial Application Turns 100

August 3, 2021, was the 100th anniversary of an important event backing up Ohio's claim as the "Birthplace of Aviation." In 1921, less than two decades after the Wright Brothers became the first to achieve powered flight, another milestone in aviation history occurred 20 miles from the Dayton bicycle shop where Wilbur and Orville invented the airplane. Over a Catalpa tree grove near Troy, an experiment set up by the Ohio Department of Agriculture resulted in the first documented use of an airplane to apply crop protection materials.

The history-making flight came as Ohio researchers were desperate for a way to prevent sphinx moth caterpillars from ravaging the state's valuable Catalpa tree crop. Controlling the caterpillars with insecticide dust dropped from an airplane was a far-fetched proposition 1921, when farmers spread

A modern-day agricultural aircraft at work.
Chris Bildilli Photo

insecticides by hand and aviation was still in its infancy. U.S. Army test pilot, Lt. John Macready, taking off from what was then an aviation experiment station at McCook Field in Dayton, applied the insecticide from a World War I surplus biplane, using an improvised spreader device to deposit the dust evenly. The idea worked. The insect pests were successfully dispatched; the trees grown for use as telegraph poles and fenceposts were saved; and a practice now vital to crop production, wildfire-fighting and mosquito control was born. ❑

Onward & Upward
For aviation professionals, the future is looking good.

by Mark Baker
AOPA President and CEO

Mark Baker

Still grappling with the effects of the pandemic, the U.S. economy and job market have been unpredictable, to say the least. "Now hiring" and "help wanted" signs continue to hang in the windows of businesses that are struggling to recover. But while the demand is there, the workers don't seem to be.

Despite signs of recovery, there remains a record 10 million job openings, according to the U.S. Bureau of Labor Statistics. This labor shortage has affected every industry — including aviation.

Like many sectors, a lack of resources has been a significant problem for some airlines, especially with the early retirements of senior crewmembers in the wake of the pandemic. In a reversal from the woes of 2020, airlines are now calling for a mass hiring of pilots as the aerospace sector turns in a positive direction.

Over the summer, we saw a sudden surge in travel. Many Americans, especially those newly vaccinated, were willing to cash in on their very postponed vacations. In August, TSA numbers hit another high with 2.2 million travelers passing through security daily — the most since pre-pandemic levels.

And while the friendly skies haven't been too friendly

to the passenger, it's a different story for the crew up front. Pilots are reaping the benefits of the economic recovery. Delta Air Lines announced its plans to hire 1,000 new pilots by summer 2022, while United said it will hire 1,500 pilots by next year and 3,000 by 2023. Meanwhile, American Airlines plans to hire 350 pilots by year's end and 1,000 in 2022.

The same demand is there for business aviation, with Argus TraqPak forecasting that private aviation may emerge from the COVID era as much as 10 percent larger than it was before the virus. In fact, June 2021 was the busiest month for private flights since October 2007. Those stats are backed up by Textron Aviation's second quarter results: The aircraft manufacturer delivered 44 jets, up from 23 last year, and 33 turboprops, up from 15 in 2020.

There's a call for qualified aviation professionals across all facets of the industry. Boeing's latest report showed a need for 763,000 pilots, 739,000 technicians, and 903,000 cabin crew members from now until 2039. In commercial aviation alone, the industry is projected to need at least 2.1 million new personnel in the coming years. Many of these jobs will come with a nice paycheck. In fact, making a living as a pilot ranked number 26 in U.S. News and World Report's 100 Best Jobs of 2021.

While this demand is great news for current aerospace professionals, those aspiring to a career still need a pathway. The industry has work to do when it comes to recruiting younger generations to aviation, to help fill this pipeline. Getting your foot in the door is often the biggest obstacle to making a living as a pilot, especially for those who don't come from legacy aviation families.

First impressions are key. Airshows, fly-ins, discovery flights, and community airport days are all great options to introducing outsiders to aviation. Visiting career fairs like the one at EAA AirVenture in Oshkosh, Wisconsin, is also a good way to make connections. According to one recruiter at this year's career fair, interest from young pilots asking about aviation careers was up an estimated 50 percent compared to 2019.

AOPA is also a great resource for aspiring pilots. We've got a wealth of knowledge in our Pilot Information Center. The specialists can answer questions on flight schools, medical certification, and the process of getting started. We've also got an incredible High School Aviation STEM curriculum, free to schools, that introduces students to careers in aviation; our program is in more than 300 schools across 36 states. And it includes a diverse pool of students — 20 percent of participants are female, and 45 percent are people of color. I'm proud to see how much the program has grown since its inception in 2015. This past year, the AOPA Aviation STEM curriculum received two accreditations from education research firm STEM.org — a huge honor.

At the same time, the very definition of aviation is evolving, as the aerospace industry is entering a new era of emerging technologies. From unmanned and supersonic flight to alternative fuels, all signs point toward a bright future — one that will need a new generation of professionals. Like any industry, uncertainty is inherent but a career in aviation won't lead you astray. We all love the sense of freedom each time we get out and fly — getting paid to do it is just the icing on the cake.

The demand is there. We need to work together to ensure that a great supply of talent is also there.

mark@aopa.org ❑

65th Wisconsin Aviation Conference To Be Held In Elkhart Lake

The Wisconsin Aviation Conference (WAC) is returning, October 17-19, and will be held at the Osthoff Resort in Elkhart Lake. Check out the current conference agenda page on the Wisconsin Airport Management Association (WAMA) website for updates: **www.wiama.org**.

In addition to seminars and exhibits, "speed dating" with the FAA Chicago Airports District Office is returning this year, but appointments are limited. Airport officials are urged to email director@wiama.org as soon as possible to reserve a time slot.

Thanks to the host city, Sheboygan, Wisconsin, and the host airport, Sheboygan County Memorial Airport (KSBM), WAC 2021 will be an exceptional conference for all attendees and an excellent opportunity to reconnect in person with friends, colleagues and officials. ❑

Pilots Working Together To Promote & Protect Airports

by Kyle Lewis
Regional Manager Government Affairs & Airport Advocacy
Great Lakes Region
Aircraft Owners & Pilots Association


Kyle Lewis

The price of freedom is eternal vigilance," quoted by Thomas Jefferson. While his thoughts at the time were focused on a new-born republic and instituting democracy, the application of vigilance is true to form in modern America.

General Aviation is unique in the United States. We, as pilots and aircraft owners, experience a freedom that few in the world know. We can begin a flight from a small rural airport in Indiana, make our way across the foothills of the Appalachian Mountains, stop for fuel in "wild and wonderful" West Virginia, then have lunch near the grounds of the first controlled powered flight on the Outer Banks of North Carolina. All made possible by the robust network of airports that reside near metroplexes, and those that are cut out of farm fields. AOPA is committed to the promotion and protection of these assets.

How Grant Assurances Protect Your Airport

An issue that we receive questions and concerns about on a regular basis is the non-aeronautical use of airport and hangar facilities. While every airport is different, let's focus on airports that receive FAA Airport Improvement Program (AIP) grant dollars. When an airport receives this federal grant funding, there are stipulations that an airport sponsor must abide by, one of those being making the airport available to aeronautical users (Grant Assurance #19-Operation and Maintenance). Hangars, both sponsor-owned and private-built on a land lease on these public facilities, fall under the obligation to be made available to aeronautical users. Any non-aeronautical use must be approved by the FAA with stipulations in a lease to return the facility to aeronautical use when the demand arises.

Any non-aeronautical use lease must include a rate that is market-rate for commercial space or storage, which is usually higher than a hangar lease rate. The

FAA will require a proposal showing the reason for lack of aeronautical use, lease rates, provisions to return the facility to aeronautical use when demand arises, and that the non-aeronautical use lease cannot exceed five years.

There are avenues for an aeronautical user to file a complaint with the FAA if a facility is not being made available to them. This would include a "Part 13 or Part 16" complaint as outlined in Title 14 of the Code of Federal Regulations Part 13 and Part 16.

It is always the advice of AOPA to try and resolve an issue locally before filing a complaint. In fact, the FAA requires that the parties try to resolve the issue locally before initiating a compliance investigation. I, along with other AOPA staff, are happy to help in a situation that may arise and offer advice and resources to resolve the problems.

100LL AVGAS

The current use of 100LL AVGAS is under fire in communities across the country. In August, the Santa Clara, California, County Board of Supervisors voted to expeditiously eliminate lead from operations and simultaneously pursue options to close the Reid-Hillview airport as soon as possible. AOPA is working with the FAA and private industry on a path toward quicker implementation of a universally acceptable 100 octane lead-free fuel for our GA fleet. In the meantime, we need to be aware and vigilant of the concerns that may present themselves in local communities.

AOPA can and will help educate local leaders on the current use of fuels, and what is being done by the industry and the FAA to transition to a lead-free fuel source. This is a dynamically important topic that AOPA, and other associations, are engaged in at all levels, and we need advance warning of any discussions on this topic at your airport. Engage with your local Airport Support Network (ASN) Volunteer or become one yourself.

Airports face a myriad of issues, no matter the size. Funding, development, calls to close, and the political fallout at the very local level. While the issues are sometimes very similar, the solutions or resolutions can be very different given the local environment. AOPA relies on our ASN Volunteers to help navigate those issues. Local knowledge is powerful, and there is only one way to get that knowledge, and that's by working with a local resource – YOU!

Do you want to help your airport? Do you want to make sure your airport remains accessible and sustainable? If that is a simple yes, visit aopa.org/asn and learn more details about the AOPA Airport Support Network, and join the 2,000 volunteers already enlisted. kyle.lewis@aopa. ❑

GAMI Receives Unleaded Avgas STC

The decades long effort to find a suitable replacement for 100-octane leaded avgas, moved one step closer to a solution July 27 when General Aviation Modifications Inc. (GAMI) announced that it has received two supplemental type certificates authorizing the use of its G100UL high-octane unleaded avgas. One STC covers a limited number of models of Lycoming engines and the second is for a limited number of Cessna airframes.

George Braly, chief engineer at GAMI, said the company will work with the FAA to expand the approved model list (AML) of engines and airframes after a period of testing with the Lycoming-powered Cessnas. Braly reports that he has been in discussions with Embry-Riddle Aeronautical University about possibly using the university's fleet of Cessna 172s as part of a controlled test, although that discussion is ongoing.

While the STCs represent a significant step in the long path toward the elimination of leaded avgas, it will be some time before G100UL might be available fleetwide, and then only if it proves itself in this large-scale test (AOPA). ❑

Splashing In Northern Idaho

Known as Idaho's crown jewel, Priest Lake, beneath the Selkirk Mountains, is somewhat unspoiled, remote, and uncrowded as compared to others further south.

by Yasmina Platt

Although Priest River (a small town) and Priest Lake in northern Idaho are both great places to fly to, the fuel system icing inhibitor "Prist" is not required (at least in the summer).

Yasmina Platt

I had heard wonderful things about the "Coeur d' Alene" (CDA) area from fellow seaplane pilots. Some refer to it as a "mecca" for float flying, so I had to check it out for myself. My hubby and I jumped into the motorhome (having made reservations back in February) and spent a month in the area this summer.

As many of you know, renting a seaplane isn't as easy as renting a landplane. In fact, only a handful of Fixed Base Operators or flight schools can rent you one without their flight instructor. CDA Seaplanes (www.cdaseaplanes.com) is the company I flew with, flying their Cessna 172 on straight floats, and I highly recommend them. They require that their flight instructor is onboard with you, whether or not you are seaplane rated.

Our mornings started and ended from a private dock on the Pend Oreille River, east of Priest River. From there, we explored many pristine lakes, rivers, and even a waterfall.

As much as I like flying on lakes, river flying is much more fun to me. It's more challenging, and I enjoy all the twists, turns, and obstacles (yes, including boats).

I also really enjoyed the Clark Fork area of Lake Pend Oreille. The landscape is beautiful and the Gauntlet – a horseshoe-shaped portion of the Clark Fork River – was fun!

As far as scenery goes, I really enjoyed landing on Sullivan Lake and admiring Pewee Falls (both in Washington State,

As far as scenery, I really enjoyed landing on Sullivan Lake and admiring Pewee Falls (both in Washington State, actually) from the air. Although a local travel brochure said the waterfall can only be seen from a kayak on the water, we proved them wrong.

Contributing Editor Yasmina Platt with the Cessna 172 on straight floats she rented from Coeur d'Alene (CDA) Seaplanes in Sandpoint, Idaho.

If you are not (yet) a seaplane-rated pilot but want to join in the fun, you are in luck. Both lakes have awesome backcountry airstrips, you can camp out at, and have direct access to the respective lakes (pack your swimming suit!). The photo above shows Sullivan Lake State Airport (09S), which is owned by WSDOT's Aviation Division and has a 1,765 by 100 ft grass runway.

The photo to the right shows Cavanaugh Bay Airport (66S), which is owned by ITD's Division of Aeronautics and has a 3,100 by 120 ft grass runway. 66S even has a restaurant across the street. What a deal! As you may imagine, they are only open in the summer (probably June to September) as snow/ice is prevalent in the area.

The Tanglefoot Seaplane Base (D28) is near 66S. Preeeetty cool!

actually) from the air. Although a local travel brochure stated that the waterfall can only be seen from a kayak on the water, we proved them wrong.

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Sullivan Lake State Airport (09S) is owned by the Washington State Department of Transportation, Aviation Division and has a 1,765 by 100 ft grass runway. Cavanaugh Bay Airport (66S) is owned by the Idaho Transportation Department, Division of Aeronautics and has a 3,100 by 120 ft grass runway. 66S even has a restaurant across the street. What a deal! As you may imagine, these airstrips are only open in the summer, as snow/ice is prevalent in the area.

The area also has multiple restaurants with docks where one can park their seaplane to grab some food. One example is "Forty One South Restaurant," located at The Lodge at Sandpoint in Sagle, Idaho.

We enjoyed our time so much that central Idaho may be on our list for next summer. I would appreciate any suggestions you might have regarding airstrips and bodies of water to check out there. In the meantime, fly safe and fly often!

ABOUT THE AUTHOR: Yasmina Platt's new job has her planning the future of aviation infrastructure for Joby's electric Vertical Takeoff and Landing (VTOL) aircraft. She also writes an aviation travel blog called ***"Air Trails"*** (**www.airtrails.weebly.com**), in addition to articles on pilot destinations for ***Midwest Flyer Magazine***. Pilots can locate articles Yasmina has written by going to **www.MidwestFlyer.com** and typing **"Yasmina"** in the search box. ❑

A Celebration of Aviation History & Friendship

Field Morey (center), author of the book "Four Years Above The Earth," with his daughter, Debbie Maier, and son, Richard Morey.
Dave Weiman Photo

(L/R) Dave Weiman, Peggy Weiman, John Lotzer and Jan Lotzer.

Celebrating the release of Field Morey's new book, *"Four Years Above the Earth"* at the Boathouse Restaurant in Minocqua, Wisconsin, August 6, 2021, were (L/R) Dave and Peggy Weiman of *Midwest Flyer Magazine* with John and Jan Lotzer, longtime owners of Gran-Aire at Milwaukee Timmerman Airport and Waukesha Flying Service, Waukesha, Wisconsin. The Morey and Lotzer families date back to pre-WWII days in aviation history with the late Bill Lotzer hosting the first EAA Fly-In in 1953. The Weiman, Lotzer and Morey families have been friends since 1978, when the Weimans launched *Midwest Flyer Magazine* (then *Wisconsin Flyer*). Dave Weiman was a contributing photographer to Morey's book which is available through Amazon.com and BarnesAndNoble.com ISBN: 9781662422980. Free subscriptions to *Midwest Flyer Magazine*, which published an extensive review of the book in its June/July 2021 issue, are available at **www.MidwestFlyer.com** ❑

Aeronautics Report

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Are you Ready for Takeoff?

by Levi Eastlick
WisDOT Bureau of Aeronautics


Levi Eastlick

Do you treat takeoff and departure as seriously as an approach and landing? Many pilots seem more concerned with navigation, enroute weather, their arrival, and landing at their destination than with their takeoff and departure. This is unfortunate since the accident rate for takeoffs is about equal with that for landings. Pre-flight planning for the takeoff portion of the flight is a fundamental step too often overlooked. The takeoff plan, focused on determining if there is enough runway available and sufficient climb performance for the airplane to clear the terrain ahead, begins with calculating an accurate "weight and balance." The key word here is "accurate!" Use a scale to weigh baggage instead of guessing because, odds are, you will guess light. Also, make sure the weight and balance data you are using is for your specific aircraft. Not all 172s weigh the same. As the saying goes, *"aircraft are like pilots… they gain weight with age."*

Next, consider the airport environment and, specifically, the runway we plan to use. A call to Flight Service or logging on to your favorite aviation planning app will give you updated weather and Notices To Airmen (NOTAMs), which should give you a good awareness of available runways and the prevailing wind direction. When calculating required runway length, some pilots use "worst case" criteria as a preflight planning tool. They look at the aircraft's performance tables to determine the required runway length for an airport at a 2,000 ft elevation with the airplane at maximum certified takeoff weight, no wind, and an air temperature at the highest degrees they will likely encounter. Then they add 50 percent for a comfort factor. If the runway is not long enough under these conditions, then a closer look is required. Jet and transport aircraft flight manuals provide a great deal more takeoff performance data than light aircraft manuals.

One useful table not available for light aircraft is the "accelerate-stop distance," but you can get a good idea of


WisDOT Aeronautics Photo

that distance for your aircraft by adding the required takeoff distance to the landing distance, and then add 50 percent for pilot technique.

Another major factor in an aircraft's takeoff performance is the "wind direction and speed." Unfortunately, many takeoff accidents involve taking off into unfavorable wind conditions. When deciding which runway to use, consider that a headwind that is 10 percent of the takeoff airspeed will reduce the no wind takeoff distance by 19 percent, whereas a tailwind, which is 10 percent of the takeoff airspeed, will *increase* the no-wind takeoff distance by about 21 percent.

Another wind factor to consider is maintaining directional control of the aircraft during departure. While many pilots use the *demonstrated crosswind component* as a reference for landings, it is also a useful number to use for takeoff planning.

While most runways in Wisconsin are generally flat, do not underestimate the effect of "runway slope" on takeoff performance. A runway with an upslope of 1 percent will add 20 percent to your takeoff run. The FAA Chart Supplement is your best resource for runway gradients. Additionally, runway contamination can have a significant effect on the amount of runway required. Light aircraft manuals offer very little information on the takeoff performance from a runway with snow or standing water, so pay close attention to runway condition NOTAMs, especially in the winter.

Now that your takeoff is carefully planned, are you ready to execute the plan? This is the stage of flight where I see many pilots not focused on the risks they are about to encounter. One aspect of a safe takeoff is having an "abort plan." Too often it seems that pilots increase power and wait for rotation speed, but do not have an abort plan, nor are they prepared for an emergency. One factor may be if takeoff speed is not reached by halfway down the runway, you will abort the takeoff. The benefit of this rule of thumb is that it will work for any length runway. There are other good reasons to power down and stay on the runway. Discuss this topic with your favorite CFI.

The most vulnerable time for an aircraft to lose power is from liftoff to at least 1,000 feet above ground level. Are you prepared and ready to react to an engine failure? Generally, the best course of action is to maintain minimum safe glide speed and land straight ahead, which usually takes an abnormally large amount of nose down input. Have you practiced for this recently (at a safe altitude of course)? Turning back to the airport is fraught with risks and a stall/spin/crash is an all-too-common outcome.

Takeoffs are deceiving since they appear relatively easy. Most flight instructors typically let new students handle all, or at least most of their first takeoff. However, the new student is only flying the aircraft; the CFI is managing all the other factors affecting the takeoff. It is essential to get into the habit of developing a firm plan of action in your mind before starting every takeoff roll. Never forget that takeoff is always optional, eventually landing is mandatory. ❑

EDUCATION

EAA AeroEducate Program Opens Wide Spectrum of Possibilities For Youth

OSHKOSH, WIS. – EAA AeroEducate, a bold new program that opens a wide spectrum of possibilities for young people interested in aviation, was officially launched on July 26, 2021, at EAA AirVenture Oshkosh, initiating an interactive, educational, and engaging experience for young people ages 5 to 18. AeroEducate's web-based resource provides clear, age-appropriate pathways to aviation and aerospace engagement, and even career paths. A multitude of turnkey, easy-to-use aviation-themed activities are available for youth, as well as for teachers and EAA chapters.

"AeroEducate takes the best elements of EAA's successful youth engagement programs and adds online access for youth, their parents, and their teachers," said Jack J. Pelton, EAA CEO and Chairman of the Board. "In addition, comprehensive programs from top companies worldwide lift the potential of the program even higher with access to resources in aviation, engineering, business, and more."

AeroEducate is available for youth, teachers, and chapter leaders to enroll as beta test participants. The beta testing will ensure that resources are fully available, easy-to-access, and well-integrated. That includes contributions from the corporate supporters: United Airlines' Aviate, Siemens Digital Industries, and Airbus. ❑

United Aviate Academy To Train New Pilots Using Boeing's Comprehensive Suite of Training Solutions

OSHKOSH, WIS. – United Aviate Academy has selected Boeing (NYSE:BA) to provide a comprehensive suite of training tools, materials, and digital solutions to develop and provide early career training to United Airlines' next generation of pilots. The companies commemorated the five-year training agreement with a ceremonial signing event at EAA AirVenture Oshkosh, July 26, 2021.

The comprehensive training package of courseware and multimedia materials spans Boeing's portfolio of service offerings, including its Jeppesen and ForeFlight solutions, and provides United Aviate Academy with the tools to help cadets master key concepts and information needed to confidently and safely pilot aircraft. ❑

MINNESOTA AERONAUTICS BULLETIN
www.dot.state.mn.us/aero
The State of Minnesota provides this Technical Bulletin in the interest of Aviation Safety and to Promote Aeronautical Progress in the State and Nation.
Cassandra Isackson, Director
Minnesota DOT Office of Aeronautics
395 John Ireland Blvd, MS 410 • St. Paul, MN 55155
651-234-7200 or (toll free) 1-800-657-3922

Hangar Loan Program Provides Funding For Aircraft Storage

by Luke Bourassa
South Region Development Engineer
MnDOT Office of Aeronautics


Luke Bourassa

Funding for airport projects in Minnesota comes from a variety of different sources. One of the more unique programs is Minnesota's "Hangar Loan Program." Rather than force hangar projects to compete for grant dollars with other infrastructure needs, this program provides loans to publicly owned airports to construct revenue-generating hangar facilities and provides protection for the fleet of general aviation aircraft registered in Minnesota. The program was established by the Minnesota State Legislature in 1957 and has provided funding for the construction of over 1,000 aircraft hangars throughout the state for more than 60 years. The program is administered by the Minnesota Department of Transportation (MnDOT).

The Hangar Loan Program has a total capitalization of $4.4 million. The funds are loaned out to airports that demonstrate a need for hangar facilities, can be used to construct new hangar facilities, and are available for up to 80 percent of the actual construction costs. The community requesting the loan is responsible for the remaining 20 percent of construction costs. The loan agreement obligates the airport to own and maintain the hangar for a minimum of 20 years and requires the hangar to be used for storing aircraft. Airports must reimburse the State by making monthly payments over a period of 20 years or less. Currently there is no interest charged to participating airports, and there are 10 completed hangar projects making monthly payments. As airports repay their hangar loans, the funds go back into the program and can be loaned out again to other airport sponsors.

Communities interested in using this program need to add the hangar and associated site prep work to their Capital Improvement Plan (an airport's CIP is a list of potential projects that an airport is pursuing in the next several years). Once the project is on an airport's CIP, the airport sponsor needs to submit a request letter to MnDOT with some basic details of the project, including a drawing of the hangar site shown on an approved airport layout plan and an estimated cost of the project. Once MnDOT receives the request with all the details needed, the project is added to the Hangar Loan Program wait list. Currently there are six projects waiting for loans. Once a project reaches the front of the line, the sponsor is notified by MnDOT.

The process of receiving the hangar loan is similar to a State Airports Funds grant. The airport sponsor is responsible for the hangar design, construction advertisement, bid letting, construction supervision and administration. MnDOT staff will perform a final inspection once the hangar is complete, before dispersing the loan and moving the project into the repayment phase.

The MnDOT Hangar Loan Program is one of the tools that MnDOT uses to help airports meet the needs of flyers in Minnesota. The purchasing power of the program has been diminished as the cost of construction has risen in recent years, so the wait time for loans has increased. Even with the increased wait time, this program is still a popular option for airports looking to provide additional hangar space for aviators in their communities.

To learn more about the Hangar Loan Program, contact Luke Bourassa at luke.bourassa@state.mn.us or 651-508-0448. ❑

MnDOT Weather Computers At Airports Get An Update... Printers Are Being Phased Out!

by Mike Hartell
Airport Operations Director
MnDOT Office of Aeronautics


Mike Hartell

Over the past 30 years, we have seen a lot of changes in our ability to gather and display weather information at Minnesota's local airports. MnDOT has a goal to make it as easy as possible for general aviation pilots to access last-minute weather and NOTAM information before departing, so they can make sound flying decisions with the best available information. To help with that goal, MnDOT's Office of Aeronautics has established weather computers at each public airport in the state. We refer to those systems as the "MnWAS" computers, which stands for Minnesota Weather Access System.

The current MnWAS computers were installed around 2012 and have gone through several changes during the past nine years. Each system was originally deployed with a Windows 7-based computer, and a printer. The computer was then connected to an internet connection provided by MnDOT or the local airport.

We are in the process of moving away from Windows 7 and to a Chrome operating system. The project is about 50 percent completed, and we hope to complete the updates and printer removals within the next year. To the user, there will be no change in look and feel. But the computer will be running in Google's Chrome browser.

When a user interfaces with the browser and completes their session, they may close all windows to reset the system and erase personal information that the user had entered. If the computer is left alone for 20 minutes, the new Chrome-based system self-resets and erases any personal information left behind.

MnWAS computer users can report problems and submit comments about the new computer system, or anything airport related. Just click the "Report the issue here" link on the right-hand side of any MnWAS computer's home screen.

The good news is that the electronics remain capable of serving the intended purpose. The bad news is that the printers that are currently installed are no longer supported, as there are no compatible drivers for these old machines. During the past year, MnDOT began installing the new Chrome OS on MnWAS computers and removing the old printers.

A number of people have asked about the plan for the printers. The answer is that MnDOT stopped supporting the printers in 2016 and decided to leave them in place until they failed. Now, with the OS change, the old printers will be retired and removed, and each airport will need to determine if a printer is needed. If so, the printer will need to be supported locally.

To keep this all simple, MnDOT is installing new switches at each airport as we update the internet connectivity. The new switches allow additional devices (like a printer) to be put on the network. We recommend that airports that wish to continue with an open printer, that they purchase a printer that supports wireless printing. This will allow a pilot to log on to the airport WIFI, see the printer, and print any documents they need. Wireless printers could work with mobile devices and pilot-supplied computers.

If you need (or want) to report a problem with any of the updated MnWAS computers or have any questions or comments about the new system or the airport, you can use the link on the right-hand side of any MnWAS computer's default screen to do so. Just click the link, fill out the form, and it will be automatically routed to the appropriate MnDOT staff person. We love to hear feedback on how we are doing and new ideas on what would make airport operations better for the users. Smooth landings to all! ❑

Some of the Pilots Who Flew To EAA 2021 & Their Airplanes

Easton, "The Kid Reporter," with a Panther LS, which is owned by Sean Sullivan of Fort Worth, Texas.
Dave Weiman Photo

by Easton, The Kid Reporter

Hi guys and gals! Welcome to another article about EAA AirVenture Oshkosh from yours truly, "Easton, The Kid Reporter."

I met many people this year (2021), from volunteers to people who have owned – or own – from one to as many as six or more airplanes. I will describe their intros into aviation and much more! I hope you enjoy my article.

My adventure began like this… My grandparents and I started by walking through the main gate at AirVenture. Security checks was the norm… It didn't matter how young or frail you were, or who you were… All bags needed to be checked, and that's a good thing! But what am I waiting for? Let's get started with my first interview.

Mark Baty, a retired mechanical engineer from Georgetown, Kentucky, grew up in Cedar Rapids, Iowa, and got his first job there at Rockwell Collins – the multinational

Mark Baty with his award-winning Van's Aircraft RV-9A.
Dave Weiman Photo

corporation, providing avionics and information technology systems and services to government agencies and aircraft manufacturers.

When I met Mark in the aircraft display area which is reserved exclusively for Van's Aircraft RVs, of which nearly 11,000 have been built so far, he was standing proudly by his RV-9A which he built himself and flew to Oshkosh this year. The airplane took Mark less than 5 years to build…a total of 3,300 hours. He finished the project just in time for EAA, and even flew away with top honors. Mark was one of several homebuilders to receive an Outstanding Kit Award for Workmanship. *Nice going, Mark!*

All of Van's RVs, from their single-seat RV-3, to the latest RV-14, are all-aluminum, low-wing monoplanes of monocoque construction (https://www.vansaircraft.com/), and as you can see from the photos that accompany this article, the builder can paint them any way they want.

Mark has been coming to EAA for 15 years. As his career in mechanical engineering evolved, he moved to Detroit, Michigan and worked for Ford Motor Company, a major sponsor, by the way, of EAA AirVenture Oshkosh. *Thank you, Ford Motor Company!*

Next up was Tom Potts. Tom is also from Kentucky and

Mark Baty's RV-9A.
Dave Weiman Photo

resides in Louisville. He has been coming to EAA for 20 years and has been a volunteer for the past 5 years. Tom's wife typically accompanies him to AirVenture, however, sadly, she had knee surgery and was unable to attend this year.

It took Tom two years to build his RV-10A, and he still found time to help a friend build his RV-6A. *How nice is that?*

(L/R) Gary Steube, Glen Marshman, and Joshua McVay with Gary Steube's "Just Aircraft Highlander" in the background.
Dave Weiman Photo

Glen Marshman and his Rans S-20 Raven doing some back-country flying in Moab, Utah.

James Walsh with his RV-4.
Dave Weiman Photos

Next up was Glen Marshman of Longmont, Colorado. The plane Glen flew to Oshkosh this year, his 20th year at AirVenture, was a Rans S-20 Raven that he built, which is powered by a Rotex engine. The S-20 is an American homebuilt aircraft designed by Randy Schlitter at Rans Designs of Hays, Kansas. It was first introduced at AirVenture in August 2013 (https://www.rans.com)

A special feature to Glen's Rans S-20 is the tundra tires he installed, which enables him to land on rough terrain. And who doesn't want to venture out to some neat back-country airstrips and land on rough terrain? Glen sure does! His excitement for adventure flying really came through when talking with him and his buddies!

Glen currently owns four airplanes, but has owned several others over the years, including a Rans-6 and Rans-9; a Pitts Special; and a Piper J-3 Cub.

My next interview was with Nick Ugolini of Charleston, South Carolina, who flew to Oshkosh in his Nat Puffer-designed 6ZY MK-IV "Cozy" he built himself. The Cozy is constructed of fiberglass and foam, sandwiched together. It's a four-seat/single-engine aircraft, which is built from plans using basic raw materials. It is not a kit aircraft, although many of the smaller parts are available prefabricated. The Cozy is similar in design and construction to the two-seat Rutan Long-EZ, from which it is derived, with approval from Burt Rutan, that is. The aircraft is designed as a high-speed cross-country aircraft. VFR or IFR equipped…that's up to the builder!

Nick built a lot of wooden model airplanes as a kid, and in addition to the MK-IV, he has built a three-seat MK-III, also designed by Nat Puffer, and a Rutan VariEze.

All these aircraft are incredibly fast and fuel efficient with speeds in the 165 to 200 mph range, depending on the engine installed and their gross weight.

I hope to meet Mr. Rutan someday and look forward to reading his memoirs once they are written and released. His accomplishments in aviation are many, including designing the Beechcraft Starship and Voyager, and to think he got much of his inspiration by attending EAA AirVenture Oshkosh.

(L/R) Nick Ugolini and Roger Prevost with Ugolini's 6ZY MK-IV "Cozy."
Dave Weiman Photo

Next on my world-wind series of interviews was with James Walsh from Chicago, Illinois. Since James was a little boy, he always wanted to fly his own airplane to EAA AirVenture. He finally got his wish this year when he flew his RV-4 to Oshkosh. James has owned his RV-4 since 2019.

James served 10 years in the U.S. Navy and his job today is flying a Bombardier Global jet for a family. In describing his career as a personal bizjet pilot, James explained that there are two crews consisting of two pilots each, so there's always pilots available 24/7. *How cool is that?*

For my final interview of the year, I spoke with Dave Byers of Franklin, Indiana.

This was Dave's second trip to AirVenture in his gorgeous 1958 Piper PA-24 Comanche, which he has owned for 6 years.

The reason Dave got involved in aviation is because his cousin owned an airport. Dave is now a captain for United Airlines flying the Boeing 787 "Dreamliner," which he says, "Is truly a dream to fly!"

Well, I hope you guys and gals enjoyed my article highlighting some of the people I met at EAA AirVenture Oshkosh this year. "Aviation is an equalizer… It doesn't matter how much money you have, who you are, what you do or did for a living, or what you fly… It's about having fun!" (James Walsh).

Many thanks to everyone I interviewed. Your support and words of encouragement mean a lot to me.

And thank you, EAA CEO and Chairman Jack Pelton and staff for providing free admission to youth 18 years of age and younger, so that we may explore the world of flight!

Dave Byers with his 1958 Piper PA-24 Comanche.
Dave Weiman Photo

Until EAA AirVenture Oshkosh 2022, July 25-31, this has been *Easton, The Kid Reporter*, over and out!

EDITOR'S NOTE: Easton is 12 years old and active in sports, playing football, baseball, and basketball. He holds a first-level Black Belt in karate and has been attending EAA AirVenture Oshkosh since before he could walk. One of his many EAA experiences was watching the night airshow in 2010 when he was 2 years old and personally meeting EAA Founder Paul H. Poberezny that evening. The preceding interviews were done at random on the fly! ❑

Hundreds of Van's RV aircraft parked together at EAA AirVenture Oshkosh 2021.
Dave Weiman Photo

Van's Aircraft Announces High-Wing Aircraft, RV-15

For the first time ever, Van's Aircraft will be manufacturing a high-wing, total performance, RV-15, it was announced July 28 at EAA AirVenture Oshkosh 2021.

"We're pretty excited that here at AirVenture, we've opened the curtain to the Van's skunkworks, and let the community know that the RV-15 will be a high-wing, backcountry-capable, total-performance, all-metal airplane," said Van's Aircraft Vice President and Chief Operating Officer Greg Hughes.

Hughes said it is very important to Van's to include the community in what the company is doing.

"There's been a lot of talk over the last couple years from the community — 'Here's what we hope Van's does; here's what we think Van's should do' — and we wanted to be able to share with our community what we're doing and the direction we're going in."

While there currently aren't any more details available on the highly anticipated aircraft, Hughes said the community is welcome to share their input with the team.

Hughes continued: "While the design is fairly well along its way, there's still a few decisions that we might be able to make, and just hearing people's input is very valuable to us. We still have design refinements that our engineering team is working on, and when you change one thing on an airplane, a lot of other things can change, so we don't want to promise anything to the public. The Van's engineering methodology is total performance, and takes the time that it takes to get it just right, so when people ask, 'When is it going to be done?' When it's done!"

This RV-10, owned by Leo Knowlden of Clarkston, Michigan, got a lot of attention on the flight line at EAA AirVenture Oshkosh.
Dave Weiman Photo

United Parcel Service's "Queen of the Skies" Makes Oshkosh Appearance

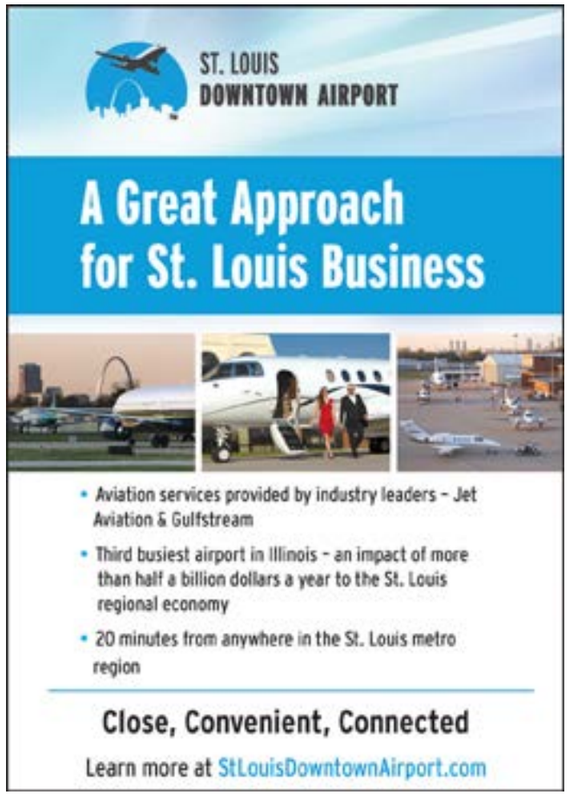
OSHKOSH, WIS. – UPS flew one of its "Queens of the Skies" – a new Boeing 747-8F – to EAA AirVenture Oshkosh, arriving at Wittman Regional Airport July 27, 2021. Among the operating crewmembers onboard was Captain Katie Wrobel of Anchorage, Alaska. Other inbound crewmembers included Capt. Chuck Parker, with Capt. Mike Starnes as a safety observer. Outbound crewmembers included Capt. Jodi Budenaers, Capt. Kevin O'Donnell, and safety observer Capt. Greg Malter.

The 747-8F was open for tours that afternoon, as well as all day on July 28 and the morning of July 29. It was obviously the centerpiece of EAA's main display area of commercial and military aircraft. The aircraft departed Oshkosh prior to the July 29 afternoon airshow and the arrival of the U.S. Air Force Special Operations Command aircraft.

The UPS 747-8F fit well with EAA's "Salute to Humanitarian Aviation." UPS has delivered more than 450 million COVID-19 vaccines to date, and 30 million tons of personal protective equipment used by health care professionals during the pandemic.

The 747-8F has a hinged nose section that flips up to allow shipments of extra-large or extra-long freight to be loaded and unloaded.

In 2016, UPS ordered 14 Boeing 747-8 Freighters. UPS later exercised options to order 14 additional Boeing 747-8F aircraft, providing additional capacity in support of accelerating demand for U.S. and international air services. By the end of 2022, UPS will have added more



A United Parcel Service (UPS) Boeing 747-8F arrives at EAA AirVenture Oshkosh 2021, July 27, 2021. *EAA Photo by Andrew Zaback*

The UPS Boeing 747-8F departs Wittman Regional Airport, Oshkosh, Wisconsin, July 29, 2021. *EAA Photo by Jim Raeder*

Orbis Flying Eye Hospital MD-10. *Dave Weiman Photo*

Samaritan's Purse DC-8. *Dave Weiman Photo*

UPS Captain Katie Wrobel

The UPS Boeing 747-8F on display at EAA AirVenture Oshkosh 2021. *Dave Weiman Photo*

The large transport aircraft display area at EAA AirVenture Oshkosh 2021. *WISDOT Photo*

than 50 additional aircraft to its fleet, including 747s, 767s and MD-11s, adding capacity for customers on both U.S. and international routes.

"As we celebrate the 30th anniversary of UPS Airlines, we are seeing unprecedented demand for our air products," UPS Airlines President Brendan Canavan said when the B747-8F order was announced in 2016. "The new freighters will allow us to continue upsizing aircraft on routes and will create a cascading effect that will boost capacity on regional routes around the world."

"UPS has clearly tapped into the power and efficiency the 747-8 Freighter brings to the market," said Boeing Commercial Airplanes president and CEO Kevin McAllister. "We're impressed with how UPS is leveraging the airplane in its operations, and also excited to see them bring additional 767s into their fleet." ❑

Humanitarian Aircraft Missions Highlighted At Oshkosh

OSHKOSH, WIS. – EAA AirVenture Oshkosh hosted a special attraction this year that highlighted humanitarian aircraft that focus on providing medical and relief assistance to those in need around the world. These aircraft and organizations were part of a salute to humanitarian aviation during the 68th edition of the EAA fly-in, July 26-August 1, at Wittman Regional Airport in Oshkosh, Wisconsin:

Orbis Flying Eye Hospital: This MD-10 aircraft travels around the world to provide eye care, such as cataract surgery and glaucoma treatment, to local hospitals in countries that have limited or nonexistent access.

Samaritan's Purse DC-8: The flagship airplane of the organization delivers tons of food, medicine, and supplies to aid victims of war, natural disasters, and other emergencies.

UPS 747-8F: This aircraft played a leading role in the delivery of over 400 million COVID-19 vaccines and tons of personal protective equipment (PPE) used to fight the pandemic in the U.S.

Cessna 208 Caravan: The Remote Area Medical organization's aircraft has three pop-up medical clinics in it, which includes medical, dental, and vision to assist in disaster situations.

Air Force C-17: This aircraft has Negatively Pressurized CONEX (NPC), which filters contaminated air with clean air to prevent the spread of disease and contamination. ❑

EAA CEO & Chairman Jack Pelton Sums Up Success of AirVenture 2021


Jack Pelton

"This was perhaps the most challenging set of circumstances we've ever faced as an organization to make the event happen. I could not be more proud of our volunteers, staff, and participants on the way they came together to exceed our expectations and make AirVenture 2021 a truly memorable experience."

Attendance: Approximately 608,000 – Only the third time attendance has surpassed 600,000 and within 5 percent of 2019's record total. Comment from Pelton:

"We went into this year not knowing what AirVenture would look like and how big of an event was possible. The aviation community spoke loudly, though – it was ready to come to Oshkosh and we were happy that we could welcome them. Our theme was 'The Wait is Over,' and indeed it was. And the wait was worth it. There was joy and excitement throughout the grounds, and it set the stage for the return of AirVenture, making us very excited for the future."

Total Aircraft: More than 10,000 aircraft arrived at Wittman Regional Airport in Oshkosh and other airports in east-central Wisconsin. At Wittman alone, there were 16,378 aircraft operations in the 10-day period from July 22-31, which is an average of approximately 116 takeoffs/landings per hour when the airport is open.

Total Showplanes: 3,176 including a record 1,420 vintage aircraft registered, plus 1,089 homebuilt aircraft, 354 warbirds, 148 aerobatic aircraft, 112 seaplanes, 33 ultralights, and 27 rotorcraft.

Camping: More than 12,000 sites in aircraft and drive-in camping accounted for an estimated 40,000 visitors alone!

Volunteers: More than 5,000 contributing more than 250,000 hours.

Commercial Exhibitors: 747.

Forums, Workshops, and Presentations: A total of 1,055 sessions hosted throughout the week.

Social Media, Internet and Mobile: More than 18.95 million people were reached by EAA's social media channels during AirVenture, with engagement of 1.08 million. EAA video clips during the event were viewed 3.48 million times.

International Guests: Despite travel restrictions that greatly limited the number of attendees from other nations, EAA still welcomed visitors from 66 countries during the week.

The Gathering Shines: The EAA Aviation Foundation's annual event to support its aviation education programs attracted more than 500 people and raised more than $1.7 million that will be focused on EAA's mission of growing participation in aviation.

Media: 567 media representatives on-site, from four continents.

Economic Impact*: $170 million for the five counties in the Oshkosh region (Winnebago, Outagamie, Fond du Lac, Calumet, and Brown). * - based on 2017 University of Wisconsin Oshkosh economic impact study

What's ahead for EAA AirVenture Oshkosh 2022, July 25-31?

Comment from Pelton:

"Planning is well underway for next year's event, including discussions during AirVenture 2021 about possible features and attractions for 2022. We also look forward to welcoming more international visitors next year to return AirVenture to a truly global reunion. In the next few months, we will be finalizing highlights in all areas to make the 69th EAA fly-in convention the World's Greatest Aviation Celebration."

Information updates are posted at EAA.org/AirVenture ❑

Award-Winning Aircraft of AirVenture 2021

Hundreds of gorgeous airplanes are displayed at EAA AirVenture Oshkosh each year in hopes of winning a "Lindy Award." Only a handful of owners come away with such honors, however. The Lindy Award is reserved for the best of the best!

Awards are presented across six categories: Homebuilts, Warbirds, Vintage, Ultralights, Seaplanes, and Rotorcraft. Entrants can only be considered for one category in a given year and are not eligible for the same or any lower-tier awards if they have won in the past.

Looks are considered in award judging, but the quality of craftsmanship inherent in the aircraft is a crucial factor as well. Careful construction and/or restoration, as well as tireless maintenance, is essential in winning a Lindy.

EAA AirVenture Oshkosh 2021 was held July 26 – August 1.

Congratulations to all the 2021 award winners!

HOMEBUILTS

Kit Outstanding Workmanship — Plaques
Mark Baty
Georgetown, Kentucky
Van's RV-9A, N19RV
Robert Skinner
Magnolia, Texas
Van's RV-10, N510RS
Thomas M. and Kristin McGuinness
Wheaton, Illinois
Van's RV-10, N119KT
Mark Beard
Essex, Maryland
Van's RV-8, N23MB
Trace Blakely
Fond du Lac, Wisconsin
Van's RV-7, N382TB
Robert Jones
Las Vegas, Nevada
Van's RV-10, N810RK

EAGLE
FUEL CELLS
800-437-8732
eaglefuelcells.com

Jeffery Erdman
Montague, Michigan
Piper PA-18 Replica, N622EX
Plans Outstanding Workmanship — Plaques
Nicholai Pfannenstiel
Montrose, Colorado
Timber Tiger Aircraft ST-L, N24NK
Michael Hoy
Oshkosh, Wisconsin
Monosport 360, N5K
Ryan Newell
Canton, Ohio
Hatz CB-1, N705SR
Special Awards
Delk LLC
Galveston, Texas
Van's RV-12, N922EN
James Tomaszewski
Clayton, Georgia
TwinJAG, N622JG
Best Aerobatic — Plaque
Shannon Hankins
Tulsa, Oklahoma
Sorrell Hiperbipe, N123HX
Kit Champion — Bronze Lindy
Magic Carpet LLC
Hampton, New Hampshire
Van's RV-8, N950RV
Robert L. Staton
Lonoke, Arkansas
Javron PA-18, N82SC
Alex Coonan
Streator, Illinois
Just Aircraft SuperSTOL, N994AC
Gary Lingbeck
Lena, Illinois
Rans S-21, N1210G
Lee Hanson
Brooklyn Park, Minnesota
Van's RV-14A, N11VF
Todd Anderson
Bondurant, Iowa
Van's RV-6, N714AT
Tom Duley
Houston, Texas
Velocity, N155FA
Randy Vanstory
New Braunfels, Texas
Van's RV-10, N783V
Jay Jolley
Cleveland, Tennessee
CubCrafters EX-2, N128JJ

Brock L. Aldrich
Indianapolis, Indiana
Sonex SubSonex, N1007B
Ron Jones
San Marcos, California
Velocity, N654RJ
Plans Champion — Bronze Lindy
Carlo Cilliers
Frederick, Maryland
Hatz, N462HC
Michael Roach
Atlanta, Georgia
Steen Skybolt, N369SS
David Read
Olney, Illinois
Thorp T-18, N718DR
Reserve Grand Champion Kitbuilt — Silver Lindy
Michael Foss
Poplar Grove, Illinois
Van's RV-8, N800MF
Reserve Grand Champion Plansbuilt — Silver Lindy
Mike Patey
Spanish Fork, Utah
Scrappy Cub, N780MM
Paul Poberezny Founder's Award for Best Classic Homebuilt
Duayne Muhle
Columbus, Nebraska
Van's RV-6, N910TP
Stan Dzik Memorial Award for Outstanding Design Contribution
Andrew Manilla
Park City, Utah
Van's RV-8, N869AM
Grand Champion Kitbuilt — Gold Lindy
Darwin Barrie
Chandler, Arizona
Van's RV-7, N717AZ
Grand Champion Plansbuilt — Gold Lindy
Lowell Manary
Montrose, Colorado
MJ51-C, N3LM

VINTAGE

Antique (through August 1945) Antique Continuously Maintained Aircraft
Mark McGowan
Plymouth, Michigan
1940 Taylorcraft BC-65, N24371

Customized Aircraft Runner-Up
Benjamin Redman
Faribault, Minnesota
1940 Waco UPF-7, N164
World War II Era (1942-1945) Outstanding Closed-Cockpit Monoplane
Seth Connell
Little Rock, Arkansas
1941 Piper J3C-65, N49901
World War II Era (1942-1945) Open-Cockpit Biplane
Roger Brown
St. Lucie, Florida
1942 Stearman PT-17, NC33NA

World War II Era (1942-1945) Runner-Up
Hunter H. Harris
Easton, Maryland
1942 Stearman PT-17, N909PT
Silver Age (1928-1936) Runner-Up
Bernard Harrigan
Fontana, Wisconsin
1929 Fleet 2, N431K
World War II Trainer/Liaison Aircraft Champion — Bronze Lindy
Grant Van den Heuvel
Oconomowoc, Wisconsin
1943 Taylorcraft L-2, N61087
Customized Aircraft Champion — Bronze Lindy
Neal Goodfriend
Sanger, Texas
1942 Waco VKS-7F, N31674
World War II Era (1942-1945) Champion — Bronze Lindy
Frederick Stimson
Fort Worth, Texas
1944 Beechcraft D17S Staggerwing, N67716
Bronze Age (1937-1941) Champion — Bronze Lindy
Dennis Van Gheem
De Pere, Wisconsin
1937 Stinson SR-9C, N18410
Silver Age (1928-1936) Champion — Bronze Lindy
Frederick Hansen
Fox Lake, Illinois
1929 Travel Air 4D, NC692H
Antique Reserve Grand Champion — Silver Lindy
Roger James
New Carlisle, Ohio
1934 Waco YKC, NC14139
Antique Grand Champion — Gold Lindy
Mid America Flight Museum
Mount Pleasant, Texas
1929 Travel Air 6000, NC8112
Classic (September 1945-1955)
Outstanding Aeronca Champ — Small Plaque
Brandon Abel
Henderson, Nevada
1946 Aeronca 7AC, N2307E
Outstanding Beech — Small Plaque
Aaron Leyda
Bartlesville, Oklahoma
1948 Beech A35, N505B
Outstanding Cessna 170 — Small Plaque
Miles Bowen
Brighton, Michigan
1955 Cessna 170B, N3498C
Outstanding Cessna 190/195 — Small Plaque
Michael Larson
Erie, Colorado
1949 Cessna 195A, N9857A

Outstanding Ercoupe — Small Plaque
Steven Westlund
Belleville, Illinois
1946 Ercoupe 415, N2996H
Outstanding Piper J-3 — Small Plaque
David Brown
Mansfield, Ohio
1946 Piper J3C-65 Cub, NC6153H
Outstanding Piper Other — Small Plaque
Michael Crosta
Sugar Grove, Illinois
1953 Piper PA-20 Pacer, N1125C
Outstanding Stinson — Small Plaque
Jeff Thomas
Texarkana, Texas
1948 Stinson 108-3, N6717M
Custom Class A (0-85 hp) — Small Plaque
David Satina
Norton, Ohio
1948 Piper PA-15 Vagabond, N4444H
Custom Class B (86-150 hp) — Small Plaque
David Smith
Milaca, Minnesota
1950 Cessna 170A, N9775A
Custom Class C (151-235 hp) — Small Plaque
Edward Warnock
Garden Valley, California
1949 Luscombe 8F, N2183B
Custom Class D (236-plus hp) — Small Plaque
Chauncey Webb
Marana, Arizona
1950 Cessna 190, N1401
Best Customized Runner-Up — Large Plaque
Walt Fanti
Greer, South Carolina
1947 Navion F, N512WD
Class I (0-85 hp) — Bronze Lindy
Aeron Fout
Melbourne, Florida
1948 Piper PA-17 Vagabond, N17VG
Class II (86-150 hp) — Bronze Lindy
Danny Simpson
Waunakee, Wisconsin
1955 Piper PA-22 Tri-Pacer, N2905P
Class III (151-235 hp) — Bronze Lindy
Scott Crane
Poplar Grove, Illinois
1948 Beechcraft 35, N4560V
Class IV (236-plus hp) — Bronze Lindy
Brian Aukes
Huxley, Iowa
1953 Beechcraft D18S, NC411J

Touchdown Oshkosh!
WISDOT Photo

Aircraft taxiing to their parking spots.
WISDOT Photo

Tent camping by your airplane is convenient and popular at EAA AirVenture Oshkosh.
WISDOT Photo

The south end of Wittman Regional Airport.
Dave Weiman Photo

Champion Customized Classic — Bronze Lindy
James Pyne
Streator, Illinois
1947 Piper PA-12 Super Cruiser
Reserve Grand Champion — Silver Lindy
Ryan Johnson
Dodgeville, Wisconsin
1947 Piper J3C-65 Cub
Grand Champion — Gold Lindy
Ken Morris
Poplar Grove, Illinois
1949 Cessna 140A, N3779V
Contemporary (1956-1970)
Outstanding Beech Single-Engine — Outstanding in Type
Michael Turner
Suffolk, Virginia
1968 Beechcraft V35A, N7797R
Outstanding Cessna 150 — Outstanding in Type
Lucas Waddell
Fort Worth, Texas
1970 Cessna 150K, N6291G
Outstanding Cessna 170/172/175/177 — Outstanding in Type
Glenn Chiappe
Lago Vista, Texas
1957 Cessna 172, N8686B
Outstanding Cessna 180/182/185/210 — Outstanding in Type
Blaine Pridgen
Arnaudville, Louisiana
1959 Cessna 180, N2660G
Outstanding Champion — Outstanding in Type
Don Hendrickson
Helena, Montana
1970 Citabria 7KCAB, N9064L
Outstanding Mooney — Outstanding in Type
Daniel Johnson
Mount Hope, Kansas
1964 Mooney M20E, N6975U
Outstanding Piper PA-22 Tri-Pacer — Outstanding in Type
Daniel Fulwiler
Algoma, Wisconsin
1958 Piper PA-22 Tri-Pacer, N8654D
Outstanding Piper PA-24 Comanche — Outstanding in Type
Karl Aber
Fairview Park, Ohio
1959 Piper PA-24 Comanche, N6022P
Outstanding Piper PA-30 Twin Comanche — Outstanding in Type
Brett Swartzendruber
Hesston, Kansas
1963 Piper PA-30 Twin Comanche, N217HC

Outstanding Limited Production — Outstanding in Type
Zachary Sweetser
Orchard Park, New York
1959 Luscombe 8F, N9927C
Best Continuously Maintained — Outstanding in Type
Charles Morris
Fort Worth, Texas
1964 Cessna 172E, N5744T
Most Unique — Outstanding in Type
Blake Deal
Jacksonville Beach, Florida
1959 Aero Commander 500, N159K
Preservation Award — Outstanding in Type
Raymond Cook
Spring Grove, Illinois
1959 Piper PA-18 Super Cub, N4273S
Class I Single-Engine (0-160 hp) — Bronze Lindy
Paul Wolff
Baraboo, Wisconsin
1956 Piper PA-22 Tri-Pacer, N4860A
Class II Single-Engine (161-230 hp) — Bronze Lindy
Paul Papasavas
West Orange, New Jersey
1965 Mooney M20E, N23FH
Class III Single-Engine (231-plus hp) — Bronze Lindy
Robbie Wills
Conway, Arkansas
1969 Beechcraft E33A, N2939A
Dean Richardson Memorial Award — Bronze Lindy
Dan Maggart
Winchester, Illinois
1968 Cessna 177, N3241T
Outstanding Customized — Bronze Lindy
William Hollan
Winston-Salem, North Carolina
1958 Piper PA-22 Tri-Pacer, N8857D
Outstanding Multiengine — Bronze Lindy
Shannon Hankins
Tulsa, Oklahoma
1966 Piper PA-30 Twin Comanche, N8063Y
Reserve Grand Champion Customized — Silver Lindy
Raymond Cook
Sprung Grove, Illinois
1968 Piper PA-18 Super Cub, N4342Z
Grand Champion Customized — Gold Lindy
Keith Kocourek
Wausau, Wisconsin
1965 de Havilland DHC-2 Beaver, N22KK

WARBIRDS
Preservation Awards
John Schaefer
Waterloo, Illinois
Cessna O-1A Bird Dog, N413PG

Pete Bales
Janesville, Wisconsin
Hughes OH-6A Cayuse, N67PB
Lou Feldvary
Hardy, Virginia
North American T-6D Texan, N757LF
Blake Bosley
Richmond, Texas
Cessna L-19 Bird Dog, N60591
Judges' Choice: Military Transport
United States Air Force
Pittsburg, Pennsylvania
Boeing C-17A Globemaster III, 02-1099
Judges' Choice: Light Attack Aircraft
Douglas F. Kulick
Reno, Nevada
Piper PA-22-160 Tri-Pacer, N2650A
Judges' Choice: Brody Equipped Grasshopper
Ric Woldow
Morton, Illinois
Piper L-4, N50364
Judges' Choice: Primary Trainer
Richard Smith
Austin, Texas
Fairchild PT-19A, N48671
Judges' Choice: T-34
Gary Otto/CAF Wisconsin Wing
Pewaukee, Wisconsin
Beechcraft T-34A Mentor, N5347W
Judges' Choice: Fighter
Warbird Heritage Foundation
Waukegan, Illinois
Goodyear FG-1D Corsair, N194G
Dirty Bird
Hunter Hamilton
Colorado Springs, Colorado
Beechcraft C-45/SNB-5, N97001

Best Military Transport
Joseph Anderson
Phoenix, Arizona
Douglas DC-3A, N8336C
Silver Wrench
Aerometal International Inc.
Aurora, Oregon
Best L-Bird
Phil Hein
Burlington, Wisconsin
Stinson L-5G Sentinel, N2584B
Silver Wrench
Fred Wright
Phoenix, Arizona
Best B-25
Betty's Dream LLC
Minot, North Dakota
North American B-25 Mitchell, N5672V
Silver Wrench
Aero Trader
Chino, California
Best Navy Fighter
American Honor Foundation
Ocala, Florida
Chance Vought F4U-4 Corsair, N240CF
Silver Wrench
American Honor Foundation
Ocala, Florida
Best T-34
Mike Reirdon
El Cajon, California
Beechcraft A-45 Mentor, N4982N
Silver Wrench
Blackwell Aviation
Belle Vernon, Pennsylvania

Best T-6/SNJ
Daniel Van Buskirk
Bismark, North Dakota
North American T-6 Texan, N72176
Silver Wrench
Springer Aeronautics
Toronto, Ontario, Canada
Best Fighter
Hannu Halminen
Orono, Ontario, Canada
North American P-51 Mustang, N951HB
Silver Wrench
Glenn Wegman Fighter Enterprises
Indiantown, Florida
Returning Best of Class — Large Plaque
Robert Stoney
Mercer Island, Washington
Cessna O-1E Bird Dog, N4848M
Returning Grand Champion — Large Plaque
Keith Brunquist
Wasilla, Alaska
Boeing YL-15 Scout, N477OC
Keep 'em Flying Award — Large Plaque
Dan Blackwell
Irwin, Pennsylvania
Beechcraft T-34A Mentor, N557DB
Silver Wrench
Dan Blackwell
Irwin, Pennsylvania
Keep 'em Flying Award — Large Plaque
Jimmy Hayes
Sarasota, Florida
Aero Vodochody L-39X Albatros, N395MK
Silver Wrench
Code One Aviation
Rockford, Illinois
Keep 'em Flying Award — Large Plaque
Joe Roetering
Naples, Florida
Beechcraft T-34B Mentor, N434JR
Silver Wrench
Blackwell Aviation
Belle Vernon, Pennsylvania
Phoenix Award
Steve Miller
Naperville, Illinois
Lockheed Airtrooper N100GR
Gold Wrench
George Robertson
Jim Fernandez
Sorrell Brothers

Reserve Grand Champion: Post-World War II
Silver Lindy
American Honor Foundation
Ocala, Florida
North American F-86 Sabre, N386BB
Gold Wrench
American Honor Foundation
Ocala, Florida
Reserve Grand
Champion: World War II — Silver Lindy
Jordan Deters/CAF Minnesota Wing
Hermantown, Minnesota
Vultee BT-13A Valiant, N52411
Gold Wrench
CAF Minnesota Wing
Grand Champion: Post-World War II — Gold Lindy
James Patrick Harker
Forest Lake, Minnesota
Convair L-13A, N6615C
Gold Wrench
James Patrick Harker
Forest Lake, Minnesota
Grand Champion: World War II — Gold Lindy
Fagen Fighters WWII Museum
Granite Falls, Minnesota
Grumman F6F-5 Hellcat, N9265A
Gold Wrench
Fighter Rebuilders
Chino, California

ROTORCRAFT
Helicopter — Bronze Lindy
Mike Gautsch
Onalaska, Wisconsin
Rotorway 162F
Reserve Grand Champion: Helicopter — Silver Lindy
Dave Storey
Finger, Tennessee
CFX Mosquito XET – Turbine, N72SX
Grand Champion: Helicopter — Gold Lindy
Michael Messex
Harvest, Alabama
Mosquito XE 290, N753MX
Grand Champion: Gyroplane — Gold Lindy
Heath Lowry
Rapid City, South Dakota
Heath Lowry Autogyro, N500WL

ULTRALIGHTS & LSA
Ultralight Honorable Mention
Lee Fischer
Larson, Wisconsin
Skonkwerks – First Flight Flyer
Grand Champion Light Sport — Gold Lindy
Paul Ditsler
Edwardsburg, Michigan
Fisher – Dakota Hawk

SEAPLANES
Outstanding Metal — Plaque
Matthew Hermann
Muskoka, Ontario, Canada
C-FIPT Cessna 182
Outstanding Fabric — Plaque
Gordon Gilchrist
Cedar Springs, Michigan
CubCrafters EX-3, N30PG
Outstanding Amphibian — Plaque
Van Pray
Montgomery City, Missouri
Cessna 206T
Outstanding Homebuilt — Plaque
Michael Eiras
Austin, Texas
SeaRey, N17TS
Judges' Choice
Alex Vickroy and Jesse Starkson
Ashland, Wisconsin
Beech 18, N33JP
Bronze Lindy
Cliff Maine
Grand Rapids, Michigan
Lake Renegade, N704BC
Grand Champion — Gold Lindy
Doug DeVries
Everett, Washington
Grumman G-21G Turbine Goose, N642

The Lark of Duluth Flying Boat Debuts At EAA AirVenture 2021

DULUTH, MINN. – The replica of the 1913 Lark of Duluth Benoist Type XIV flying boat was a featured attraction in the EAA Museum during EAA AirVenture Oshkosh 2021, July 26 – August 1. The replica was exhibited with the 1903 Wright Flyer replica and Curtiss A-1 Pusher Sweetheart in the Pioneers of Flight area of the museum.

The Duluth Aviation Institute donated the 2013 replica to the EAA Aviation Foundation on December 3, 2020, to preserve and exhibit the aircraft for the public and in perpetuity.

The Lark of Duluth replica took nearly six years to build, under the leadership of Duluth's aviation craftsman, Mark Marino, with volunteer labor contributions from institute trustees and local EAA members Tom Betts, Michael Gardonio, Michael Shannon, Jim Nelson, John Vanderhorn, Bob Parenteau, and Sandra Ettestad.

The original Lark of Duluth, was owned by two visionary Duluthians, Julius Barnes and W. D. Jones, who foresaw the advantages aviation could offer in service to society and toward economic development. The first "Lark" made the historic first commercial flight with one paying passenger across Tampa Bay, Florida on January 1, 1914.

The Lark of Duluth flying boat was featured during the summers of 1913 and 1914 at Lark O' the Lake Carnival held by the Duluth Boat Club. For the centennial celebration, the Duluth Aviation Institute featured the replica at the Lark O' the Lake Festival in July 2013 and EAA AirVenture Oshkosh in July 2014.

The Duluth Aviation Institute's mission is to preserve Duluth's local aviation history and to educate the community with this history and knowledge of aviation and aerospace. ❑

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The Volunteers of EAA AirVenture Oshkosh

by Harold Green

Harold Green

This year was a watershed year for EAA AirVenture Oshkosh 2021, following the Covid hiatus of 2020. Not only did attendance reach very acceptable heights, the attitude of attendees, by all accounts, also reached new heights of friendliness and enthusiasm.

In trying to decide what to report on this year's event, it came to me that there are several things that make this event the unusual success it has become. Among these, of course, are the number and types of airplanes that are on display, but also, the number and capability of volunteers who actually make the show work.

As you stroll around the grounds, you see people parking planes, driving "follow me" carts, providing directions, driving trams full of people, cleaning up the place and more. People who visit AirVenture for the first time almost universally exclaim over the cleanliness of the area. In addition, there are those volunteers who are less apparent, but who are also key to operations. They judge airplanes, coordinate specific airplane categories, teach special sessions and conduct many more activities. These folks don't get the public credit they deserve. Therefore, it seems appropriate to get their viewpoint on the event and their description of what they do and why they do it. After all, we owe all of them our gratitude, for without them, the event could not go on.

I selected a small group of individuals I know to discuss their roles in the event. They include a senior A&P mechanic working with the seaplanes whose wife also volunteers…a husband-and-wife team working with the warbirds… and a very experienced individual performing key leadership and support to the Vintage Aircraft group, while his wife manages a store on the grounds. Hopefully these people I've chosen to interview fairly represent the 5,000 volunteers at AirVenture.

One of the unexpected things uncovered was the fact that all three of these individuals are part of a husband-and-wife team, and when their children were old enough, they too became involved. This seems to indicate that AirVenture is truly a cultural phenomenon.

In conducting these interviews, I learned something about the Experimental Aircraft Association (EAA) I did not know before. That is, there are organizations separate from EAA that function in partnership to the benefit of both. These groups are 501c3 non-profit organizations that have their own fundraising activities and set their own rules consistent with EAA's philosophy. They each have their own management organizations and publications. Three of these groups have a governing board and include the Vintage Aircraft Association, Warbirds of America, and the International Aerobatic Club (IAC). While I was aware that these groups existed, I did not know they functioned separate from EAA.

First, Mike and Heather Kugel of Oregon, Wisconsin, have been parking cars and providing security for six years in the warbirds area. Their days can be long, but they enjoy meeting the people and being part of something that preserves these airplanes. Heather is a dental hygienist and Mike is an IT manager and a Private Pilot and owns two older airplanes -- one of which is experimental, which he flies as frequently as he can. Heather's father was an airline pilot, so she grew up exposed to airplanes. The opportunity to volunteer came through an uncle of Mike's who was retiring from volunteering. Heather became interested and they began volunteering together. Heather's father was not only an airline pilot…he was also a Navy fighter pilot, so working the warbirds area connects her with her late father. Two children, one now in college and one finishing high school, wanted to be part of the fly-in, so they now also volunteer with the warbirds.

A couple of years ago, Mike saw a camper for sale and realized it would be ideal for camping at AirVenture, so he bought it. He confesses that he uses the camper for other activities during the year, but the impetus for buying it was AirVenture. Mike and Heather are both happy with their work at AirVenture and have no intention of un-volunteering. In fact, Mike intends to extend his membership to the Vintage Aircraft Association because of the Volksplane and Aeronca Chief he owns and flies, although that won't change his volunteering with the warbirds.

Lori and Al Barger volunteering at the EAA Seaplane Base.

Al Barger of Windsor, Wis., is director of maintenance at Morey Airplane Company in Middleton, Wisconsin. He is an Airframe and Powerplant Mechanic (A&P) with Inspection Authorization (IA) with 37 years of experience and has been attending AirVenture for three decades. Early on Al volunteered at various areas at AirVenture, until he landed at

All members of the Barger family volunteer at EAA AirVenture Oshkosh.

the seaplane base. In fact, it was Al's wife, Lori, who was the reason he got involved in the seaplane base. Lori started volunteering because she was at loose ends, while Al was wandering the grounds and doing other volunteer work. So, she looked for something to keep herself occupied and wound up at the seaplane base. Lori then convinced Al that he should volunteer there as well. At one point Lori was the "dock boss" at the base and still has significant responsibility there. Because of his expertise in aircraft maintenance and restoration, Al judges seaplane quality. Their two children also volunteer at the seaplane base. The seaplane group is rather an orphan not being affiliated with any of the 501c3 groups. Their primary fundraiser is the "Watermelon Social" during AirVenture.

Dan Knutson is a private pilot from Lodi, Wisconsin, and the sales manager at a large automobile dealership in Madison. His late father became involved with classic airplane restoration and Dan followed in his father's footsteps. Dan first attended AirVenture in the company of his father when he was 12 years old and has been volunteering for 30 years. He currently owns several vintage planes and has 3700 hours of flight time.

Dan and his wife, Mary, spend the entire week at AirVenture, but have activities during the year in preparation for the event. Dan is chairman for vintage aircraft judging, and this year he became vice president of the Vintage Aircraft Association. Mary is a hospital nurse, and chairman of the Red Barn store in the Vintage Aircraft area.

There are two items of particular note relative to this year's AirVenture and the Vintage Aircraft Association. First, there were 1,420 vintage aircraft on display, the largest of any group of aircraft attending. In fact, airplane parking was a big problem. Second, the Red Barn sales this year were $105,900 in comparison with 2019 sales of $63,000. In both instances, an indication that AirVenture 2021 was a success! By the way, the Red Barn is the main means of fundraising for the Vintage Aircraft Association.

There were common threads among these three interviews. First, these couples, and for some, their children as well, have no intention of not volunteering at AirVenture. Second, they all stated that they really liked meeting and interacting with the people who attend and participate. Third, any problems they encountered in operations were quickly and effectively dealt with. Fourth, most attendees are cooperative, pleasant people who are great to work with.

In closing, I can think of no better way than to quote Dan Knutson's response to my question as to what he liked most about his job at AirVenture:

"Participating in the largest aviation event anywhere and walking away at the end of the show hoping that in some small way, I made it better!"

With volunteers like the Kugels, Bargers and Knutsons, EAA AirVenture Oshkosh indeed has a bright future!

EAA AirVenture Oshkosh 2022 will be held July 25-31. For additional information on volunteering, contact Cassie Bruss: 920-426-4856 (cbruss@eaa.org).

Also see volunteer opportunities at **https://www.eaa.org/eaa/support-eaa/volunteer.**

EAA AirVenture Oshkosh, "Where Your Passion Finds Purpose!" ❑

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Rollie Mack
Dave Weiman Photo

Rollie and Joan Mack celebrate Rollie's retirement with a party at Morey Airplane Company, Middleton, Wisconsin. *Skot Weidemann Photo*

A Distinguished Pilot & Mechanic Retires

by Harold Green

One of the unique aspects of general aviation is the people who have made it a career. Usually these are people who, for their own reasons, have no desire to fly or work for the more regimented airlines. Often, they fly light aircraft, be they twins or singles. They can be found at airports of all sizes and locations. Often, they have an Airframe and Powerplant license, in addition to pilot ratings appropriate to the work requirements enabling them to fly.

These are people who started flying when support information was sparse at best. Weather was a reasonable guess, and a lot of times accurate to the extent that it was thought there would be thunderstorms, but where and exactly when was a matter of eyeball judgment. It was not at all unusual to fly an airplane with no deicing or prevention equipment, and to do so in weather that could produce ice.

As time inevitably moves on, these pilots are retiring with a resultant loss to the industry of their accumulated experience. Thankfully, this level of experience will not be so critical in the future since technology, for both flight and weather, have been improved. However, when things go south, the knowledge acquired from years of experience, could save lives. Further, recent changes to FAR Part 135 that governs charter operations, have removed some ambiguity in decision-making, thereby relieving pilots from having to fly in adverse conditions, regardless of the demands of frustrated passengers.

One of these aviation professionals is Rollie Mack of Morey Airplane Company, Middleton Municipal Airport – Morey Field (C29), Middleton, Wisconsin. Rollie was hired by Howard Morey in 1958 and remained with the company through three generations of the Morey family, as an aircraft technician and charter pilot. He holds an Airframe and Powerplant (A&P) Certificate with Inspection Authorization (IA), and an Air Transport Pilot (ATP) Certificate. Rollie is not really sure what his total flight time is, but says it's probably more than 12,000 hours.

Like many such pilots, Rollie had a separate source of income. For him, that source was from farming, devoted principally to livestock.

Rollie and his wife, Joan, raised four children, and in addition to operating his home farm, he helps his daughter and son-in-law with a farm adjacent to his, bringing the total number of acres they farm to 160.

The mechanical aptitude required of farmers may have

Minnesota Aviation Trades Association – Investing In The Future!

Congratulations to NATHAN WURST of Chaska, Minnesota, who was selected to receive the 2019 MATA Scholarship!

Nathan is working on his private pilot certificate at Thunderbird Aviation at Flying Cloud Airport in Eden Prairie, Minnesota, and has been accepted at the University of North Dakota John D. Odegard School of Aerospace Sciences beginning this fall.

To help pay for his education, Nathan started working as a line service technician at Thunderbird Aviation in the fall of 2018 while a senior in high school. Nathan stated: ***"I believe in hard work and focus in order to succeed as a pilot. I see the aviation community as bonded over its love of flight... It is a community that I am proud to be a part of for the rest of my life."***

To be eligible for the MATA Scholarship, applicants must be currently enrolled in a flight training curriculum at a Minnesota flight school that is also a member of MATA, and write an essay on why they want to learn to fly or continue their training. The applicant's ability to communicate their current position and future goals is very important. The scholarship application, details, updates and requirements can be found at **https://www.mata-online.org/**

One of the goals of the Minnesota Aviation Trades Association is to help create tomorrow's aviation professionals, while supporting member flight schools.

Aviation businesses interested in becoming a MATA member and supporting the organization's efforts to promote and represent the industry before government, should contact **Nancy Olson at 952-851-0631 Ext 322 or email ngo@thunderbirdaviation.com.**

MATA – The Choice & Voice of Aviation Businesses Since 1945

A career filled with great memories and accomplishments.
Skot Weidemann Photo

contributed to Rollie's success in aviation, and his personality always gave the impression that he was competent and unflappable. Howard Morey was always impressed with Rollie's abilities and his willingness to stay with the job until it was completed!

Of course, Rollie has accumulated his share of "interesting" experiences. He's reticent to talk about them because that would be like bragging, and he doesn't like when people brag.

There is a story of Rollie returning home from a charter flight during the winter and was at an altitude that kept him out of icing conditions that another pilot was experiencing in the same area, but at a higher altitude. The pilot of the other aircraft was requesting a lower altitude from Center, so the controller assigned Rollie a higher altitude ostensibly to allow the other pilot to descend out of the icing conditions. Rollie's response was a calm and respectful, "No, I don't think I'm going to do that." So, the controller instead assigned Rollie a different heading to allow the other pilot to descend to the same altitude. Rollie's decision may have required the controller to work a little harder by considering alternatives, but in the end, it was the safest course of action for all concerned.

Rollie flew both Cessna 310s and Cessna 340s, but C-340s more so toward the end of his flying career.

In addition to flying charter at Morey Airplane Company, Rollie flew corporate for two area businesses. Rollie also maintained those aircraft, so he became very familiar with them, and as a result, never bent an airplane in all the years he flew.

Two events remain with me with respect to having worked with Rollie Mack. The first is when the heater in a Cessna 310 would not work on a day when the outside air temperature was about 10 degrees above zero Fahrenheit. We discovered this during the pre-takeoff check.

Calling in to see if anyone had a suggestion, Rollie came out to the aircraft, and while the engines were still running, he crawled into the nosewheel well to see if he could fix it. He needed the engines running to try and coax the recalcitrant heater into functioning but without success. Rollie did, however, determine that he needed to order a new part. Since the heater was not a flight critical issue, we continued the flight to Atlanta. When we returned several days later, the part had arrived, and Rollie repaired the heater.

The second event was when the company I worked for retained Rollie to fly charter in a Cessna 340. My fellow employees were nervous about flying in a different aircraft, as they were used to flying in a larger aircraft, operated by a different charter company. But when Rollie showed up with homemade baked goods that Joan had made for them the night before, the passengers felt more at ease. Rollie's calm and confident demeanor, and his ability to keep passengers informed, was the frosting on the cake!

Rollie Mack's retirement is understandable and well deserved, but he will be missed by employees and customers. He and others with equal experience and tenure, created the foundation upon which today's charter and corporate operations are built. We owe them a debt of gratitude for a job well done! ❑

Gipson & Yodice To Lead EAA Legal Advisory Council

Ronnie Gipson

Kathy Yodice

OSHKOSH, WIS. – Attorneys Ronnie Gipson of Memphis, Tennessee, and Kathy Yodice of Potomac, Maryland, who are both pilots and have extensive experience in aviation law, have been named chair and vice-chair, respectively, of the Experimental Aircraft Association (EAA) Legal Advisory Council, a group of EAA-member attorneys who assist the organization and its members in a variety of aviation legal matters.

Gipson is currently an Assistant Professor of Law at the University of Memphis, where he advocates for general aviation issues through his scholarly work, which has been published worldwide in legal journals, and cited by Congress. As a lawyer, he has represented aviation clients in FAA enforcement actions, and accident/incident litigation, as well as purchase and sale transactions. Now, Gipson routinely gives webinars and presentations on issues critical to general aviation, such as airport preservation; drone integration into the National Airspace System; and immunity for Designated Pilot Examiners (DPEs).

Yodice is a well-known aviation attorney who has been representing aviation interests for more than 35 years, beginning in the FAA's Office of Chief Counsel and now in private practice. Her experience also includes consulting, expert legal testimony, and lecturing on aviation legal issues. Yodice is a past president and current board member of the Lawyer-Pilot Bar Association and is a part-time lecturer at Kent State University's College of Aeronautics and Engineering. ❑

Avfuel & Embraer Collaborate To Bring Neste MY SAF To Melbourne Orlando International

ANN ARBOR, MICH. – Avfuel Corporation and Embraer are proud to announce their recent collaboration to bring Neste MY Sustainable Aviation FuelTM (SAF) to Melbourne Orlando International Airport. The agreement comes as Embraer announces its commitment on climate action, such as achieving carbon neutral operations by 2040 and supporting the aviation industry´s goal of net-zero carbon emissions by 2050, both of which include integrating the use of SAF into its sustainability initiatives. As part of the collaboration, Avfuel supplied Embraer with Neste MY SAF at its Melbourne, Florida, facility by delivering the fuel to Sheltair (KMLB) for storage and handling. Embraer aims to use the SAF in ongoing operations at its executive jet's headquarters in Melbourne.

Avfuel provided its first delivery of the fuel to Embraer at Sheltair Melbourne on July 14. Each truckload (approximately 8,000 gallons) of the fuel from Neste's Houston location provides a 19.1 metric ton reduction in carbon emissions over its lifecycle—equivalent to the amount of carbon sequestered by 23.4 acres of U.S. forests per year. SAF is the most effective way to reduce a flight's carbon footprint; and, in the future, SAF could deliver up to 80% less greenhouse gas emissions versus traditional jet fuel in its neat form. ❑

The historic three-story terminal building in Wichita, Kansas, houses all interior exhibits.

A Look At The Kansas Aviation Museum

by Grant Boyd
NBAA Under 40 Honoree
Photos Courtesy of Kansas Aviation Museum

If it wasn't for Wichita, Kansas, there would be quite a few blanks missing from the aviation history books. The "Air Capital of the World," as it became to be known as in 1928, wasn't just home to the notables of Learjet, Cessna, and Beechcraft, but also other big names like Stearman, Travel Air, and Swallow.

All in all, in its "heyday" prior to the Great Depression, the town had nearly three dozen active aircraft manufacturers at one time. Names included those already mentioned, as well as a few others. Perhaps the most poignant example of the sheer scale of the then booming industry is the map of the town posted near the entrance of the museum. This shows the locations of each of these early manufacturers, as well as other information pertinent to them (pictured here).

Much of the history of these littler, lesser-known manufacturers is not as widely publicized as legacy manufacturers that still have operations. That said, their importance to the aviation ecosystem of Wichita, the state, and ultimately the world should not be understated.

The Kansas Aviation Museum (KAM) has, since 1991,

Inside the Kansas Aviation Museum, Wichita, Kansas.

The view from the decommissioned air traffic control tower.

worked to showcase all these companies' unique histories, as well as the people who made these airplanes possible. Guided by the vision of inspiring, educating, and commemorating Kansas aviation for the future, the diverse collection of aerial artifacts and aircraft is as unique as the story of the region's involvement in aviation.

Like other museums, there are a variety of exhibits and avenues to aid in the absorption of history. Visitors can expect to spend several hours working their way through the three-story former terminal building that houses all interior exhibits, as well as the ramp area, which is adjacent to McConnell Air Force Base. General aviation traffic unfortunately is not allowed.

Barb Kramer, Kansas Aviation Museum's Interim Executive Director, notes the following about some of the most highly regarded interior exhibits:

"I make a point to ask our guests, new and returning, what are their favorite museum features, and the most popular answers are: the control tower, the flight simulators (donated by the Beach Family Foundation), the Vintage Aircraft Room, and the building itself. A lot of people remark about the art deco feel of the museum and express an appreciation for the building that is on the National Register of Historical Places. For me personally, while I love the whole museum, it is a tie between the Vintage Aircraft Room, Berry Foundation Learning Library, and Air Capital Theater."

Ms. Kramer continues by giving a brief overview of these spaces, with others described on the Kansas Aviation Museum's website:

"The Berry Foundation Research Library is a space for people who are interested in doing aviation research. It includes two comfortable chairs and is surrounded by shelves full of magazines, books, and other print materials. Our director of collections, Logan Daugherty, is available during the week to help guests with any research-related questions and can also assist them with searching our extensive archive space, which consists of 216,580 items (as of late August 2021).

"Another new and cool space is the Air Capital Theater funded by Bank of America. Currently, the 40-minute film, 'Wichita: The Air Capital' is being shown on loop. It is an excellent piece that explains exactly why Wichita gained the name it did. The Vintage Aircraft Exhibit is the showcase for the exceptional skills our volunteers have in restoring aircraft and it is second to none. We have two new aircraft in this exhibit, a Cessna C-37 Airmaster, which was once owned by Blanche Noyes (on loan from the Ninety-Nines); and a

Travel Air 4000, not only once owned by Louse Thaden, but it was the plane she won the 1929 Women's Air Derby in! Both planes are a feather in KAM's cap and tie wonderfully well into our upcoming new exhibit, the Women of Aviation Exhibit, which is funded by Fidelity Bank and Energy."

Perhaps, most impressive is that few of the dozen or so displayed aircraft that dot the original terrazzo floor of the former Wichita Municipal Airport terminal (1935-1954) did not arrive in their current meticulous condition. Many of the aircraft on display initially arrived in horrible condition. Some were found in collapsed barns or in crashes. In the case of the Texaco Stearman 4D, it showed up in dozens of five-gallon buckets. The skills to return these aircraft back to their beauty and glory is world-class and the museum is proud to showcase their volunteers' many talents.

Prior to being proudly displayed for aviation enthusiasts of all ages to view, all aircraft have first been routed to the restoration shop just outside the building's front doors. Here, spread out amongst several thousand square feet of shop space, more than 100 weekly volunteers work to cut, twist, sand, and shape wood, metal, and other materials to restore the aircraft back to their former glory.

Much of these craftsmen are retired from the town's manufacturers and rely upon their decades of experience to accurately accomplish cosmetic restorations to original design specifications. Walking through the sawdust and fabric dope-scent filled rooms, visitors (by pre-arranged invitation) can see several in-progress restorations, each in varying stages of completion. Current restoration projects include a Cessna 310, a Beechcraft C-45 painted in the WASP (Women Airforce Service Pilots) livery, as well as a BD-5 experimental aircraft.

Aircraft donated to the museum and the volunteers' work outpaces the amount of covered space available to showcase the artifacts to the public. As such, the ramp area immediately to the Southeast of the building is relied upon heavily. At present, it is home to heavy metal models, like a veteran Boeing B-52D, FedEx liveried Boeing 727, and a retired Kansas Air National Guard Boeing KC-135E, as well as a Ryan International Airlines Boeing 737-200. Other prominent ramp birds include a Beechcraft U-8 Queen Air, Lockheed T-33 "T-Bird," Republic F-84F, Cessna T-37B "Tweet," and Boeing B-47E bomber, all of which have some connection to Kansas in one way or another.

General aviation is also represented in this showcase space, headlined by one of the few remaining Beechcraft Starships in any condition. This aircraft serves as a reminder of engineering ingenuity and the design evolution of aircraft in aviation's relatively short lifespan since first flight. Two early production business jets, a Cessna 500 Citation (serial #1) and a Learjet Model 23 (serial #6) also sit on the ramp. They collectively serve as a testament to a portion of the aerospace sector that was born in Wichita and has become an integral part of the industry.

All these aircraft can be seen from a bird's eye view within the decommissioned air traffic control tower. Sitting atop the museum itself at approximately 35 feet AGL, visitors are treated to panoramic views of McConnell Air Force Base (KIAB), including military traffic and the neighboring Spirit AeroSystems facility, as well as a considerable portion of Wichita itself.

More information about the Kansas Aviation Museum, including hours of operation, can be found at https://kansasaviationmuseum.org ❑

St. Louis Downtown Airport Gears Up For NBAA Convention

After a COVID-19 induced hiatus in 2020, the 2021 NBAA Business Aviation Convention & Exhibition (NBAA-BACE) is returning to the Las Vegas Convention Center, October 12 -14, bringing together business leaders, owners, operators, government officials, manufacturers, corporate aviation department personnel and many others involved in business aviation. St. Louis Downtown Airport (KCPS) in Cahokia, Illinois, is looking forward to participating in the year's most significant event for the business aviation industry and hopes to see you there!

If you are planning to attend, you'll find St. Louis Downtown Airport officials at Booth #3328 in the West Hall. Stop by and learn more about St. Louis Downtown Airport, which is located just a few minutes from downtown St. Louis, Missouri, and the Gateway Arch, positioning the airport as the St. Louis region's front door for business aviation.

St. Louis Downtown Airport is eager to connect with other industry professionals, prospective tenants for the airport, and prospective customers who may not yet be familiar with the advantages of flying through KCPS to visit St. Louis, which was recently named one of the World's Greatest Places of 2021 by *TIME Magazine*.

For additional information, see **www.StLouisDowntownAirport.com** or email St. Louis Downtown Airport Director Erick Dahl at eadahl@stlouisdowntownairport.com. ❑

Carver Aero Acquires LumanAir & ATS Illinois

AURORA, ILL. – After more than 60 years in business, Bob and Mike Luman of LumanAir Aviation Services at Aurora Municipal Airport in Sugar Grove, Illinois, have accepted an offer from the Iowa-based company, Carver Aero, to acquire the business. In addition to LumanAir, Carver Aero has acquired the aircraft engine maintenance and service company, ATS Illinois, also located at Aurora Municipal Airport.

"It's been a wonderful ride," said Mike Luman. "Our dad started the business in 1960 at the former Aurora Airways Airport. We've had several offers over the years, but we were waiting for the right people and the right company to come along that would continue the legacy of our family. Carver Aero is that company." The Aurora City Council approved the acquisitions of LumanAir and ATS Illinois on July 27, 2021.

"As a new tenant of the airport, we are honored by the welcome and trust we received from the city and from existing businesses at the airfield," said Peter Limberger, Co-founder and Chairman of CL Enterprises, the parent company of Carver Aero.

Under its Part 135 charter certificate, Carver Aero operates a Pilatus PC-12, a fleet of King Air turboprops, and a Citation Ultra jet. The company will be adding experiential charter services, such as offerings to exclusive golf/spa resorts, Chicago Bears away games, and other specialty events.

Owned by CL Enterprises, Carver Aero (www.carveraero.com) has other fixed-base operations in Muscatine, Davenport, and Council Bluffs, Iowa; Aurora, Illinois; and Janesville, Wisconsin. Carver Aero provides air charter, pilot services, aircraft maintenance, avionics, flight training, fuel sales, and aircraft storage.

The Peru, Illinois-based CL Enterprises (www.cl-enterprises.com) is the investment and holding company owned by husband and wife, Peter Limberger and Inga Carus. CLE owns and invests in businesses in a variety of industries, including farming, manufacturing, real estate development, hospitality, and aviation, with a focus on economic development in smaller Midwestern towns. Both Limberger and Carus are avid pilots. ❑

Duckworth, Durbin Announce $7.6 Million For Central Illinois Airports

WASHINGTON, D.C. — U.S. Senators Tammy Duckworth (D-IL) and Dick Durbin (D-IL) have announced a total of $7,659,968 in federal funding to three Central Illinois airports. These Federal Aviation Administration (FAA) investments are funded through President Biden's American Rescue Plan and will provide some economic relief for costs associated with operations, staffing, cleaning, sanitization and combating the spread of COVID-19 at airports in Peoria, Savoy and Springfield.

The following entities will receive funding:

- Metropolitan Airport Authority of Peoria (General Downing) will receive $4,394,907.
- Board of Trustees University of Illinois (University of Illinois-Willard) will receive $1,849,172.
- Springfield Airport Authority will receive $1,415,889. ❑

Southern Illinois University Aviation & Delta Air Lines To Offer Accelerated Pilot Career Path

An agreement between Southern Illinois University Carbondale and Delta Air Lines will provide an accelerated career path for aviation students interested in becoming professional pilots.

Chancellor Austin Lane and Delta representatives signed a memorandum of understanding between the university and Delta's Propel Collegiate Pilot Career Path Program on August 24. Joining Lane was Michael Burgener, interim director, SIU's School of Aviation; Kelvin Mason, Propel's pilot development manager; Delta First Officer Graham Bostrom, lead Propel liaison; Courtney Copping, Delta First Officer, Propel liaison; and SIU Carbondale alumna, other airline personnel, university officials and aviation students.

SIU is the 13th university to participate in Delta's Propel program, which launched in 2018. This is SIU's first agreement with a major airline to mentor and hire aviation students directly from the program.

Under the five-year pact, the Propel program supplements Delta's pilot hiring needs by offering an accelerated path to the airline's flight deck for selected students. After a rigorous interview and evaluation process, Delta will offer successful candidates a qualified job offer, detailing a defined path and accelerated timeline to become a Delta pilot. ❑

Hartzell Propeller Expands Heating Options With Acquisition of Tanis Aircraft Products

PIQUA, OHIO (July 13, 2021) – Hartzell Propeller has purchased the assets of Tanis Aircraft Products, a leading manufacturer of engine preheat systems for fixed and rotary wing aircraft, with facilities in Minnesota. The Tanis brand will become part of Hartzell Propeller's heated products, which now includes systems for propeller de-ice, piston engine preheat, turbine engine preheat, helicopter preheat, and battery, avionics, and cabin preheat.

Douglas J. Evink, Hartzell Propeller Vice President of Sales for Tanis, is seen here teaching a seminar July 28, 2021, at EAA AirVenture Oshkosh, on the basics of aircraft preheating.
Dave Weiman Photo

"The Hartzell family of companies, which is investing heavily in the future of general aviation, is broadening our offerings in heated products with this acquisition," said Hartzell Propeller President JJ Frigge. "We were impressed with Tanis' exceptional quality, laser focus on safety, passion for aviation, and fit with Hartzell. We continue to look for opportunities to make direct, long-term investments in value-added manufacturing companies that complement our existing portfolio or leverage core competencies," he added.

Tanis Aircraft Products President and CEO Douglas J. Evink has been named Hartzell Propeller Vice President of Sales for Tanis. Tanis engineering, sales, and administrative staff will continue to be based near the Anoka County Airport, a suburb of Minneapolis, Minn. Tanis manufacturing operations will be integrated into Hartzell Propeller's heated products portfolio in Piqua, Ohio.

Tanis has a wide range of piston engine preheat products, including kits for engines from manufacturers Austro, Continental, Franklin, Jabiru, Jacobs, Lycoming, Rotax, and more. Tanis also offers turbine preheat kits and systems for all major engine manufacturers including Honeywell (Garrett), Pratt & Whitney, Rolls Royce (Allison), and more.

Tanis turbine engine preheat systems are approved for many aircraft models including PC-12, PC12/47E, and DHC-6 Viking. In addition, Tanis produces preconditioning systems for oil coolers, gear boxes, fuel control units, mod motors, and hydraulic units.

Tanis preheat products include kits and systems for most helicopter manufacturers, including AgustaWestland, Airbus, Bell, Enstrom, Erickson, Hélicoptères Guimbal, MDHI, Robinson, and Sikorsky. These helicopter systems are used with a variety of engine manufacturers, including GE, Lycoming, Pratt & Whitney, Rolls Royce, and Turbomeca.

A Tanis multi-point preheat system thoroughly heat-soaks engines. This keeps the metal above dewpoint, removing the chance of condensation on engines. Condensation forms when warm oil and water vapor rises from oil pans and hits a colder surface, like cylinder heads.

The Tanis system heats the metal on engines and keeps the tolerances of the metal more uniform, causing a reduction in wear during startup. For deep heating, the piston preheat system uses a unique and patented heated threaded element that can go into the rocker cover or intake to fully heat the head of the cylinder. Heating the cylinder heads protect the engine and allows the heat to distribute through the engine cylinders more uniformly.

Hartzell Propeller is the global leader in advanced technology aircraft propeller design and manufacturing for business, commercial and government customers. The company designs next generation propellers with innovative blended airfoil technology and manufactures them with revolutionary machining centers, robotics, and custom resin transfer molding curing stations.

Hartzell Propeller and sister companies, Hartzell Engine Technologies LLC, Quality Aircraft Accessories, and AWI-AMI (Aerospace Welding Minneapolis, Inc., and Aerospace Manufacturing, Inc.) form the general aviation business unit of Tailwind Technologies Inc. For more information on Hartzell Propeller, go to www.hartzellprop.com.

See more at: https://hartzellprop.com/hartzell-propeller-expands-heating-options-with-acquisition-of-tanis-aircraft-products/ ❑

Pilots Get Ready For Winter With Tanis & SwitcheOn

Tanis Aircraft Products, a Hartzell Propeller company, and SwitcheOn, a Malmoset, LLC company, are working together to make preheating aircraft engines and cabins easier for aircraft owners.

Tanis Aircraft Products, the world's leading manufacturer of aircraft preheating systems, and SwitcheOn, a cellular remote power switch manufacturer, have formed a partnership that provides the most advanced cellular option of remote power switching for consumers.

systems in 1974. Tanis received their first patent in 1976 and has sold well over 100,000 systems. In late 2019, Dovair Aviation, Inc. purchased the cellular remote switching system FST LLC and moved its production into the Tanis Aircraft Products facilities. As announced July 13, 2021, Tanis Aircraft Products was purchased by Harzell Propeller with manufacturing operations in Piqua, Ohio, but Tanis sales offices remain in Blaine, Minnesota.

SwitcheOn uses a new Android application, along with an

SwitcheOn Celluar Remote

Tanis Engine Preheat Systems
- Piston
- Turbine
- Rotorwing

Avionics/ Cabin Preheater

Doug Evink, Hartzell Propeller Vice President of Sales for Tanis, says that this partnership is a continuation of their desire to bring the most advanced technology to the aviation preheating marketplace. Sean Mollet of SwitcheOn says that partnering with Tanis brings together the most advanced power switching product and the most advanced preheating system. This is what so many pilots have been wishing was available and now it is.

Tanis Aircraft Products pioneered the aircraft preheating industry in 1972 and started selling aircraft engine preheating updated iOS application. Tanis Aircraft Products, FST LLC, and Preheatremote.com will continue to support the legacy FST LLC products that have been sold and will offer upgrade options to put this new hardware and software into their existing products.

To order either a Tanis preheat system and/or SwitcheOn cellular remote power switch, contact Tanis Aircraft Products at **1-800-443-2136** or visit **preheatremote.com** or **tanisaircraft.com**. ❑

Calendar

Include the DATE, TIMES, LOCATION *(INCLUDE CITY, STATE & AIRPORT NAME & I.D.)*, and CONTACT PERSON'S TELEPHONE NUMBER, as well as that person's address & email address for reference. First 15 words **FREE**. $.75 for each additional word.
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* INDICATES ANY NEW OR UPDATED CALENDAR LISTINGS SINCE THE PREVIOUS ISSUE.

OCTOBER 2021

2* **JANESVILLE, WIS. -** 2nd Annual Tri-State CAF Wing Brat Fry Fly-in. Brats will be served on the TARMAC on the south side of the terminal building by volunteers of the Tri-State CAF Wing from 10am to 2pm. Rain Date 3rd. 913-850-1522.

7* **OSHKOSH, WIS. -** EAA Aviation Museum's aviation film series: Barnstorming 6:30 - 9 pm Cost $5.00.

9 **OTTAWA (KOWI), KANS. -** Breakfast 8-10am. 785-229-2710.

12-14 **LAS VEGAS, NEV. -** National Business Aviation Association (NBAA) announced its 2021 Business Aviation Convention Exhibition (NBAA-BACE). nbaa.org

17-19 **ELKHART LAKE, WIS. - 65th Annual Wisconsin Aviation Conference** at The Osthoff Resort.

20 **WATERTOWN (WRYV), WIS. -** Hamburger Social Fly-In 5pm.

23* **SHEBOYGAN (KSBM), WIS. -** The Aviation Heritage Center of Wisconsin, located at the Sheboygan County Airport, will host fun, family-friendly activity stations around the science of flight 9am-4pm. You can tour the museum, fly a simulator and learn about airports and airplanes. 520-403-7368.

23* **ST FRANCISVILLE (KAJG), ILL. -** Wings and Bats Fly-In. Breakfast is from 8-11am and lunch is from 11am-3pm. Fly-In is to benefit a local girls 12u softball team. 812-890-0178.

23* **MARYSVILLE (KMRT), OHIO -** Octoberfest Food Truck Fly-In at Union County Airport. Food truck - German traditions - Schnitzel, Bratwurst, Curry Wurst, Hamburgers, Frankfurters, Potato Pancakes, Pretzel Bites, Sauerkraut, Potato Salad and deserts. The airport has a covered outdoor eating area and the capacity for up to 50 planes at a time to park on the ramp. We'll even have German music playing and you might even catch a few people in traditional German outfits.

MARCH 2022

17-19* **NASHVILLE, TENN. -** 2022 International Women In Aviation Conference at Gaylord Opryland Resort & Convention Center. https://www.wai.org/

APRIL 2022

5-10* **LAKELAND, FLA. -** Sun n Fun Aerospace Expo. flysnf.org/

6-8* **ROCHESTER, MINN. -** Minnesota Airports Conference at the Mayo Civic Center. For more information, please visit the conference web page or contact Katherine Stanley at sell0146@umn.edu or 612-626-1023.

MAY 2022

3-5* **SAN ANTONIO, TEXAS -** NBAA Maintenance Conference. nbaa.org/

JULY 2022

5-10* **OSHKOSH, WIS. -** AirVenture Oshkosh 2022. www.eaa.org/airventure

AUGUST 2022

8-17* **ONTARIO, CANADA -** A flying fishing adventure to Miminiska Lodge
TRIP #1: (3-Night/2-Day Trip): August 8 - 11, 2022 - *BOOKED!*
TRIP #2: (3-Night/2-Day Trip): August 11 - 14, 2022 - *BOOKED!*
TRIP #3: (5-Night/4-Day Trip): August 8 - 13, 2022 - *BOOKED!*
TRIP #4: (3-Night/2-Day Trip): August 14- 17, 2022 -
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Contact Laurian Miles At Wilderness North 1-888-465-3474

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GAMA Opens Registration For 2022 Aviation Design Challenge

WASHINGTON, D.C. – On National Aviation Day, August 19, 2021, the General Aviation Manufacturers Association (GAMA) announced that registration for the 2022 Aviation Design Challenge has opened. This annual competition, which enters its 10th year, promotes careers in aviation and Science, Technology, Engineering and Mathematics (STEM) education in U.S. high schools through aviation-focused curriculum.

"We are excited to once again open registration for GAMA's annual Aviation Design Challenge, especially as the program enters its landmark tenth year. It is fitting that we make this announcement on a day in which we celebrate

CONTINUED ON PAGE 63

Douglas Conciatu

(L/R) Airshow performer and EAA Young Eagles Chairman, Sean D. Tucker; EAA Young Eagles award recipient, Douglas Conciatu; and EAA Chapter Office representative, Chris Gauger. *EAA Photo by John Egan*

Michigan Pilot Receives Young Eagles Leadership Award

Douglas Conciatu, EAA Lifetime 53419, of Macomb, Michigan, has received the 2021 Phillips 66 Aviation EAA Young Eagles Leadership Award. The award recognizes outstanding Young Eagles volunteers who have supported the future of aviation by going above and beyond the basic Young Eagles flight.

For nearly 30 years, Conciatu has been an active member of EAA, flying Young Eagles every year, mostly from his home airport in Ray, Michigan. He ranks ninth among Young Eagles pilots across the organization and has flown more than 2,400 young people. He has also been an EAA AirVenture Oshkosh volunteer at the Blue Barn, and in past years, volunteered to fly Young Eagles at EAA Pioneer Field in Oshkosh during the summer months.

Conciatu never thought flying would become a lifelong passion. A self-starter, he began his interest in aviation in high school by reading industry magazines and learning as much as he could about it. At the age of 16, he achieved his first solo flight and received his pilot certificate at age 17.

Although piloting was never his full-time career, Conciatu found time to fly as much as he could, while maintaining his day job in public safety before he retired. In addition to being a Young Eagles pilot, he is an independent flight instructor at Ray Community Airport (57D) in Ray, Michigan.

"One summer, I gave a boy a Young Eagles ride at Pioneer, and years later, he found me at Oshkosh to share that he was enrolled at the University of North Dakota, studying aviation. It's stories like this that make what I do with the Young Eagles and EAA so incredibly special. That feeling you get when you've impacted someone's life is unmatched, and I'm very grateful to continue what I love and guide younger generations so they, too, can find a passion for flight."

Not only does Douglas Conciatu have a love for aviation, but his wife, Marla Smith, EAA Lifetime 739104, is also actively involved with Young Eagles. Although she is not a pilot, she has volunteered with the ground crews at the Young Eagles rallies and coordinated rides alongside her husband. She and Douglas, in fact, met at AirVenture 13 years ago and enjoy coming back to Oshkosh every summer.

Douglas Conciatu is a member of EAA Chapter 13 in Ray, Michigan, and Chapter 252 in Oshkosh. ❑

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HANGAR IN DOOR COUNTY, WIS.(3D2) FOR SALE – $42,000. Metal w/ bifold door and windows, 42x32x10. Concrete floor, power, lighting. Workbench and shelving. Contact Larry Wickter, ldwickterjr@gmail.com, **630-962-9208**.

HARTFORD, WISCONSIN (KHXF) – Hangar for Sale: 70 x 70 hangar built in 2014. Higher Power hydraulic door that measures 60 x 16. Hangar is located at the North End of the field: $180,000. Contact **Dana 608-235-9696** or danaosmanski@gmail.com.

GET THREE MONTHS FREE RENT ON HANGARS at Southern Wisconsin Regional Airport (JVL), Janesville, WI. Available on T-hangar units #25-#44 only (1-year commitment required). Check out our website www.jvlairport.com for airport amenities and call **608-757-5768** for current availability. Better yet, fly in and see for yourself. While you're here, enjoy a meal at Bessie's Diner or 18-holes of golf at the Glen Erin Golf Club.

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Education Continued From Page 25

Purdue University Aviation Experts Collaborate With Industry To Address Critical Shortage of Pilots & Aviation Maintenance Technicians

To avoid a looming personnel crisis in the aviation industry, Purdue University's School of Aviation and Transportation Technology announced August 30, 2021, the creation of the Purdue University National Aviation Symposium – Emerging Critical Shortages of Pilots and Maintenance Technicians. This three-day symposium, scheduled for April 6-8, 2022, will unite the aviation community – including airlines, manufacturers, industry associations, labor unions, government agencies and academic institutions – to identify and mitigate challenges to creating a sufficient pool of qualified pilots and technicians.

Aging and retiring pilots, combined with fewer numbers of pilots and technicians entering the workforce, have created a potentially crippling shortage of workers. One report by consulting firm Oliver Wyman predicts that the worldwide aviation industry could need as many as 50,000 more pilots than are available by 2025. According to the Aviation Technician Education Council, some progress has been made to increase the availability of aviation maintenance technicians, but technicians are still retiring faster than they can be replaced. This shortage of human capital has the potential to create a human resource crisis in the aviation industry, but Purdue's aviation experts intend to change that.

Stephen Dickson, the administrator of the Federal Aviation Administration (FAA), will address symposium attendees. Dickson has been an advocate for safety, global leadership, operational excellence, and the health, welfare, and evolution of the FAA's workforce since he was confirmed by the U.S. Senate in 2019. Before going to the FAA, Dickson spent nearly three decades at Delta Air Lines, retiring as the senior vice president of flight operations.

In addition to hearing from Administrator Dickson, three objectives of the National Aviation Symposium include:

- Reviewing the baseline projected levels of demand and supply of pilots and maintenance technicians.
- Identifying challenges and roadblocks that impede the creation of candidate pools.
- Proposing a unified position and voice on policy changes and actions required for industry, government, and academia.

"As air travel returns to pre-pandemic levels, the shortage of qualified pilots and maintenance technicians is only going to get worse unless we do something about it," said Thomas Frooninckx, head of the School of Aviation and Transportation Technology at Purdue University. "By combining our expertise and resources across all facets of the aviation industry, we hope to identify and act upon the best ways to attract, train and retain a reliable, robust pipeline of aviation professionals."

To participate in Purdue's National Aviation Symposium, request more information online at polytechnic.purdue.edu/national-aviation-symposium.

The Purdue Polytechnic Institute, one of 10 academic colleges at Purdue University, offers undergraduate and graduate degrees in aviation, computing, construction management, engineering technology, technology leadership, and technology education. In addition to Purdue University's main campus in West Lafayette, Indiana, Purdue Polytechnic offers select degree programs in nine Indiana communities. ❑

Whirly-Girls International Announces Garmin eLearning Scholarship Recipients For 2021

Whirly-Girls International has selected six deserving recipients of the Garmin eLearning Scholarships for 2021. Garmin, long-time supporters of the Whirly-Girls, extended their support by offering eLearning courses to current Whirly-Girls International members. These scholarships provide the opportunity to complete the GTN Essentials 2.0 eLearning Course, G1000H NXi Fundamentals eLearning Course or the G1000H NXi Advanced-IFR eLearning Course. The six scholarship recipients this year include:

Fallon Blattner-Venice, Florida (Garmin GTN Essentials 2.0 eLearning Course)

Courtney Guinan-Wasilla, Alaska (Garmin G1000H NXi Advanced IFR eLearning Course)

Josilyn Lundquist-Seattle, Washington (Garmin GTN Essentials 2.0 eLearning Course)

Chelsea Montgomery-Mesa, Arizona (Garmin G1000H NXi Advanced IFR eLearning Course)

Paola Sisconetto-Rio de Janeiro, Brazil (Garmin G1000H NXi Fundamentals eLearning Course)

Valerie Smith-Fallbrook, California (Garmin GTN Essentials 2.0 eLearning Course)

Whirly-Girls International is a non-profit, educational, and charitable organization dedicated to advancing women in helicopter aviation. It was founded in 1955 and currently has more than 2,100 members representing 47 countries. ❑

Exploring Extraordinary Career Paths In Aviation With Minnesota Aviation Career Education Camp

by Katrina Mittelstadt
Chairperson, Minnesota ACE Camp Board of Directors

Career exploration in high school is one of the most critical points in a young person's life that often sparks a passion and helps to guide the decision-making process that will influence their future. For the past 30 years, Minnesota Aviation Career Education Camp has been there to support students entering 10th, 11th, and 12th grade to gain exposure and experience in the exciting industry of aviation. Through three one-week-long residential summer camps, 90 students are given the opportunity to go behind the scenes in the Minneapolis-St. Paul Metropolitan area and see firsthand how airport operations are conducted, try their skills in an air traffic control simulator, fly in an airplane, helicopter, and glider with a certified instructor, and much, much more.

The purpose of what we do at MN ACE Camp is to inspire students to consider career paths in aviation by facilitating hands-on activities and unique experiences that light their imagination and show them that an aviation career is very within reach. We care deeply about our students' success and even after camp provide support and mentorship to our alumni as they pursue their dreams. It really is an ACE Camp family.

MN ACE Camp was not hosted in 2020 due to safety concerns related to the Covid-19 pandemic, and after much consideration by staff organizing the event for 2021, a modified single-day MN ACE Days event was held June 11th, June 24th, and July 12th at South St. Paul Airport (KSGS).

A total of 180 students were hosted over the three one-day events and were given the opportunity to learn about the path to become a pilot, air traffic controller, aircraft mechanic, and the exciting new possibilities that exist for unmanned aerial vehicle or drone pilots. Students were also given the opportunity to talk with flight training schools that attended the event, explore aerospace engineering with guest speakers, and discuss what it is like being a flight attendant with staff volunteers. For many attendees, the event was a first look into the career possibilities that exist and was a place they were able to experience the excitement alongside their peers.

Want to learn more? Visit www.mnacecamp.org and sign up to receive MN ACE Camp's newsletter to be notified when the student application window for Summer 2022 opens, and to receive other important updates and deadline notifications. MN ACE Camp can also be found on Facebook and Instagram by searching @mnacecamp. If you want to volunteer or have specific questions, MN ACE Camp's staff can be reached at www.mnacecamp.org/contact or by emailing supportstaff@mnacecamp.org.

Minnesota's Aviation Career Education Camp is a 501(c)(3) nonprofit organization. Please consider joining the amazing supporters that help MN ACE Camp inspire the future of aviation by becoming a donor or sponsor at www.mnacecamp.org/donate. One hundred percent of contributions directly support MN ACE Camp's scholarship fund that helps remove financial barriers to attend camp and soon will be offered to program graduates to help them achieve their dreams! ❑

GAMA Opens Registration For 2022 From Page 58

the history and promote the future of aviation – National Aviation Day. This valuable program provides students with the opportunity to learn about the science of flight, the mechanics of creating aircraft and the exciting career opportunities available in the general aviation industry," said Pete Bunce, GAMA President and CEO.

The Aviation Design Challenge is open to the first 150 schools that register to participate. Registered schools will receive free "Fly to Learn" curriculum, which is aligned with national STEM standards, to facilitate the learning of flight and airplane design principles. Teachers can guide their students through the curricula in approximately four to six weeks through in-person and/or virtual settings. The teams will then virtually modify an airplane design and complete a mission in a fly-off using X-Plane software.

Completed challenge submissions will be scored by GAMA judges based on the fly-off and other performance parameters. The winning team will receive an all-expenses-paid general aviation experience. The second-place team will receive a STEM Lab Camp provided by Redbird Flight Simulations, an industry leading manufacturer of aviation training devices and tools.

Since its inception in 2013, the Aviation Design Challenge has had over 600 teams participate, representing over 400 high schools from 46 states and Washington, D.C. The Aviation Design Challenge has inspired many students to get involved in general aviation and/or pursue a college degree or career path related to GA.

To register and to learn more about the challenge, visit the GAMA Aviation Design Challenge webpage: https://gama.aero/opportunities-in-ga/aviation-challenge/ Registration closes on December 17, 2021, or once all available slots are filled. ❑

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