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Vol. 41. No. 1



ISSN: 0194-5068

DECEMBER 2019/JANUARY 2020

ON THE COVER: A Javron PA-18 Super Cub, owned by Minnesota pilot, Craig Macdonald. Macdonald's aircraft is experimental and highly modified, and features PA-12 control rigging, Sullivan-style tail feathers, and a shortened nose to better balance the aircraft for the heavier 180 hp O-360 Lycoming engine. The aircraft is equipped with Trick Air Skis for winter operations. Javron Aviation, a division of Javron Precision Machining of Brainerd, Minnesota, builds aircraft kits to customer specifications, from original factory, to the most tricked-out Alaskan flying machine. Javron Aviation owner, Jav DeRosier, is also a pilot, and can be reached at 218-829-9320 or info@javronaviation.com (http://www.javronaviation.com/).

Brad Thornberg Photo

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Dialogue

Airport Tenants Make For A Strong Airport Support Group

by Dave Weiman

s an airport tenant, wouldn't you like a say on how your airport is ran...an opportunity to get your friends and business associates involved in supporting your airport...an opportunity to protect the property around your airport from encroachment...an opportunity to support airport development projects and help get funding?



Airport managers, airport commissions and elected officials should welcome your input, if they truly care about the future of their airport. Unfortunately, some municipalities do not support their own airport – usually because they do not see the value in it, and therefore are not interested in investing any money in it (even as little as 5% for improvements). Unfortunately, that puts the airport manager (and hopefully the commission) between a rock and a hard place. Either the airport manager supports the airport, or the municipality which signs his paycheck. That's when a "tenant group" can be especially helpful.

Most of the airport managers I know welcome the support of their tenants, solicit their input before a formal airport development proposal is written, and share with them short and long-range airport development plans.

Good communication skills are essential for all concerned, as is mutual respect for one another. The airport tenant should be respected because he is the customer, and likely has an investment in a hangar or business at the airport. The airport manager should be respected for his expertise.

In this issue of *Midwest Flyer Magazine*, there's an article on how airports can apply for state and federal funding, beginning on page 52. This is valuable information for airport managers and tenants alike.

If there is ever outright disagreement on how the airport is ran, or with any proposals, I encourage both management and tenants to hold a public hearing, or at the least, write down their concerns and share them with one another in a calm and objective setting with a mediator.

A good way to achieve consensus on issues is to have all parties respond separately to the same set of questions, then have an independent party review their responses and determine agreement or disagreement, and share the results with each party. This is called "consensus building," or a way to determine how close or far apart the parties are on the issues. Oftentimes, the parties are closer in agreement than they think they are, especially since the objective should be the same, to have the best airport possible! For assistance with consensus building, contact your state aeronautics office or university.



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DEADLINE	ISSUE
October 15	December - January
December 15	February - March
February 15	April - May
April 15	June - July
June 15	August - September
August 15	October - November

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MIDWEST FLYER MAGAZINE 6031 Lawry Court Oregon, WI 53575-2617 USA www.midwestflyer.com

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Illegal Charter Doesn't Just Happen In Business Jets

by Greg Reigel, Esq. Copyright 2019. All Rights Reserved

s you may know, the FAA has recently increased its investigations into illegal charter activities and is vigorously pursuing enforcement against operators conducting illegal charter flights. Many of the publicized cases have involved owners and operators of business jets with civil penalty assessments in excess of a million dollars. However, the FAA doesn't just pursue enforcement actions



Greg Reigel

against illegal charter involving jets. It will go after any operator conducting illegal charter, whether the operator is using jets or single-engine, piston aircraft.

A case in point is a recent civil penalty case, *In the Matter of: Robert M. Riter d/b/a Riter Aviation. In Riter*, the Respondent was the co-owner of a Cessna 172. According to the FAA, the Respondent authorized the use of his aircraft and arranged a pilot to fly two passengers on a roundtrip from Torrance, CA to Las Vegas, NV in exchange for \$660.00. The FAA found out about the arrangement during its investigation after the aircraft crashed shortly after departing for the return trip to California.

Since the Respondent did not hold an air carrier or operator certificate authorizing him to operate as an air carrier or commercial operator, the FAA alleged that the Respondent's carriage of passengers for hire violated 14 C.F.R. § 119.5(g). The FAA assessed a civil penalty of \$11,000 for the two flights, even though it could have assessed a civil penalty of up to \$22,000 (\$11,000 for each flight).

On appeal to the Department of Transportation Administrative Law Judge ("ALJ"), the ALJ confirmed the violation of § 119.5(g), but reduced the sanction to \$5,700. The FAA then appealed to the FAA Administrator where the issues revolved around the amount of the sanction, and the Administrator ultimately reinstated the \$11,000 civil penalty originally imposed against the Respondent.

This case is instructive not only for its discussion of how a civil penalty should be calculated in a case alleging violations



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of § 119.5(g), but also as an example of the FAA pursuing claims against an operator for illegal charter in aircraft as small as a single-engine Cessna 172. The FAA will impose civil penalties against aircraft owners and/or operators who conduct illegal charter using their aircraft. And although this case doesn't mention it, I suspect the pilot also faced a certificate action for the flights which could have resulted in suspension or revocation of the pilot's airman certificates.

The moral of the story: If any money is going to be changing hands in exchange for flights in an aircraft, it is important that the aircraft owner and operator/pilot make sure the proposed operation is structured correctly in compliance with all regulations. Failure to properly structure ownership and operation of aircraft, even single-engine, piston aircraft, can result in both civil penalty and certificate actions.

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. For assistance, call 214-780-1482, email greigel@shackelford.law, or Twitter @ReigelLaw. website: www.shackelford.law

Academy College Announces 2019 Sherm Booen Legacy Scholarship Recipient

BLOOMINGTON, MINN. – Established in 2016 to celebrate Academy College's 80th Anniversary, the "Sherm Booen Legacy Scholarship" provides \$10,000 for a student pursuing a professional pilot career in honor of aviation legend, Sherm Booen. This year's recipient is Jessica Anderson.

Anderson is a Minnesota native, and she still remembers the flight that hooked her into aviation, even



(L/R) Paul Bloch (Director of Maintenance), Corey Grape (Operations Manager – KMIC), Fred Nauer (Chief Flight Instructor), Nancy Grazzini-Olson (President), Jessica Anderson (Scholarship Recipient), Roger Sage (Director of Education), Julie Falk (Operations Manager – KFCM). Thunderbird Aviation has locations at Minneapolis Crystal Airport (KMIC) and Flying Cloud Airport (KFCM) in Eden Prairie, Minnesota.

though she was just two years old and in a car seat at the time! Fascinated, albeit slightly terrified of heights, her obsession with aviation took off from there.



As a first-generation female pilot, Anderson lives and breathes aviation, even inspiring her eight-year-old niece to get her pilot certificate someday!

Anderson is passionate about giving back to her community through volunteering with children and working with outreach programs to educate and encourage others to pursue their dreams in aviation.

In 2014, Anderson took a chance on her dream and started flying

lessons. In 2018, she decided to turn her dreams into a career and enrolled in the Commercial Pilot Program at Academy College in Bloomington, Minnesota. Successful in both the classroom and in the air, Anderson's future in flight is very promising.

Sherm Booen was born on a farm near Glenville, Minnesota. He was a B-17 civilian test pilot during World War II and moved to Richfield with his wife and daughter after the war. He then worked in radio and television and produced the World of Aviation and published The Minnesota Flyer. WCCO Television aired the World of Aviation every Sunday morning for over 28 years. Booen was inducted into the Minnesota Aviation Hall of Fame in 1995. Over the years, Sherm Booen became known as the voice for aviation in the state of Minnesota.

Contact Academy College at 952-851-0066, or email scholarship@academycollege.edu for scholarship details.

Human Factors, Angle of Attack Indicators & Buttonology

by Michael J. "Mick" Kaufman



Michael Kaufman

n my column in the October/ November 2019 issue of *Midwest Flyer Magazine*, I wrote about the importance of knowing your navigation equipment and interfaces, and I challenged my readers to create a waypoint and hold at it. On my next flight after writing the article, my goal was to try this with different navigators, and the first navigator was the Garmin

G1000 which went well, though we did have to search a few different menus until we found the best one that would help us create the holding waypoint. In writing the article and creating the illustration, I made a mistake which was caught by Don Kiel of Whitelaw, Wisconsin. The artwork did not match my clearance. SHAME ON ME!

I have written previously about human factors and their relevance to flying in general. In the movie "SULLY," which was released a few years ago, it reminded us how important human factors are.

A few weeks back I was on an airline flight from Madison, Wisconsin to Reno, Nevada for the STIHL National Championship Air Races, September 11-19, 2019, and a series of unusual circumstances caused a distraction to the pilots which reminded me how these same circumstances could have caused an accident. The flight was slightly late pushing back from the gate, and as we began to taxi, a small child began to scream and cry. This was not the ordinary small child cry and it was quite disturbing to the other passengers. Somehow the child broke loose from his parents from a seat that was somewhere behind me and started running to the front of the airplane. One of the flight attendants must have called the captain on the intercom and the taxi was stopped immediately. The child's father got up and started chasing the child, and a flight attendant followed and talked to the father. The father and child went back to their seat, and few moments later, the incident repeated itself. The pilot then taxied back to the gate and the father, mother and child got off the airplane. There was a fairly long delay as they needed to remove the family's checked baggage. The airliner then departed the gate and taxied to the departure end of the runway.



The weather that day was very convective and we were delayed again as a micro burst and wind shear shut down the airport. We were number one for departure after the storm passed, and as we started our takeoff roll, something did not seem normal to me. We aborted the takeoff and turned off onto a taxiway approximately 2000 feet from our starting point. As we taxied back to the departure end of the runway, it became noticeable that the pilot was starting one of the engines. Now it was clear. During the delays, the pilot shut down one engine to save fuel and did not remember to restart it. No comments were made to the passengers on the intercom, except for the delay for the storm.

Back to the back of the line, waiting our turn to takeoff, I thought about what had happened. Recognizing the situation, the pilot aborted shortly after bringing the power up. Could the same thing happen to other pilots? How do we handle distractions? Could we make a procedure change to keep a similar thing from happening again?

On Aug 27, 2006, a Comair Flight #5191 mistakenly took off on a short runway from Lexington, Kentucky, crashing into a wooded field, killing all but one of the 50 people onboard. Federal aviation officials said that after an initial examination of the flight recorders, or so-called "black boxes," there was indication that the pilots of the plane, a Bombardier Canadair jet, used a 3500-foot runway at the Blue Grass Airport, which is much shorter than is typically required for a fully-loaded aircraft of that type. They stated that the pilots of this aircraft could have been distracted by the runway lights of the short runway being turned up, making them think this was their runway to depart on.

Elements of stress can cause a pilot to land on the wrong runway the day after his father's funeral, and after he found out that his wife had been diagnosed with cancer. The FAA has addressed these issues in publications and they are real. Flying in weather can also cause stress to the point a pilot begins to make bad decisions, all of which are part of human factors. We must never forget the five hazardous thought patterns that are part of our personalities (see below):

Anti-authority: "Don't tell me!" Impulsivity: "Do something quickly!" Invulnerability: "It won't happen to me!" Macho: "I can do it!"

Resignation: "What's the use?"

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AVIATION, BUSINESS & MEDIATION LAW PRACTICE EDWARD E. LEINEWEBER 608-604-6515 RICHLAND CENTER, WI *CFII, Maintenance Technician, former Circuit Judge* eleineweber@leineweberlaw.com www.leineweberlaw.com The FAA and other safety groups have worked hard to recognize our human traits and we have come a long way to improve safety by learning to recognize them.

There are never two situations that are exactly alike, and as we make changes to improve situations and safety, we often open doors to create new, more serious issues.

After making a secure cockpit door that was fool proof, no one would have thought of a pilot committing suicide and taking all of his passengers with him. This happened to Germanwings Flight 9525 on March 24, 2015. It is important to remember that no two situations are exactly the same, and we must use common sense to apply what we have learned from previous experiences and the experiences of others.

Angle of Attack Indicators

Many of us have heard of – or have purchased – "angle of attack indicators" for our airplanes. Years ago, I wrote about these indicators and explained why I thought they were a waste of money. However, in recent months, I have been changing my mind with the introduction of several new units on the market. I do not see a direct relationship to instrument flying even though these units are instruments. They are most useful to the pilot when making approaches and landings on short runways and backcountry landing areas.

The Garmin GI-260 is an add-on option to the G3X, as well as other Garmin products. The feature I like about this unit, which has an audible sound similar to an automotive backup system, is that it gives the pilot beeps more frequently as he approaches the angle where the wing is about ready to stall, rather than a visual display. I have to say it was very accurate and worth the price should your Garmin equipment support it and you have a need.

As this column is centered on instrument flying, I feel the need to emphasize how important it is to understand how the system is supposed to work. And when your autopilot does something it is not supposed to do, it is time for the pilot to take over manually and fly the airplane.

In recent weeks, most of my flying has been with the Garmin G1000 glass panel cockpit and I forgot some of the traits of the King KFC 200 autopilot that is – by the way – one of my favorite autopilots and will always be a gold standard.

When the airplane I was flying started doing strange things, it was necessary for me to take over and manually fly the approach. I was ready to send the aircraft to the autopilot tech for repair after landing, but it was the operator – me – who made the mistake in pushing the wrong button. Later I verified my mistake and the autopilot worked as designed.

Until the next issue, keep training, know your equipment, and stay proficient in hand-flying those approaches!

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. Kaufman conducts pilot clinics and specialized instruction throughout the U.S. in a variety of aircraft, which are equipped with a variety of avionics, although he is based in Lone Rock (KLNR) and Eagle River (KEGV), Wisconsin. Kaufman was named "FAA's Safety Team Representative of the Year" for Wisconsin in 2008. Email questions to captmick@me.com or call 817-988-0174.

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.

Free Medical Air Transportation, Patient Transport

irlift Hope of America is a program of Mercy Medical Angels utilizing over 150 volunteer pilots to transport patients to specialized medical care. The organization is a coordinating service matching volunteer pilots who are willing to donate their time and use of their aircraft to individuals in need.

All Airlift Hope pilots hold instrument ratings, and maintain a perfect safety record.

Airlift Hope pilots own or rent the aircraft they fly. The aircraft range from four to six-place single-engine aircraft, to twin-engine pressurized cabin-class aircraft.

Airlift Hope is available to children and adult patients and their escorts who need transportation for medical evaluation, diagnosis or treatment. Patients must be ambulatory, which means they must be able to walk, enter and exit the aircraft with little or no assistance, and require no medical care (i.e., doctor or nurse) en route. Airlift Hope will also fly persons with a compassion need on a case-by-case basis. Airlift Hope can only assist when the destination is within a few hundred miles.

Airlift Hope will accept requests from anyone directly involved in the need (doctors, nurses, patients, social workers, transportation coordinators, family members, etc.). A minimum of five business days is required to coordinate flight.

For additional information or to request assistance, visit https:// airlifthope.org or call 1-800-325-8908. Airlift Hope is headquartered in Virginia Beach, Virginia.



BPT Mourns Aviation Maintenance "Superstar," Dave Monti

t is with a heavy heart that Bonanza Baron Pilot Training, Inc. (BPT) announces the passing of Jon David (Dave) Monti, BPT Director of Maintenance, on September 27, 2019.

Dave Monti was a long-time friend and colleague and subscriber to *Midwest Flyer Magazine*. He was well known for the numerous lectures he presented at BPT Flight Clinics throughout the country. He conducted walk-arounds with more than 250 BPT pilots every year, helping them complete a thorough preflight inspection



Dave Monti (center) accepts the 2019 Maintenance Technician of the Year Award from representatives of the FAA.

of their aircraft. He always made himself available to help other pilots – both far and near – who were experiencing maintenance issues. Pilots could always count on Dave for help and advice. He was gracious and would spend time with people on the phone, and at clinics discussing their concerns and answering their questions.

Dave Monti was an exceptional pilot and mechanic, earning his Airframe & Powerplant Certificate in 1975. He soloed on his sixteenth birthday in three different aircraft, including his father's Bonanza. For more than 40 years, Dave repaired aircraft and honed his skills. He founded Rebuilt Aircraft, originally in South Lake Tahoe, Calif., and subsequently in Minden, Nev., where he and his wife, Jan, lived. the trip and fly on the airlines. So, a phone call was made and anonymous donor stepped up and flew his private jet to Minden, Nevada and flew Dave and Jan to Oshkosh for the presentation, then flew them back.

As we walk through a cemetery, we often read inscriptions on gravestones. We notice the person's name and the date of birth and the date of death. Between them is a dash, which indicates what the person did with their life. Dave's dash would show a man with a big heart, many friends and a person who was always ready to help others. It would also show a kind and gentle family man loved by his wife, children and friends. With a true passion for aviation, we say Dave Monti has "GONE WEST." He will be missed.

Submitted by friends of Dave Monti.

In recognition of his tremendous service, expertise and a lifetime pursuit of aviation safety, Dave Monti was recognized as the 2019 Maintenance Technician of the Year at the FAA's General Aviation Awards Program during EAA AirVenture Oshkosh in July.

A more-worthy recipient of this lifetime achievement award would be hard to find. Dave found out about the award in early April and was provided with an all-expense paid trip to Oshkosh to receive it. All plans were made for the trip when Dave learned that he had stage four cancer and would be unable to make



Check out midwestflyer.com *for previous articles that you might have missed or to revisit*

PILOT PROFICIENCY

The New Rules For Instrument Currency

by Harold Green

Recently the FAA changed both the content and the wording of the regulation governing "pilot instrument currency." Hopefully this discussion will clarify these new requirements. In summary, the changes are mostly positive for pilots. There has been no change to the currency requirements, but there has been a major modification to the means of maintaining currency.



Harold Green

First, consider the currency

requirements. There has been a wording change that does not affect the previous requirements, although in first reading the requirements, it seems to eliminate the original six-month grace period. To ensure accurate representation on my part, I did check with various sources. In this process I was presented with a Federal Aviation Regulation (FAR) with which I was unfamiliar. It was given to me as the "secret" regulation and with some minor wording change, it went like this:

"No Federal Aviation Regulation shall be understood by any pilot. In the unlikely event understanding occurs, the offending regulation shall be modified so as to eliminate such understanding."

This appears to be the case with 14CFR FAR 61.57, which is the principal regulation covering instrument currency requirements. There has been a wording change that the FAA said was made to eliminate confusion.

Attempting to compare the old vs. the new, results in a tortuous discussion that would add nothing to our understanding of the new regulation. Therefore, only occasional references will be made to the old regulation. This discussion focuses on translating the new regulation.

The new wording, apparently intended to clarify, and once one makes a basic change in reference, generally does so. Hence: IFR (Instrument Flight Rules). VFR (Visual Flight Rules).

FAR 61.57 (c)(1)(2) in part says: "A person may act as pilot-in-command under IFR or weather conditions less than the minimum prescribed for VFR only if: (1) Use of an airplane, powered lift, helicopter or airship for maintaining instrument experience. Within the 6 calendar months preceding the month of the flight, that person performed and logged at least the following tasks and iterations in an airplane, powered lift, helicopter, airship as appropriate for the instrument rating privileges to be maintained in actual weather conditions, or under simulated



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conditions using a view limiting device that involves having performed the following. (i). Six instrument approaches, (ii) holding procedures and tasks, (iii) intercepting and tracking courses through the use of navigational electronic systems."

As a result of this wording, the pilot is considered to be current any time during this six-month period. Therefore, the non-current period begins after the initial six months. Further, FAR 61.57(d) states: "...a person who has failed to meet the instrument experience requirements of paragraph (c) of this section for more than six calendar months may reestablish instrument currency only by completing an instrument proficiency check." The key here is the fact that failure to meet the experience requirements begins after the initial six-month period in which the pilot is current by definition. Thus, a full twelve (12) months exist between the initial time and the need for an instrument proficiency check (IPC).

One needs to be aware of the statement *"Within the six months preceding the flight."* This means that if you are planning to fly in December, the six months preceding ends in November. This is a change in how the months are counted.

On the positive side of these changes, pilots can now accomplish the required flight experience in an approved flight simulator, flight training device or aviation training device and may do so without an instructor sign off. A direct quote from 61.57(c)(2) is: "A person may complete the instrument experience in any combination of an aircraft, full flight simulator, flight training device or aviation training device providing the device represents the category of aircraft for the instrument privileges to be maintained and providing the pilot performs the tasks and iterations in simulated instrument conditions."

The pilot must make appropriate logbook entries to document the activity. (We'll take up the logbook entries later in this discussion.) It is very important to note that there is no requirement for an instructor to sign off these entries.

The pilot must make logbook entries in a manner identical to that required for activities completed in an airplane except the model of the simulator must be spelled out, along with the approaches and holds, just as the pilot would in an airplane. The regulation clearly states that currency may be achieved in any combination of airplane, simulator, flight training device (FTD) or aviation training device (ATD). The



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- Site dimensions starting at 42 ft x 34 ft

definitions of flight simulators, flight training devices and aviation training devices, and the activities for which they may be used, is left for future discussion.

Of course, you can still fly with a "safety pilot" and no discussion would be complete without referring to this individual.

Providing the flight is in visual meteorological conditions, the safety pilot does not need to be instrument rated. The best way to look at this is the fact that the safety pilot must be able to act as pilot-in-command in the aircraft and conditions of the flight. The requirement for logging this time can be found in FAR 61.51 (b). The name of the safety pilot must be included in the logbook entry.

If, despite your best efforts, you wind up needing an IPC, you can expect the same events encountered on your instrument check-ride. The difference is that an authorized instrument instructor (CFII), rather than a designated pilot examiner (DPE) may conduct the IPC. Some pilots find it advantageous to obtain an IPC occasionally just to be sure they are on top of the latest requirements and rust has not entered into their flying.

There is one item that is still puzzling. The portion of the regulation that states that a person may act as pilot-incommand under IFR or weather conditions less than the minimum prescribed for VFR. Why does the regulation say IFR or weather conditions?

Generally, it would be assumed that if the weather conditions were less than the minimums prescribed for VFR, the operation would be conducted under IFR. It will be interesting to see what is made of this in the coming years.

In summary, this new wording makes no significant change to the experience requirements. What has changed is the fact that currency can be maintained using a flight simulator, FTD or ATD and an instructor sign off on such activities is no longer required. In addition, now it is necessary to count the six-month period to conclude in the calendar month before the month of the intended flight.

In my next column, we will explore FTDs, ATDs and full flight simulators and how they can become a regular part of your self-currency efforts.

EDITOR'S NOTE: Harold Green is an Instrument and Multi-Engine Instrument Instructor (CFII, MEII) at Morey Airplane Company in Middleton, Wisconsin (C29). A flight instructor since 1976, Green was named "Flight Instructor of the Year" by the Federal Aviation Administration in 2011 and is a recipient of the "Wright Brothers Master Pilot Award." Questions, comments and suggestions for future topics are welcomed via email at harlgren@aol.com, or by telephone at 608-836-1711 (www.MoreyAirport.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 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.

PLBs & Satellite Messengers – Are They Worth Buying?

by Pete Schoeninger

Q: My friend, a medical doctor, strongly urges me to carry a personal locator beacon (PLB) or satellite messenger – even when flying day VFR – in the remote chance of an



Pete Schoeninger

off-airport incident. Isn't that overkill? I have a smart phone which gives me my location any time I want.

A: I agree with your friend. Your smart phone is an electronic marvel, but it needs to be within reach of cell towers. If you have the misfortune of ending up in a wooded or hilly area, you might not be able to get cell phone reception. A PLB is hand carried, and you have to activate it manually. It will give your position to satellites. The slightly more expensive satellite messenger units, sometimes called personal tracking devices, cost a little more: \$300 - \$600, and require a subscription which costs \$20 - \$100 a month. They allow you to send and receive messages and can give the most accurate report of your exact position via satellite. Whichever you choose, consider keeping them in your coat pocket, as they may get lost if you have a substantial accident. Since they are portable, you can take them with you anywhere.

Remember in the winter, even when flying over populated areas, to always take along some survival gear. A first aid kit, and old wool blankets and/ or used snowmobile suits, and a pair of snow boots, weigh almost nothing and are cheap insurance. I just bought two nice used snowmobile suits on "craigslist" (https://www.craigslist.org/), I have for an emergency – \$85 for two of them! Over wooded or more sparsely populated areas, you should carry lots more stuff. Look up survival and first aid kits on the Internet. **Q:** I am looking to buy an airplane that will carry three couples and a small amount of baggage for weekend getaways. Our trips are about 300 miles long, and our weight of people plus baggage, excluding fuel, will be about 1,000 lbs. Our destination has fuel, so we don't need to have a heavy fuel load onboard. I've got about \$130K to spend, and it looks like a Piper Saratoga might best fit the bill compared to Beech Bonanzas and Cessna 206/210s. Do you agree? Would you recommend a retractable gear version, or the fixed gear version?



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A: Piper Saratogas offer a bigger cabin than their competitors, and a high useful load with a wide C.G. range. I think your choice is correct. The fixed gear Saratoga model was made from 1980 – 1990, and the retractable from 1980 - 1992. Given a bigger fuselage, the cruising speed is less than competing Cessna and Beech models. Expect about 140 knots from the fixed gear airplane and about 10 - 15 knots more from the retractable. On your 300-mile trip, the time difference between a retractable and fixed gear model would be 10 minutes or so, thus I would lean toward the fixed gear version for you. All else being equal, the retractable version will run about \$15,000 more than a fixed gear model. Turbo charging was offered in some years, and adds a bit to prices, but it is not a free lunch as the time between overhaul (TBO) is reduced and the fuel flow is increased. Be sure to have a mechanic familiar with Saratogas thoroughly look over any prospective airplane before you buy it, and also do a title search.

Q: As an aircraft owner, I regularly receive solicitation in the mail from aircraft dealers or brokers asking if I want to sell my airplane. Exactly, how does that work? If I am interested in selling my airplane, do I send a description of the aircraft to the dealer, including the year, make and model; total aircraft time; total time since major overhaul; a list of avionics; and photos —inside and out – and then does the dealer shoot me a price as to what he feels my aircraft is worth, make me an offer 5% or 10% below the actual value of the aircraft, then buy it outright, or do they broker it for me, then take a percentage of the sale? And finally, is this a safe, fair and convenient way to sell my airplane, or would I be better off trying to sell it on my own?

A: Some dealers and brokers will be immediate buyers, but at a reduced wholesale price. But more often, they are looking for a listing, where they get a commission if they sell your airplane. If any solicitations interest you, take the bull by the horns and ask those questions. You can try and sell your airplane yourself. Selling an airplane can be easy and fun, or difficult. Expect to spend several hundred dollars on ads, be prepared to put up with people who want a free ride, some who do not have financial resources to complete the deal, people with unusual requests, etc. The broker or salesman earns his fee by handling these problems for you. If you hire a sales agent, I urge you to have it be someone nearby that you trust, who can be available at not much notice to show your airplane. Also ask that agent for references of recent sales.

Q: My 2003 Cessna 172S has a Lycoming IO-360-L engine, which is approaching overhaul. I was expecting to spend \$25,000 - \$30,000 with my local FBO to have a replacement engine installed, but I just heard from a friend that his cousin – who is an aircraft mechanic that owns a maintenance shop two states away -- overhauled his personal 172S for \$12,000. Am I about to be ripped off?

A: The \$12,000 you mentioned probably was only the cost of parts replaced. The shop owner undoubtedly did the labor of engine removal, tear down and cleaning, reassembly, and reinstallation. You will have to pay that labor, perhaps 90 hours total. So, let's do the math: \$12,000 in parts, 90 hours of labor at say \$100/hour = \$9,000 (hence: shop rates vary between \$60 and \$100 per hour, depending on location, rural versus urban, and other factors). Add \$7,000 more or so for overhead, liability insurance, and a little for profit, and you're in the high \$20s. So, you are not getting ripped off at \$25 - \$30K for a quality overhauled engine installed in your airplane.

Q: Someone told me I can shorten my landing roll maybe 100 feet on my Stinson by having the brakes applied at about half of full pressure, just before touchdown. The reason he said is if I land with lots of drag on the tires, the airplane will have a slight nose-down pitch, preventing any slight skip or



bounce, allowing braking immediately, thus reducing landing roll maybe 100 feet. Does this make any sense?

A: NO, don't try it! You might end up upside down with repairs needed that will exceed the value of your airplane. Is saving 100 feet of landing roll worth that risk? I sure don't think so. *DON'T LAND WITH YOUR BRAKES ON, PERIOD!!*

Q: I have ridden with my friend a few times in his Cessna 185. That airplane takes off quickly and climbs very well. He says it is so powerful that performance is not affected by load weight. Is that true?

A: No, you cannot beat the laws of physics. Just like all other airplanes, weight has a direct effect on performance. Have your friend look in his Pilots Operating Handbook to verify this.

Q: I have read that airline pilots don't always use full power on takeoff. Wouldn't that be dangerous?

A: When conditions of load, temperature, runway length, ATC clearance, etc., permit, airline pilots may use less than full power to save fuel, and wear and tear on their engines.

Q: At Oshkosh this summer, I looked at a couple of

Cessna 195s. How can the pilot see forward with that big radial engine blocking his view? What do you know about C195s? Have you ever flown one?

A: On the ground, in a three-point attitude, forward visibility is poor as you noted, necessitating "S" turns while taxing. In flight, the view over the nose is about normal. I flew one only once, so I am no expert on them. I was struck by how stable the airplane was in level flight at cruise. The Cessna 195 competed against Bonanzas immediately after World War II for the high-end, single-engine airplane market. The Bonanza had tricycle landing gear, much better visibility, and was much faster compared to the C195. Cessna sold about 1,000 C195s between 1947 and 1952. The Bonanzas also started production in 1947, and immediately outsold the C195s, and to this day, are still being manufactured.

Q: You said the two bluebook references you use are often within 10% or so of each other, but sometimes there is as much as a 20% variation in value. How then can you, or anybody else, come up with an exact appraisal figure which is 100% accurate?

A: I can't. The average airplane in the USA is about 45 years old. No two airplanes are exactly the same in

CONTINUED ON PAGE 19



HIGH ON HEALTH

BasicMed Again!



Dr. Bill Blank

by Bill Blank, M.D.

"B asicMed" took effect on May 1, 2017, as an alternate way for pilots to fly without holding an FAA medical certificate, as long as they meet certain requirements. Since then, approximately 50,000 pilots have taken advantage of this alternate pathway to medical qualification.

The median age of pilots flying with BasicMed issuances is 65. The oldest pilot is 100. Sixty percent (60%) of the pilots are older than 80, and 98% are male. Eight percent (8%) of 3rd class medical holders are female. Twenty-eight percent (28%) of pilots with BasicMed have had a special issuance. As of September 13, 2018, pilots with BasicMed were involved in at least 179 aviation accidents. Thirty-four (34) of these accidents were fatal with 37 fatalities.

How many of these fatal accidents were due to medical issues is unknown. They are still under investigation by the National Transportation Safety Board (NTSB).

The legislation authorizing BasicMed requires the FAA Administrator to submit reports on BasicMed to Congress no later than 5 years after the enactment of the act. The current plan is to issue interim reports at the 3- and 4-year marks, as well as a formal 5-year report around July 2021. In talking with a highly placed FAA physician who is involved in all medically-related aircraft accidents, he feels that BasicMed is here to stay unless there is a major increase in accidents among this pilot population.

Since BasicMed started a little more than two years ago, I want to review certain dates pertaining to continued certification of pilots flying with BasicMed. Regular FAA medicals (1st, 2nd, 3rd class) expire at midnight on the last day of the month in which they were issued. The BasicMed doctor's examination is different. It expires at midnight at the end of the exact date it was signed by the examining physician and is good for 4 years.

The interim medical education course has to be taken in 2 years. It can be taken anytime in the month in which the medical exam was performed. If you take it early, you will shorten the period of validity. If you take it late, you cannot fly until you have completed it and have gained nothing. The 4-year duration expires on the date of the medical exam.

It is important to understand that your BasicMed was not issued by the FAA Aeromedical Certification Division. That means the FAA cannot revoke it. BasicMed operates under the Flight Standards Service. If the FAA becomes aware of a serious medical condition which renders you unsafe to fly, since they cannot revoke your medical certificate, the Flight Standards Service will revoke your pilot certificate to prevent you from flying. To my knowledge, this has not happened yet, but I am sure it will.

Because the Department of Transportation failed to respond to the AOPA/EAA petition on BasicMed, it was passed with very little input from the Aeromedical Certification Division. Not surprising, from the FAA's point of view, some special situations were not addressed in the law:

- Airmen reported as having a DUI (driving under the influence) violation within the last two (2) years on the



National Driver's Registry.

- Hotline complaints alleging airmen to have conditions that would make them ineligible for BasicMed.

- Airmen found to have falsified their most recent application for Airmen Medical Certification.

- State-licensed physician reports that he signed off on a BasicMed and then realizes that the airman did not reveal disqualifying medical conditions.

- Re-examination of an airman's qualification for BasicMed if urgent and credible information is received, suggesting that they may have one of the conditions requiring evaluation by the FAA's Special Issuance process.

Whether there is any likelihood that any of this will be addressed, I don't know. For those of you holding BasicMed, I hope this information has been helpful. For those who don't, hopefully it has been informative.

In the October/November 2019 issue of *Midwest Flyer Magazine*, there was an article by Federal Air Surgeon Michael A. Berry, M.D. about tetrahydrocannabinol (THC) from a federal regulatory point of view. In my next column, I will

ASK PETE FROM PAGE 17

condition, airframe hours, engine hours, corrosion, clarity of maintenance records, avionics, damage history, paint condition, autopilot, etc. My appraisals are my best estimate of the value of the airplane as inspected on that date, but that is not to say the airplane could be sold a week later for significantly more or less money.

Q: The mandate for Automatic Dependent Surveillance-Broadcast (ADS–B) "Out" is almost here (January 1, 2020.) Should I bite the bullet and get the equipment installed, or try to avoid airspace where it will be required? Also, what does it cost?

A: Yes, like death and taxes, it's coming very soon. Get it done, and expect the minimum cost to be \$2,500 - \$6,000. Otherwise, you will drastically limit the utility of your aircraft by where you can go, especially in regards to operating in controlled airspace. Consider adding ADS-B "In" as well if your wallet allows, as there are substantial benefits, like traffic and weather. ADS-B provides many benefits to both pilots and air traffic control that improve both the safety and efficiency of flight.

EDITOR'S NOTE: Pete Schoeninger appraises airplanes for estates, divorces, and partnership buyouts. He is a 40year 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. For aircraft appraisals, contact Pete at PeterSchoeningerLLC@ gmail.com or call 262-533-3056 (peterschoeningerllc. wordpress.com).

DISCLAIMER: The information contained in this column

address cannabidiol (CBD) – an active ingredient in cannabis, derived from the hemp plant that has become popular in the treatment of pain, insomnia, and anxiety.

Until then, happy flying!

EDITOR'S NOTE: William A. Blank is a physician in La Crosse, Wisconsin, and has been an Aviation Medical Examiner (AME) since 1978, and a Senior AME since 1985.

Dr. Blank is a retired Ophthalmologist, but still gives some of the ophthalmology lectures at AME renewal seminars. Flyingwise, Dr. Blank holds an Airline Transport Pilot Certificate and has 5600 hours. He is a Certified Instrument Flight Instructor (CFII) and has given over 1200 hours of aerobatic instruction. In addition, Dr. Blank was an airshow performer through the 2014 season and held a Statement of Aerobatic Competency (SAC) since 1987.

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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.



Introducing Dr. Bob Worthington – PILOT, WRITER, SOLDIER

B ob Worthington of Las Cruces, New Mexico, has joined the editorial team at *Midwest Flyer Magazine* to share not only his experience as a



Bob Worthington

pilot and aircraft owner, but also as a military officer, psychologist, and survival expert. Bob is an instrumentrated, single-engine land pilot with 40 years of flight experience and over 7000 hours. He has owned nine airplanes and flown to 49 states and three foreign countries.

Bob did not become a pilot until he was almost 40, resulting in an unusual approach to aviation safety. Prior to learning to fly, he was a combat infantryman and special operations officer having served on three combat tours.



Find out how to get your copy of the book and movie at www.BobWorthingtonWriter.com After 15 years as a combat infantryman, Bob received his Master of Arts Degree and PhD in Psychology, transferring into Army medicine as a clinical psychologist. Due to his rank and military experience, he was assigned as the Psychology Consultant for the Army in the U.S. This assignment required considerable travel and his Army pilot friends suggested he become a pilot and fly himself. He called the local Army flying club, asking what it took to become a pilot, and in a few short months, received his private pilot certificate.

While in flight training, his instructors impressed on him the fact that flying had its risks, but that these risks can be mitigated by the pilot. Combat missions are dangerous, yet combat leaders are expected to execute, not say, "this looks too risky...I think I will not go today, and instead wait until the situation improves." However, Bob learned that a pilot has the option of doing just that (i.e. "The weather doesn't look good today, so I will stay home until it improves.")

Bob's interest in aviation, safety, and the behavior of pilots led him to becoming an aviation psychologist where he developed several seminars for Army pilots on the psychological aspects of safe flying and survival.

Upon retiring from the Army, Bob joined the Civil Air Patrol and became a search and rescue pilot, and ran the cadet flight orientation program.

Both Bob and his wife, Anita, had graduate degrees in Business, so they formed a management consulting company serving aviation businesses. Bob also convinced the editor of General Aviation News to hire him as their business editor. Thus, began his aviation writing career (he was already a non-fiction writer in areas of military, firearms, behavioral science and business).

Bob has been involved in aviation at the county, state, and national level, and has served as president of the U.S. Pilots Association (USPA).

As an FAA Safety Counselor and FAASTeam Representative, Bob Worthington has created and taught dozens of WINGS safety seminars. As an aviation psychologist, he developed and taught a safety seminar entitled "The Aging Aviator," which was the original seminar specifically created to show pilots how aging affects performance, and what older pilots can do to off-set the negative aspects of growing older and flying airplanes.

Bob has taught seminars on mountain flying and used to guide pilots through western Canada, around Alaska, and back into the lower 48.

As a non-fiction writer, Bob Worthington has written over 2500 articles, mostly about aviation. His articles range from tips on flying, to aircraft selection, purchase, ownership, and selling. Bob covers technical concerns while doing considerable research on current aviation topics, such as ADS-B equipment and its 2020 deadline, and the problems with the Boeing 737 MAX.

Currently, Bob Worthington is very much involved with writing his military trilogy books. His book **"Under Fire with ARVN Infantry,"** published in October 2018, is about his first tour as a combat advisor in Vietnam. His second book, **"Combat Advisor in Vietnam: Special Operations,"** will be published in mid-2020, and is about his second tour in Vietnam. His third book about his service as an Army psychologist, will be published in mid-2021. He also produced the documentary film, **"Combat Advisor in Vietnam,"** which was released in March 2019.

Anyone who has a fascination or curiosity with the Vietnam War will find Bob's books and documentary of interest. To order **"Under Fire with ARVN Infantry"** go to https://mcfarlandbooks.com/product/Under-Fire-with-ARVN-Infantry/. To order the documentary film, **"Combat Advisor in Vietnam,"** go to www. borderlandsmedia.com.

In the mid-1980s, Bob Worthington created his column, "*The Left Seat*," for another aviation magazine, so we are proud to have his column finally land at *Midwest Flyer Magazine*. For additional information, visit www.BobWorthingtonWriter.com

THE LEFT SEAT

Why the Boeing 737 MAX 8 situation matters to GA pilots

by Bob Worthington www.BobWorthingtonWriter.com

ost of us general aviation (GA) pilots are familiar with the problems the Boeing Company is

★ ▼ ▲ wrestling with regarding its 737 MAX 8 aircraft. But how many of us recognize how this situation relates to what we fly?

On October 29, 2018, a Lion Air Boeing 737 MAX 8 (Flight 610) crashed into the Java Sea in Indonesia, 13 minutes after takeoff, killing all aboard. Then on March 10, 2019, an Ethiopian Airlines 737 MAX 8 (Flight 302) crashed near the town of Bishoftu in Ethiopia, southeast of Addis Ababa, six minutes after takeoff, also



Boeing 737 MAX 8 Boeing Photo

killing all aboard. Thus the 737 MAX 8 was grounded. The investigations as to why, continue.

Here is what we do know about the Boeing 737 MAX 8. The 737 was created in 1964, the analogue age of aviation technology, with its first flight in 1967. Since then the

aircraft has undergone four generations of changes to enhance efficiency, carrying capacity, range, and a host of other improvements.

The 737 was a favorite of airline pilots, so Boeing wanted to retain the same aspects of the aircraft as it proceeded to modernize it. Doing this though, changed the flight characteristics of the aircraft. Therefore, Boeing had to devise ways to control these changes.

In 2011, Boeing initiated development of the 737 MAX



8 (and we are now in the digital technology age of aviation). New engines were placed differently than previous models, causing the nose to pitch up under certain flight conditions. Thus, the Maneuvering Characteristics Augmentation System was created to correct the adverse flight positions of the aircraft.

Here we have a 55-year-old aircraft design, undergoing numerous changes, and involving the introduction of very complex technology, to keep flying safe. This brings us to another part of the problem -- the experience, qualifications and training of the pilots flying the 737 MAX 8.

In the U.S. for a pilot to occupy the right seat of an airliner carrying passengers, he must have at least 1500 hours of flight time (there are a few exceptions, depending on training). But in other parts of the world, a pilot can fly for the airlines with as few as 200 hours. In my experience, that equates to just completing flight school.

The FAA regulates aviation and pilots only in the U.S., so certification of aircraft is being done with American test pilots and American airline pilots. These pilots are among the best in the world. They test fly an aircraft and understand the complexity of the modifications, and have the expertise and experience to safely make the flights. But can lessor-trained pilots understand and operate safely, the complex technology of the modifications, replicating the skills and experience of American pilots? Clearly the answer is no.

In April this year, the FAA instituted an international panel of aviation safety experts from nine different countries, including the U.S. This committee was tasked to examine all the procedures to approve the Boeing 737 MAX 8 flightcontrol systems.

So, what does this have to do with general aviation pilots? Consider this. Every day GA pilots repeat the scenario of those two downed 737 MAX 8 aircraft.

The average age of the typical GA aircraft is 50 years old. Therefore, these aircraft were certified using analogue technology of the late 1970s and early 1980s. By January 1, 2020, in order to fly in U.S. controlled airspace, all aircraft must have onboard digital technology in the form of Automatic Dependent Surveillance-Broadcast (ADS-B) equipment. How many of you found that installing the ADS-B equipment required more modifications to properly mate with your old analogue technology?

The typical GA pilot flies less than 100 hours a year with some estimates citing 40 hours a year. Most of us GA pilots own older aircraft because new aircraft are a bit out of our

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financial reach. So, what do we do? Exactly what Boeing has done with the 737 MAX 8. We modify our old airplanes to carry more weight, fly faster, or become more automated. And when we do this, it is not uncommon to encounter conflicts because what we want to add isn't compatible with what we already have.

When I bought my first airplane, I modified it for instrument flying. The navigation equipment was purchased, and installation began. After installation got underway, it was determined that the electrical system was insufficient for the new equipment. The solution? Install a new electrical system, which we did.

Sometimes modifications can be a challenge for pilots, who fly without becoming totally familiar with the modifications. A prime example of this is what happened to the singer (and pilot), John Denver. A great person, very talented, and about as pro GA as one can be. John purchased a used experimental aircraft, the Long-EZ. The builder changed the location of the fuel selector valve to behind the pilot's seat. While practicing touch and goes at Monterey, California, John headed out over the coast, and the plane crashed in the ocean. The National Transportation Safety Board (NTSB) determined that John was not familiar with the aircraft, and when trying to switch tanks, he inadvertently lost control of the aircraft.

The number one cause of GA accidents is "loss of control," mainly due to stalling. When I started as a student pilot in 1975, the training emphasis was on aeronautical maneuvering, controlling the airplane in flight. Navigation was done using maps and terrain navigation, the compass, and VORs. The complexity of learning to fly was in mastering how to make the plane do what I wanted it to do, from takeoff, to cruise, to landing. We practiced stalls and spins, were taught how they occur, and learned how to safely exit a stall or spin.

Today, aircraft are much more complicated with digital operations and glass cockpits. Flight training emphasis is on both aeronautical maneuvering and how to manage the digital instrument panel. Young people today have grown up in the digital age, so those in pilot training already possess an intuitive understanding of how a glass cockpit works. But with the average age of GA pilots in the high 40s, they did not grow up in the digital age, so mastering added digital equipment may take some additional training.

Consider for a moment driving your car and wanting to change the heat setting or the radio station, or worse yet, the "clock." Most of us need to take a quick glance at the knob or button or computer icon to make sure we press, turn, or touch the right component. If it is a simple change we want to make, we usually don't lose control of the car and crash. But in an airplane, the situation is quite different as we are maneuvering in multiple directions: up and down, sideways, and forward. In cars, we just move forward and sideways. Still, not safe!

So how do the 737 MAX 8 accidents relate to GA pilots?

The familiar (and ubiquitous) airframe was modified with new technology, and when things began to get bad, the pilots were unable to correct the situation and crashed. Part of the problem is new technology, and part is the experience level of the pilots.

Many of our GA aircraft are decades old and have been modified to fly and navigate using modern technology. Is flying three to seven hours a month enough to maintain the level of skills and proficiency needed to safely manipulate your digital-equipped aircraft? Are you safe in hard IFR flight at night? FAA accident statistics suggest many pilots are not.

The technology of today requires pilots to not only be able to maneuver the aircraft, but also, at the same time, be an adept systems manager competent in mastering autopilots, GPS navigators, and all the programs in the computer systems on the instrument panel. If a pilot cannot intuitively operate all the new technology in his aircraft, the risk factor of an accident is greater.

It is not uncommon when flying in controlled airspace for air traffic control (ATC) to issue a command to quickly change your flight characteristics to perhaps avoid another aircraft, stop a landing configuration and switch you to another runway, or amend your instrument clearance to proceed to a different and unfamiliar fix, vector you in a different direction, or assign you a different altitude. Any of these deviations require a pilot to instantly realize what must be done, and often the pilot must make immediate changes to the automatic settings already programmed into his avionics. Sometimes the only way for instant compliance is to cancel all automation and hand-fly the deviations issued by ATC.

Some pilots, though, are so familiar with their automated cockpit, that they can instinctively make the requested changes on their equipment, so they can instantly respond to the revised clearance. This is not multi-tasking, but rather an instinctive understanding of what must be done, and how to do it.

A common myth is the ability to "multi-task." The human brain is not designed to multi-task (research the scientific studies, if you don't believe me). Therefore, trouble can occur if a pilot is flying a plane and then must focus instead on the navigation instruments to make a change and the pilot is not sure exactly how to reprogram the equipment. Danger ensues if the pilot is unable to make the changes due to a lack of experience or proficiency with the equipment. This is what happened to John Denver.

In the mid-1980s, I purchased an almost new Mooney 231, fully IFR equipped. Before that, I owned a late-model, instrument-equipped Cessna 182. It took me around 25 hours of training with a flight instructor before I was comfortable flying in instrument conditions in the retractable Mooney. Twenty years later, I bought a Cessna 182RG and had it completely rebuilt. It had the latest GPS navigator and flight management system with an autopilot. This time it took me 100 hours of practice with all the automated systems to feel completely safe flying in instrument conditions at night.

Quite a difference in technology (analogue to digital), and quite a difference in the time required to become proficient with a new system.

If you have digital technology in your airplane, how competent are you in knowing every aspect of what the equipment is capable of accomplishing? Do you fly often enough to retain the knowledge of operating your equipment under the most challenging conditions or situations? Do you fly with friends or flight instructors who know more about your equipment than you do, who can place you in demanding flight situations that will test your ability to respond immediately and instinctively to abrupt changes in flight? Do you obtain either flight reviews or instrument check-rides twice a year to assess your ability to handle all your automated equipment safely and quickly? Most automatic and computerized flight equipment for aircraft have computer programs to use in training. Do you have them and do you use them?

When I was a new instrument-rated pilot, my job required traveling all over the U.S. A flight school went out of business and had an analogue ATC 610 desktop flight simulator for sale (with yoke and rudder pedals). It was not cheap, but I bought it. When I had flights to airports I was unfamiliar with, I could program the simulator for instrument approaches to those airports. A day or two before my flight, I



would spend a few hours flying those programmed instrument approaches, so I would be familiar with what I might expect at my destination. I owned and used that simulator for almost three decades and it gave me confidence that I could safely handle any IFR approach at my destinations.

The number one cause of GA accidents is "loss of control." Many accidents are caused not because we can't comprehend what to do, but because we don't know our aircraft well enough to do what we need to do. The result is often loss of control because we try to make changes to our automatic systems and can't quite figure out what to do. We become fixated on trying to manipulate our equipment and fail to focus on flying the plane. Don't let that happen to you. Practice until you are the expert and continue to practice so you stay the expert.

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.

16th Annual Flying Cloud Air Tour



Flying Cloud Air Tour organizer, Brad Johnson, briefs the group before departure.

by Kristie Derendinger

rainy week cleared on Saturday morning, September 14th; perfect timing for 30 aircraft from Flying Cloud Airport (KFCM) and surrounding airports to gather in Eden Prairie, Minnesota, and journey south to Prairie du Chien, Wisconsin (KPDC) to take part in the 2019 Flying Cloud Air Tour!

The quiet morning was suddenly buzzing as the planes started to arrive. Some of the first arrivals were local aircraft taxiing over to the staging area from their hangars across the field. Then more arrived from their home airports of Crystal,

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The weather as seen along the way. Kristie Derendinger Photo

Anoka County-Blaine, South St. Paul, and as far away as Aitken, Minnesota. The incoming planes, ranging from a newer Cirrus SR20 to a 1946 Taylorcraft, kept the volunteer marshals on their toes. But thanks to careful planning, every plane had a designated parking spot.

A crowd of nearly 60 pilots and passengers gathered around the coffee and donuts, and picked up their Air Tour hats provided by Air Trek North and Tanis Aircraft Products. Stories were told among old friends; introductions were made by new friends. After a short update on the weather and instructions for the day, the tower manager welcomed the group and answered any questions prior to departure.

And then they were off! Launching every minute, a continuous line of small aircraft made their way southward to Prairie du Chien, 160 miles away. There were some unexpected clouds in the distance, but the lead plane, piloted by Hiroshi Takeuchi, assured the group that the clouds wouldn't impact our planned route.

Along the way, we flew over the beautiful hills and valleys near Winona, Minnesota. Soon the destination was in sight **CONTINUED ON PAGE 27**



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Make it count

by Mark Baker AOPA President & CEO

Leanor Roosevelt once said, "Today is the oldest you've ever been, and the youngest you'll ever be." Sometimes I cringe when I hear that, as it's a sharp reminder of how quickly time flies. The holidays are almost here, and marketing companies are preparing for major sales, Christmas movies are on our TVs, and every other online ad is persuading us to buy the latest gadgets and toys. But amid the



Mark Baker

frenzy, we should also remember that the end of the year is about self-reflection and giving back. And while we, pilots, like our toys, we also put them to good use. General aviation gives back to communities every day, and often under the radar.

You might be surprised to learn that you're in a more exclusive club than you may have originally thought. Fewer than 1 percent of the world's population are pilots, leaving us with a skill set not many possess—a skill set that we can use to make a difference for the public good.

Unfortunately, GA tends to get a bad rap—from an often-panicked news media, power-hungry public officials, or energized but misinformed environmentalists. Many are blind to the value that GA and its treasured airports bring to people, thousands of local communities, and the overall economy. GA is more than a hobby for the wealthy it's often portrayed as—it's a lifeline for emergency medical transports, it's a savior when natural disasters strike, and it's a gateway to success for today's youth. As pilots, we all love to fly, so in the spirit of the holiday season, I encourage you to go wheels up for a good cause.

There's never been a better time to get involved. The passage of the 2018 FAA reauthorization bill was a huge win for volunteer pilots, and something AOPA has advocated for years. Under the legislation, volunteer pilots conducting medical transports and charitable flights are protected beyond the limits of their insurance coverage, making liability concerns a nonissue.

There is so much goodwill surrounding GA, but it doesn't always get the spotlight it deserves, and that's the very reason AOPA exists. Our mission is to protect the uniquely American freedom to fly and show others the value of that liberty.

During my time as president of AOPA, I've had the

opportunity to witness the immense generosity of our aviation community. We've dealt with many devastating natural disasters and, along with paramedics, firefighters, and other heroes, it's usually pilots who are among the first responders volunteering their time and aircraft to aid in relief. The coordinated effort of the GA community, and the hundreds of volunteers lending helping hands, never ceases to amaze me. In many cases, aircraft are the only means to deploy resources in the aftermath of natural disasters, and that's one of the reasons we work so hard to keep our airports open—they truly are a lifeline for these communities.

Yes, we can offer our aircraft, and we can open our wallets, but it's time that will always be our most valuable asset. So, as a New Year's resolution, or just as a personal goal, I encourage you to donate your time and expertise. Go wheels up, give back to those in need, and most important—make it count.



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What You Can Do To Preserve Your Public-Use Airport

by Kyle Lewis

Regional Manager / Government Affairs & Airport Advocacy / Great Lakes Aircraft Owners & Pilots Association

s 2020 begins anew, we celebrate the fact that general aviation (GA) is alive and well. Over the last few years, GA flight hours have been on the rise, the number of pilot certificates issued have been trending upward, and BasicMed has surpassed 50,000 issuances and Mexico now recognizes it, and it has a good safety record!



Kyle Lewis

I have been lucky enough to attend

several events across the region, including a stellar grand opening of the new Williston Basin International Airport (KXWA)! The airport is truly a gem for western North Dakota and will have facilities to serve the GA community for a very long time! Congratulations to the City of Williston, Mayor Howard Klug, Airport Manager Anthony Dudas and staff, North Dakota Aeronautics Commission Director Kyle Wanner and staff, and everyone else involved in this effort. It is truly a culmination of goal setting, planning, and dedicated people to get the job done!

One aviation issue that has become a red flag of sorts, is the number of public-use airports in the United States. In the 1970s and 1980s, there were over 7,000 public-use airports on record. Today, we are trending around 5,200. Not all 5,200 airports are eligible for federal dollars. To be eligible, an airport must have a NPIAS (National Plan for Integrated Airports Systems) designation. (See article elsewhere in this issue.) Here, are the numbers:

- 5,236 public-use airports
- 3,321 eligible for federal funding NPIAS
- 380 commercial service airports



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As another data point, for conversational purposes, there are over 19,000 landing facilities – private airstrips, heliports, seaplane bases, ag strips, etc. As part of AOPA's advocacy agenda, a large portion of my time as a regional manager is focused on the preservation and promotion of airports. Our Airport Support Network (ASN) is vital to that mission, and I rely on over 400 volunteers in the Great Lakes Region for up-to-date information and advice when issues arise.

The work of educating local elected officials, neighbors, businesses, and even airport tenants is a constant drum beat for AOPA and ASN Volunteers.

There is a very important function that every pilot and/ or airport tenant should take part in. Become involved in the local pilot group, EAA chapter, tenant association, Saturday morning coffee club, or whatever means your local airport may have. If your airport does not have one, start one! These groups provide a single voice to airport management – whether it be a city or county commission, airport authority, or township board. These local groups, or at least representatives from these groups, participate in technical advisory committees during master plan updates, sit on advisory boards, plan and carry out airport open houses, and in many examples, are the caretakers of the airport. Aside from funding, becoming active in the airport association is the best thing one can do to ensure the long-term sustainability of the airport.

Now that we have the foundation for airport protection covered, what are the top issues facing airports today?

You may be answering – "noise," which is not always the case. Is it one person complaining 100 times a year or is it 100 different people complaining each year? There is a big difference. Noise complaints are just a symptom of perhaps a larger, more concerning problem – "incompatible land development" near an airport.

Are there good local zoning laws on the books? If so, how well educated are local government officials on them specific to airports? Is the community following proper state zoning code? In Ohio, each public jurisdiction owning an airport is directed to establish an airport zoning board, specifically for hazard and airspace protection (Ohio Revised Code 4563.03). Other states have similar statutes.

Another issue that airports face is "political pressure." A developer makes promises of grandeur for a community – new housing, a new sports complex, a new park or school, industrial development, solar or wind energy, etc. The developer just needs land. "Hey, what is that airport doing? Nothing! Let's close it and make good use of that acreage – tax revenue!" That is the song and dance of so many political influencers and developers that really have no understanding as to the value of an airport.

AOPA is very adamant that an airport should do everything it can to become self-sufficient and sustainable, the best medicine for a political squeeze. If the airport is dying on the vine, the pickings come so much easier, and the battle tougher. Make sure the value of the airport is known. If the municipality has taken some FAA Airport Improvement Program (AIP) funding, there are protections built in as part of the grant awarding process (i.e. grant assurances). There's even more protection if land has been acquired with federal monies. This is not clear and simple and takes some educating for all to understand what is at play.

The moral of the story is to become involved, and stay involved. Airports are an integral part of the community for pilots and the non-flying public.

Thank you! It is a privilege to serve you! (kyle.lewis@aopa. org)



A volunteer marshals a Navion into place at Prairie du Chien Airport. Kristie Derendinger Photo

FLYING CLOUD AIR TOUR FROM PAGE 24

and plane after plane safely landed at Prairie du Chien. *Huckleberry's Restaurant,* just a short walk from the airport, hosted the group for lunch. Great food and awful pilot jokes were enjoyed by all.

After lunch, pilots departed at their discretion, some choosing to visit other airports before returning home, and some routing through Iowa on their ______way back.

The Flying Cloud Air Tour began in 2004 to get pilots together, socialize, see new flying destinations, and most of all, have fun! This year, the planning responsibilities were bestowed on Brad Johnson, a local pilot who has participated in the tour since 2013.

This marks the 16th year of the air tour. It was a big success, thanks to the fantastic pilot skills of all who participated!

Special thanks to Bill at Flying Cloud Tower; the Metropolitan



Happy air tour participants on the way back to the airport following lunch. Hiroshi Takeuchi Photo

Airports Commission (MAC) staff at Flying Cloud; the airport manager at Prairie Du Chien, Richard Yeomans and his family; Roxane and the team at Huckleberry's; and Bill Bittman, Vanessa Sampson, Hiroshi Takeuchi, Liz Takeuchi and all of the other pilots and volunteers for all their help.



The Purest Form of Human Flying

by Yasmina Platt

n addition to its delicious culinary offerings, Lima, Perú is known for surfing and paragliding off the cliffs in Miraflores (a trendy and touristic neighborhood). Paragliding is very close to actually flying like a bird. Did you know paragliding was invented by a Frenchman, Jean-Claude Bétemps, in June of 1978? I recently learned this while reading on a commercial flight.



Yasmina Platt

I had only flown in a paraglider one other time, and enjoyed it, so I had to try it again. Miraflores has a nice lines were all connected and attached correctly, and to see what the wind was doing. We then walked slightly back and then forward to gain momentum. No more than four fast steps forward (yes, with heels and all) and we were in the air!

It was fun to cruise up and down the city and coast, and it was as comfortable as sitting on a couch. We stayed above the height of the cliffs during most of the flight, and we got as high as the tallest building in the area, the JW Marriott hotel by the Larcomar shopping mall.

After peaking my curiosity, my research revealed that an average paraglider gets a lift-to-draft ratio of 7:1, meaning, in still air, the forward horizontal speed through the air is 20 mph and the vertical descent speed is 3 mph. It is honestly so relaxing one could even have a quick conversation with the pedestrians nearby.

"Parapuerto" (paragliding port) where one can always find people flying and giving rides, especially in the early afternoons when the wind from the coast seems to pick up, hitting the buildings and creating "dynamic



Much like we do with aircraft, we did a non-standard (right) traffic pattern and came in for a controlled and smooth landing. I'm convinced I should learn how to do this on my own... It should not take more than a month at the right location

forces" that enable and favor operations. They take passengers up for approximately 10 minutes on a first-come, first-serve basis for about \$75 (includes a video of the entire flight). However, I was lucky enough to be able to do this on my birthday (since my flight back home was delayed by a day, thanks to Tropical Storm Imelda) at a discounted price of about \$57.

Paragliding is fairly simple. The ingredients are walking/ running feet to gain speed during takeoff, a fabric (often nylon) wing, which you unsheathe from its pack, and wind to fill your canopy with air and create lift. One can direct the glider by pulling on handles, one on either side above the shoulders. You want to turn left, you pull left... you want to turn right, you pull right. The more you pull, the steeper the rate of turn and the more likely you are of losing altitude as well. The canopy is also equipped with brakes. Pulling down on brake toggles causes the trailing edge to flare down, increasing the angle of attack and slowing the speed.

So, when we were ready to depart, my instructor inflated the canopy behind us. We checked it to make sure that the 28 DECEMBER 2019/JANUARY 2020 MIDWEST FLYER MAGAZINE (coastal areas or mountainous areas are best) and with the right weather (wind and/or thermal) conditions.

If the wind is too calm (which it does happen often...), you can try flying in a powered Paratrike. However, they operate from an aerodrome south of Lima. It is unclear to me which one they operate out of, but I would not be surprised if it is from San Bartolo.

To read other destination articles (including two others in Perú), visit www.airtrails.weebly.com.

Flying is freedom! Fly safe and fly often!

EDITOR'S NOTE: Yasmina Platt has been with the international airport planning and development consulting firm AECOM since 2016. 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 Platt has written by going to www.MidwestFlyer.com and typing in her name in the search box.

The STIHL National Championship Air Races At Pylon 4

The Genesis

ecades have passed since I sat in the lobby of Thunderbird Aviation at Flying Cloud Airport (KFCM) in Eden Prairie, Minnesota, and listened to flight instructors gush about the STIHL National Championship Air Races at Reno/Stead Airport (KRTS) in Reno, Nevada. Fast, fast planes! Loud planes, racing! They were excited! That day, the Reno Air Races were added to my bucket list.

The Preparation

The process begins. You all know the routine along with the anxiety that goes with going to a new destination, new event, and with new responsibilities.

• Pre-Registration.

• Does my 35mm camera work (can I even find it)?

• If I don't fly there myself, airline tickets... Do I go to Reno, San

by Jay Olson

Francisco, or Sacramento?

- Hotel Accommodations
- Car Rental

A quick flight, car rental, and I was on the road to Reno. It was my first time there, and I was not sure what to expect.

The Sacramento/Reno/Lake Tahoe area is a beautiful part of our country. Small, charming and open for business, I felt that the town, and the STIHL National Championship Air Races, were made for each other! Reno is highlighted by a beautiful river walk, casinos and restaurants. Truly a charming town with big-town amenities!



The Races, Day 1 (Saturday, September 14, 2019)

I exceeded my daily step quota trying to enter the races and obtain media credentials. I was rescued by a volunteer worker who was more than generous with his time in assisting me to get registered. Entering the world of the STIHL National Championship Air Races was like stepping through a curtain into another world. Airplanes, pilots, future pilots – and did I mention – airplanes and food. Food that pilots like: hot, ready-to-eat, and at a cost less than expected.

I spent most of my first day taking in the static displays, eating, and becoming familiar with the layout. The end of the day was highlighted with a demonstration by the magnificent U.S. Air Force Thunderbirds. An amazing display of equipment and pilot skills, the Thunderbirds rattled my molars and left me wanting more.

The Races, Day 2 (Sunday, September 15, 2019)

The final day of race week, September 15, 2019, began with the Welcoming Ceremonies, where the Reno Air Racing Association (RARA) recognized Pete Law as the "Person of the Year," the highest honor of the organization. In his six decades with the STIHL National Championship Air Races, "Secret Pete" worked with nearly every Unlimited Gold racer to fly the pylon course and is credited with being the humble, yet brilliant man who helped make Unlimited Air Racing faster, safer and the most exciting racing spectacle in history.

As they have for the last several years, RARA also recognized the Tuskegee Airmen with a tribute and flyby during the Welcoming Ceremonies. This tribute was especially poignant with the passing of retired Lt. Col. Robert "Bob" Friend, one of the original Tuskegee Airmen. Friend flew 142 combat missions in World War II as part of the elite group of all-black fighter pilots trained at Alabama's Tuskegee Institute. A few years ago, the Palm Springs Air Museum helped restore the P-51 Mustang "Bunny" and painted it with the same numbers and markings as the plane flown by Friend during WWII. "Bunny" is flown every year at the STIHL National Championship Air Races, and this year with a special tribute logo.

National Aviation Hall of Fame enshrines, Dick Rutan, Robert 'Hoot' Gibson, Col. Clarence 'Bud' Anderson and Clay Lacy, joined the late Neil A. Armstrong's son, Mark Armstrong, and presenting sponsor Perform Air International, in awarding the "Grand Champion Neil A. Armstrong National Aviation Heritage Trophy" to the 1931 WACO QCF owned by Chris Galloway of Woodland, Calif.

It was also announced that the STOL Drag Race is expected to be an official race class in 2020, September 16 -20. This will be the first new race class created in 22 years.

After a night of fantastic food and modest gambling, I entered Day 2 as a veteran of the races, knowing where to

park, where to enter, and who to confirm my reservation with for Pylon 4, where the true excitement of the races began!

At the media trailer, I learned the particulars of our ride to Pylon 4. The atmosphere took on a higher degree of order and intensity. Time deadlines, location specifics, do not go here, but you can go there... Pylon 4 was evolving into reality.



Pylon 4

At the designated time and location, I entered an unmarked white van with a group of other reporters. I could tell that these people had been there before. Some chatter among the group and lots of camera equipment checks. After a short delay, it was a 30-minute drive into the desert.

Arriving at Pylon 4 was non-ceremonial and all business. We were positioned on a ridge and occupied a sliver of desert with a giant pylon on a telephone pole located above us. The wind was blowing with gusts just to remind us who was really in charge.

We received a briefing by race officials who got to the point. They laid out where we could – but more importantly – where we could not go to take photos. Remember, the pylons are where the planes round the corners 50 feet or less at speeds sometimes exceeding 400 mph. This was no place for daring and foolish photographers. Step out of line and a photographer could be banned for life.

We got into position and waited. "Here they come" and I strained to locate the first aircraft. It was like your first cross-country and looking for traffic. The sky is big and blue when a dark spot catches your attention. You zero in on it and mentally you confirm that it is indeed the aircraft in the race. Vroom! They are here and just like that, they are gone to the next pylon and out of sight. My first set of pictures caught a lot of aircraft tails. A quick adjustment and four more laps of the race to make up for my mistakes. Eventually my photo skills got up to speed and the excitement of being at Pylon 4 overtook the fear of being there.

The last race of the day is the "open class." P-51 Mustangs and Hawker Sea Furys highlight this class, which is a crowd favorite. Loud and fast, the open class combines the beauty of elegantly designed and powerful aircraft, flown by pilots jockeying to demonstrate to the crowd who was #1 that day.

The field was small this year. Only five aircraft started out. Reporters speak romantically of the past when up to 35 aircraft were competing, and the late Bob Hoover would hover overhead in his P-51 Mustang "Ole Yeller" to assist pilots in distress. It seems economics, politics, and this year, aircraft damage, have taken its toll on the number of entrants.

I discovered a local connection from my earlier ventures at the show. "Sawbones," a Hawker Sea Fury FB MK.11 that generates up to 3000 hp (owned by Robin Crandall, piloted by Curt Brown, maintained by Rick Ranheim), had incurred damage and was not allowed to compete this year. The downtime allowed the crew to discuss the race; the past, the present, and the future of the STIHL National Championship Air Races.



The race pit where last-minute preparations are done.



Originally an F8-11, George Baker built it up with the slightly larger MK-20 horizontal stabilizer. George retained it as his personal air show aircraft, calling it "Sky Fury," was well known on the air show circuit with its unique wing tip smoke generators.

As were most of these aircraft from Iraq, the original Bristol-Centaurus engine was removed and replaced with what is basically a Skyraider engine - the Wright "Cyclone" R-3350-26. The oil

SawBones, based at Anoka County/Blaine Airport in Blaine, Minnesota, was this year's favorite to win the open class. This prognostication was based on a very loose survey, overhearing others on the flight-line. A strong finish last year, the pieces seemed to be in place for the top spot this year. However, damage to the elevator from a prior flight led to the grounding of the aircraft. As I hung around their static display, I had a chance to chat with crewmembers. What a personable group of individuals who are very willing to share their knowledge with those who stopped by just to ask a question or two.

Gold Race Results

Unlimited Class Results: Dennis Sanders flying *Dreadnought*, completing the course in 09:20.713 at an average speed of 403.274 mph.

Jet Class Results: Pete Zaccagnino flying *Just Lucky*, completing the course in 05:41.672 at an average speed of 495.106 mph.

Sport Class Results: Andrew Findlay flying *One Moment*, completing the course in 07:12.928 at an average speed of 390.744 mph.

T6 Class Results: Chris Rushing flying *Barons Revenge*, completing the course in 07:23.400 at an average speed of 235.081 mph.

Formula One Results: Lowell Slatter flying *Fraed Naught*, completing the course in 06:09.023 at an average speed of 243.442 mph.

Biplane Class Results: Andrew Buehler flying *Phantom*, completing the course in 04:55.831 at an average speed of 227.755 mph. The Tom Aberle Memorial Gold Race

was canceled due to high winds. The results for this class were based on Heat 3A.

For complete race results, go to http://reports.airrace. org/2019/2019.Unlimited.html

The STIHL National Championship Air Races are an absolute must for aviation enthusiasts. Northwestern Nevada is a beautiful part of our country. The city of Reno adds a fun dimension to a weekend getaway or a week-long vacation. The races allow you to regain or reenergize your love of country, trust of people, and devotion to aviation. Pylon 4, what more could you ask for?



Fire in the cockpit

by Chuck Cook

his is the story of my inflight fire in the - cockpit and crash landing of my 1954 T-28 Trojan, which occurred on August 23, 2018. It is also my story of survival, which began on that day. I write this story to share what happened to me and to share some afterthoughts in an effort to encourage other pilots to be prepared for such emergencies and possibly prevent such a tragedy from happening to them.

On that day, it was beautiful VFR weather and I was right where I like to be, in a formation flight with



This story is not just about fire in the cockpit and a horrific crash landing...It is also about survival and healing and recovery. I can also say, in looking back after 14 months, that for me it also includes the extensive support from family and my many friends. This support has provided me with the hope I needed during my recovery. This experience has also given me an extreme appreciation for every joy of every day. And I take nothing for granted! Thank you for letting me share my story.

my buddies en route to a formation flyover event. About 15 minutes into the flight, the generator fail light came on, so I decided to separate from the formation and return to my home airport – Anoka County-Blaine Airport (KANE) in Blaine, Minnesota.

After turning the aircraft toward home, I sensed a slight smell of something burning. I radioed my flight lead and asked if there were fires burning out west and he replied yes. (In the Minneapolis area with prevailing westerly winds, it is not uncommon to smell the smoke and see haze in the air from fires occurring in California or Canada.) The smell was slight and very soon dissipated, so I did not give it much further thought. I then switched DC power from battery/generator to battery only. In this aircraft when you have a generator failure and the DC power switch is in the battery/generator position, you have automatic load shed of the secondary bus. When DC power is switched to the battery-only position, you re-energize the secondary bus, which provides power for many systems, including the speed brake, landing gear position indicators, and, on some aircraft, the radios. My direct flight home took me through Saint Paul Class D airspace, which required communication with Saint Paul tower, and I also had to



I invited two different friends to ride along on this formation flight. I am sure glad they were not available, as I doubt a passenger would have survived.

pick up ATIS and talk to tower at my home airport. (To enable speed brake operation, the landing gear operation and for radio communication, I chose to leave DC power on in the battery-only position, rather than in the off position). Other than the battery fail light, the flight back to Anoka was only about 15 minutes and was uneventful.

Upon reaching Anoka, I entered the standard breakto-land. (For those not familiar with the brake-to-land approach, it is a landing maneuver used by the military and by civilian formation pilots. This technique involves flying over the threshold of the runway at 1,000 feet above the ground (AGL), banking 60 degrees and flying a 360-degree descending circle to land at the threshold of the runway). I then reduced power to 20 inches of manifold pressure, banked 60 degrees and deployed the speed brake.

Immediately there was thick billowing smoke filling the cockpit. I opened the canopy to clear the smoke and announced "I have smoke in the cockpit" to the tower. Right away I knew I had a serious problem, but feeling that I was too low to bail out, I elected to continue the turn to get the plane on the ground ASAP. I had to hold my face up to the slipstream on the right side of the canopy to keep forward visibility and avoid breathing in the smoke. In short order, I was also being sprayed with a fluid, which at the time, I thought was fuel. The spray was very heavy and was even getting up inside the visor of my helmet. At 180 degrees of turn and level altitude and reaching abeam the runway threshold, I dropped the gear and flaps. That's when the fire started.

The fire was ferocious and first came up between the left sidewall and the left side of my seat bucket. It was like an intense blowtorch. Soon, the fire was coming up between my legs and reached above the height of my face. Despite the fire, I held the stick to fly the airplane and I continued the circle towards the threshold of the runway. Next, the fire was going up my face shield and burning my face.

At very short final, I realized I could not continue the flare and landing. I felt I was burning alive and needed to do a controlled crash and get out of the aircraft. At about 100 feet AGL, I was veering left of course and I saw the threshold of the runway in my peripheral vision. At this point I was losing my ability to see, so I decided to push the stick forward and drive the plane home.

I do remember I had some intuition that I would





Here I veered off course and barely made it over the nearby highway.

somehow survive the crash. I don't remember retarding the throttle and I don't remember the exact point of impact.

I remember waking up to the sound of silence, but I don't remember exiting the cockpit. An eyewitness to the crash confirmed that I did get myself out of the cockpit. This eyewitness was driving by on a nearby highway and told me he pulled over and dialed 911. Then he looked up and said that he saw a man on the ground just outside the cockpit, kicking his feet trying to put out the fire on his legs and shoes. I do remember lying on the ground kicking my feet and also trying to roll over because the sheepskin liner on my parachute was also burning by the left side of my face. This gentleman, along with another good Samaritan, who was also driving by, slipped through the airport security fence and ran about 500 feet to my rescue. These two men, along with a lineman from the local FBO who also arrived on the scene, pulled me away from the burning aircraft wreckage. The wing had separated from the fuselage, so when I stepped out of the cockpit, I fell to the ground and broke my left forearm in a compound fracture. I had collapsed about 5 feet from the fuselage, but was conscious.

I asked one of these eyewitnesses if he had to, could he have pulled me from the cockpit. He stated; "*no, it was already too engulfed in flames by the time we arrived.*" Immediately after they pulled me a short distance from the plane, I heard an explosion. Immediately they had to pull me further away from the aircraft. The lineman later told me it was the leftwing fuel tank. He said; "there was shrapnel and fire from the explosion and the area where you were previously lying moments before, was now engulfed in flames."

At this point I was going into shock. They tell me I asked for water and I told them my arm hurt. I was able to give them my wife's name and phone number, and that's the last thing I remember for two months. I was airlifted to the Minneapolis Hennepin County Medical Center where they treated me for 2nd and 3rd- degree burns over 40% of my body, and some 4th-degree burns on my right hand and leg.

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As for my medical treatments, they kept me in intensive care in a drug-induced coma for two months while they did 20 skin graft surgeries and numerous other procedures and also stabilized the compound fractures in my left arm. Early on, my survival was very questionable. I spent a total of four months in the hospital. As of this writing, it has been 14 months since the date of my accident and I have been in rehabilitation therapy since the day after the accident. I am told I will have this therapy for at least another year.

This level of burn damage has many implications. I had to learn how to walk again starting with a walker and I am now getting some limited use of my left hand. My right hand suffered significant burns and doctors had to amputate one half inch off of each finger of this hand, and to date, it has almost no function. I also suffered severe burns to my face, which now has permanent disfigurement. At this point it looks like I will have an additional 10 or more surgeries.

Despite my injuries, I am thankful for surviving and for the many functions I do have. I am also thankful for the many people responsible for saving my life. This includes among others, all of the many first responders and also the extensive medical team at Hennepin County Medical Center. I have also been blessed with an extraordinary support system. My wife, my family and my many friends have been here for me and have helped me with my many needs without fail. I attribute my ability to maintain a good spirit and my motivation in my ongoing recovery process to this extensive, loving support group.

Regarding the nature or source of the smoke and fire, we may never know. Upon impact, the airplane broke apart and the fuselage from the engine firewall to the rear bulkhead of the rear cockpit burned in its entirety, leaving nothing more than a pile of ash and rubble on the ground. In examining the photos of the wreckage, we found the engine firewall and the engine accessory inspection door. Neither of these showed any indication of fire penetration. Additionally, when the National Transportation Safety Board (NTSB) inspector and I examined the aircraft wreckage, we found that the accessory section of the engine had no indication of any mechanical failure or fire damage. The engine-driven fuel pump and the engine-driven hydraulic pump appeared as normal. This leads me to believe that the fire was not generated from the engine compartment. Without any remains of the cockpit portion of the fuselage, it's not possible to determine the exact nature of what failed. Another piece of information that I do have pertains to my flight suit and helmet. Both of these were returned to my family after the accident and both are saturated with an oily substance and smell of petroleum. A swatch from my flight suit has been sent to NTSB and is being tested to determine the exact content of the oily substance.

My speculation is the fire was generated under the cockpit floorboard and was fueled by hydraulic fluid under highpressure. When the airplane is in a clean configuration, the hydraulic system is in a bypass mode and there is no hydraulic pressure. When I dropped the speed brake, the hydraulic system was pressurized. I believe this caused a compromised hydraulic line to fail. This is the point when the smoke in the cockpit occurred. The smoke was white, which I am told is oil based, not fuel-based which produces black smoke. I further speculate that when I dropped the gear, something electrical ignited the spray of hydraulic fluid. The way the fire was coming into the cockpit, I believe it burned through the floorboard below the pilot seat. It is unknown whether the generator failure and the momentary smell of something burning were related to the smoke and fire in the cockpit, but it certainly is very suspicious.

As far as safety takeaways for other pilots, I have several suggestions, as well as some food for



Note here how the tail section broke free from the main section of the fuselage and is facing opposite the direction of landing.

thought. While most of my comments apply directly to pilots flying warbird aircraft, some of the comments also apply to airshow performers and aerobatic pilots, as well as general aviation pilots. Please keep in mind my suggestions are from my perspective and experience of the fast onset of a very severe fire in the cockpit.

• Read your aircraft manual. Study your aircraft's emergency procedures and know your checklists. Keep them in your aircraft and if possible, follow them in an emergency. They can save your life. The consequences of not following published emergency procedures can be life altering (or worse).

It should be noted that checklist items printed in bold are intended to be committed to memory. These items should be memorized for those circumstances like mine with the fast onset of a ferocious fire. In my case, once the smoke and fire started, there was no time to pull out the checklist.

• Personal Safety Gear. Where applicable, wear a Nomex flight suit, gloves and helmet. I regret to say my gloves were in a bag on the floor and I had no time to reach for them. Initially, I thought the flames traveled up my pant legs and arm sleeves. But after discussion with a burn nurse at the hospital, I learned that I likely experienced thermal burns from the intense heat penetrating the flight suit.

The flames did not penetrate the flight suit, but the heat certainly did. I wish I had worn full-length clothing under my flight suit for thermal protection, even though it might be hot and uncomfortable. Instead, I was wearing shorts and a tee shirt under

my flight suit. My burns extended from the middle of my thighs down to my toes and from the middle of my biceps all the way down my arms and hands. I also wish I had been wearing Nomex boots as the ankle-high leather work shoes I was wearing did not work out very well. My ankles were burned severely and the intense fire burnt the shoelaces and stitching out of my right shoe and it opened up, and my right foot suffered severe burns. I could possibly have reduced the amount and the level of burns I suffered, and the consequential amount of skin grafting, had I followed these recommendations.

• Your shoulder harness should always be tight and locked. There won't be time to consider this in a catastrophic fire emergency. Also, consider a good sheepskin padding for the straps of your shoulder harness. I believe this extra padding helped me considerably during my forward impact. My aircraft went from 100 knots to full stop in about 20 feet. I remember telling a friend that I was surprised I didn't have any significant injuries from the forward impact. My wife overheard this statement and corrected me. While I did not have internal injuries, she said *"your torso in its entirety, was black and blue."*



Judging from the way the airplane came apart, it was obviously a very violent crash. I guess I drilled it in harder than necessary, but it is hard for me to criticize because I survived. The tail section separated at the back of the rear cockpit, then flipped over top and ahead of the cockpit section of the fuselage and landed facing backwards. The main wing separated from the fuselage in its entirety as a whole. It then tipped up and slammed against the tail section, facing the correct direction of flight. Somehow both the left and right main landing gear remained extended and undamaged.

• Install a quick release in the COM line of your helmet. Again, I don't remember getting out of the aircraft, but I am sure I would not have thought or had the ability to unplug the COM lines. I am sure glad I had the quick release.

• Practice getting out of the aircraft on the ground with the parachute attached. I often practiced getting out of the cockpit with my parachute attached while in the hangar. Stepping up into the seat bucket with the parachute attached and staying out of the slipstream is harder than one realizes. I attribute my instinctual ability to get out of the burning cockpit with severe burns and compromised vision to my previous practice.

• Always carry an on-board fire extinguisher and consider installing an automatic fire suppression system. The onset of my fire came on so fast and ferocious, there was no time to think about my handheld fire extinguisher. To be honest, once the fire started, my focus became very narrow. The only thing I could think about was getting the plane on the ground and getting out of the cockpit. I was too low to bail out, and at this stage of my circle-to-land, I certainly could not let go of the stick to operate a fire extinguisher. I had no choice but to hold the stick and fly the aircraft to the ground. Consider installing an automatic fire suppression system not only in the engine compartment, but also under the floorboard of the cockpit.

• If you have any suspicion that there may be an impending inflight fire, obviously turn the DC power off and land immediately if possible. If a suitable landing area is not immediately available, I would recommend climbing to a bail out altitude and turning in the direction of a nonpopulated area. It gives one time to deal with emergencies, and it also gives one the option to bail out in the event of a catastrophic fire. In my case, the fire had a very fast onset and was ferocious. The fire was so intense that in the 20 to 25 seconds it took to fly the second half of the brake-to-land, I was at the end of my human endurance and my burns were severe. Even being in the pattern at 1,000 feet, configured for landing and only 180 degrees of turn to go, I could not complete the landing. If you are cruising along at 180 knots with the airplane configured clean, and you have a fast onset of a ferocious fire, you will not survive the time it takes to get the airplane on the ground with the fire burning.

If you suspect the possibility of an in-flight fire, take what precautions you can and also **prepare your mindset** ahead of time as to what you're going to do if a fire should break out. In a T28, I would also recommend opening the canopy and dropping your speed brake, flaps and landing gear at altitude. Again, when you activate these functions, you pressurize the hydraulic system. Better to find out if you're going to have a hydraulic system fire at altitude, than down low in the pattern. If you do experience a ferocious fire, it may be fueled by the engine-driven fuel pump or the engine-driven hydraulic pump. As listed under emergency procedures, if a fire breaks out, cut the engine fuel mixture immediately to stop the engine and hopefully stop feeding the fire. And of course, also turn the fuel selector and electric fuel pump off.



Here you can see how the engine separated from the fuselage and how the propeller separated from the engine taking with it a portion of the gearcase housing and the planetary gearset.

My closing comments are about complacency vs. being prepared. I know that many of my suggestions may seem obvious to any responsible pilot. While I considered myself a responsible pilot, I was complacent, I was not well prepared, and I failed to do what may seem obvious to others. When an emergency such as smoke in the cockpit or inflight fire occurs, it can be a moment of denial, as well as a moment of terror. While I continued to fly the aircraft as best I could, I was not at all prepared for such an event. In my case with the fast onset of the fire while in a 60-degree steep bank of a circle-toland and low to the ground, it was too late for preparations or emergency checklists. I was in survival mode. As stated above, I remember my focus became very narrow; all I could think about was to fly the airplane to the ground and get out. I offer these thoughts so that others can have the opportunity to be best prepared.

With the benefit of 2020 hindsight, I will tell you what I think I should have done differently.

• I should have worn all of the fire protection gear I listed above, especially the Nomex gloves and Nomex boots. While the protective gear I suggested would have reduced the level of burns I suffered, when you have the fast onset of a fire in the cockpit, you still have to put the fire out or exit the cockpit ASAP. Unfortunately, I have nothing to offer in terms of face protection. In this case, the only options are to put the fire out immediately and/or exit the aircraft ASAP.

• At the very first indication of the smell of something burning, I should have turned off the DC power to the OFF position. I made the very costly mistake of switching the DC power from battery/generator, to battery only, to maintain radio communication and also for landing gear and speed brake operation. At this point I also should have prepared my mindset for what I may have to do if a fire were to break out.

• At the initial onset of smoke and/or fire in the cockpit, I should have moved the engine mixture to cut off. In my



Chuck Cook

case, this would have stopped the engine-driven hydraulic pump from feeding the fire. Obviously, I did not prepare my mindset for this event. I just never suspected that what started as a generator failure, could result in the fast onset of a ferocious fire.

I will make this comment about the North American T-28 Trojan; the aircraft has a very robust airframe and will absorb a lot of impact. While the airframe broke apart, the cockpit section did not collapse or trap me inside. I was able to climb out despite this devastating crash. One additional first responder who showed up onsite immediately after the crash, happened to be my advanced flight instructor for the past 26 years. He stated: *"I saw the cockpit portion of the fuselage sitting upright on its belly, fully intact, canopy open and engulfed in flames.*" He also stated, it was a good thing I opened the canopy before the crash, or in my condition, I likely would not have been able to get out and would not have survived the post-crash fire.

Again, I am thankful to be alive and hope this article will help save a fellow aviator.

Amelia Earhart's Personal Photographer, Albert Bresnik



Albert Bresnik holding a photograph he took of Amelia Earhart before her last flight. Airvue Photo by Don Winkler

by Don Winkler

t was the opening day at EAA AirVenture Oshkosh 1992 in Oshkosh, Wisconsin. That meant lots of airplanes and large crowds of people from all over the world. Pretty chaotic, but very exciting!

I had just picked up my press schedule for the day at EAA Press Headquarters when I noticed a gentleman, short in stature and dressed in typical southwestern attire. He stood



Don Winkler

out in his pastel blue jacket and trousers with an ornate silver and turquoise bolo tie and matching Stetson cowboy hat, decorated with an EAA pin and other assorted memorabilia. The elderly gentleman was being jostled around by other members of the press with their cumbersome photo bags and gear, so I felt obligated to offer him my assistance.

"Hi, I am Don Winkler with *Midwest Flyer Magazine*. Can I help you locate someone?"

"Thanks! I am waiting for Paul Poberenzy," he replied.

I started to tell him that Paul was a pretty busy guy right now, and then as I gazed at the walls, I saw several black and white mounted photographs of Amelia Earhart. "Gosh, look at that...Amelia Earhart photos," I said to the gentleman.

"Yes. Those are mine," he replied. "I have been asked to bring out the negatives I have stored in my safe ever since her disappearance and take them to the Smithsonian Museum. My name is Albert Bresnik and I was her personal photographer."

Immediately, I invited Mr. Bresnik to accompany me to the flight-line and airshow headquarters. Once there, we went upstairs, sat down in an office, and we talked for over an hour. I recorded every word of our conversation.

Bresnik told me about himself and his career as a photographer.

Albert Louis Bresnik was born February 3, 1914 in Milwaukee, Wisconsin. During the early '30s, he was shooting pictures for Columbia Studios in Hollywood, as a press photographer. Such notables as Al Jolson, Clark Gable and others were his subjects. He said that he became a close friend of Gable's, who deeply admired his work. Bresnik had the ability to make people feel at ease when he photographed them. This ability was the reason George P. Putnam, a well-known publisher and Amelia Earhart's husband, asked Bresnik to be Earhart's personal photographer. After working with her and developing a trust, Earhart mentioned to Bresnik that she never had a brother and thought they should adopt one another. Thereafter, she referred to him as her "little brother."

Albert Bresnik had first seen Amelia Earhart flying while photographing the "Women's Air Derby," later nicknamed the "Powder Puff Derby" by humorist, Will Rogers. This was the first official women-only transcontinental air race in the United States, taking place during the 1929 National Air Races. Nineteen pilots took off from Santa Monica, California on August 18, 1929, with



Amelia Earhart

another pilot taking off the following day. Fifteen pilots completed the race that ended in Cleveland, Ohio, nine days later.

Amelia Earhart took flying lessons from Mary Anita "Neta" Snook Southern, a pioneer aviator who achieved many aviation firsts. She was the first woman aviator in Iowa, first woman accepted at the Curtiss Flying School in Virginia, first woman aviator to run her own aviation business, and the first woman to run a commercial airfield. Yet "Snooky," as her friends called her, was fated to be remembered for her relationship with Amelia Earhart. Her autobiography is entitled *"I Taught Amelia to Fly.*" While Earhart is known for challenging the male dominated aviation community, Southern challenged them first, and Albert Bresnik was there and photographed both of them, then sold prints for 50 cents apiece. Southern died in 1991 at the age of 95.

After Bresnik had been photographing Amelia Earhart for a while, he attended a meeting she was holding to inspire young women to become aviators, and to challenge themselves to accomplish other goals. Looking around the room, she suggested that they form an association. She then counted 99 women in the room and said, "We will call ourselves the Ninety-Nines." Bresnik recounts: "Later, they decided to add me in and I am still the only male inducted."

As I write this story, I realize that there is more to the story than just Amelia Earhart. There is the dedication to a far greater purpose, that of motivating women to pursue their dreams. Both Amelia Earhart and Albert Bresnik dedicated their lives to this cause. Bresnik conveyed that message through the images he took of Amelia Earhart as she accomplished so many feats in aviation for women pilots.

Bresnik said that after Earhart's disappearance, he and his wife, Gabrielle, felt her presence in their home, as well as throughout their daily lives. He told me his mission in life after her disappearance was to continue to convey her message in his public speaking appearances. Earhart and Bresnik were collaborating on a book to be called "World Flight," documenting her historic flight circumnavigating the globe prior to her disappearance.

Bresnik had planned to accompany Amelia Earhart and navigator, Harry Manning, on the flight. After a groundlooping accident in Hawaii, and necessary modifications to the aircraft were made, there was no longer room for Bresnik. When Manning was called back for duty with the Navy, another change was made when Fred Noonan was substituted as the navigator. It makes one wonder if all of these lastminute changes were coincidental.

Because of photojournalists like Albert Bresnik and his historic images of Amelia Earhart and flight, the public became more aware of opportunities for both men and women to pursue aviation careers.

Ironically, a more recent tribute to Amelia Earhart was the flight of astronaut and U.S. Marine Corps pilot, Lt. Col. Randy "Komrade" Bresnik, Albert Bresnik's grandson, who took one of Amelia Earhart's favorite scarves with him on the Space Shuttle "Atlantis" to the International Space Station.

Lt. Col. Bresnik was selected as an astronaut by NASA in May 2004. In February 2006, he completed Astronaut Candidate Training that included scientific and technical briefings, intensive instruction in shuttle and International Space Station systems, physiological training, T-38 flight training, and water and wilderness survival training. Bresnik completed his first spaceflight on STS-129 in November 2009. From 2009 through 2011, Bresnik was assigned as the support astronaut on the space shuttle closeout crew, tasked with strapping in the crew and closing and sealing the access hatch for flight. He was the lead astronaut on the closeout crew for the final shuttle mission STS-135. From 2012 through 2015, Bresnik served as the lead astronaut for NASA's partnership with the SpaceX Company in the design and development of their crewed Dragon Capsule, as well as a capsule communicator (CAPCOM) in the Mission Control Center.

In September 2014, Bresnik, his three crewmembers and two habitat technicians, tested technologies and training techniques for use aboard the International Space Station and future deep space exploration missions during NASA's Extreme Environment Mission Operation (NEEMO 19). Bresnik was the commander of NEEMO 19's team of aquanauts. The mission was conducted in Florida International University's undersea research habitat, Aquarius Reef Base, located six miles off the coast of Key Largo, Florida, and 62 feet below the surface of the Atlantic Ocean.

From July 28 through December 14, 2017, Bresnik was joined by ESA/ASI Astronaut Paolo Nespoli and Russian Cosmonaut Sergey Ryazanskiy and launched from the Baikonur Cosmodrome aboard the Soyuz 51S spacecraft. During the mission, the crew worked on over 300-plus scientific experiments and investigations, worked with four different visiting space vehicles, and conducted four spacewalks (3 USOS & 1 Russian). In addition, the crew took 808,126 photographs of the earth and inside the International Space Station during the two expeditions. Expedition 52/53 was completed in 139 days, completing 2,224 orbits of the earth and traveling 58,835,163 miles (108,962,720 km). Bresnik served as the flight engineer aboard the Soyuz 51S and Expedition 52, as well as commander of the International Space Station for Expedition 53.

In essence and spirit, Amelia Earhart completed the last 7,000 miles of her trip around the world via the International Space Station, because Bresnik brought her scarf along for the ride.

Those who are interested in seeing images of Amelia Earhart photographed by Albert Bresnik, can do so in the book "*The Sound of Wings: The Life of Amelia Earhart*" by Mary S. Lovell. The book features many of Albert Bresnik's photographs.

EDITOR'S NOTE: The information on Lt. Col. Randy "Komrade" Bresnik was provided by NASA. See more stories by photojournalist, Don Winkler, on his blog at https://anothervue2.blogspot.com/



State Aeronautics Directors Meet For The Betterment of The Industry 88th Annual NASAO Convention & Trade Show Held In St. Paul

by Dave Weiman

ST. PAUL, MINNESOTA – The fall season started on a strong note for the National Association of State Aviation Officials (NASAO), with the 88th Annual Convention and Trade Show held at the beautiful and historic Intercontinental St. Paul Riverfront hotel along the banks of the Mississippi River in downtown St. Paul, Minnesota, September 7-11, 2019. The event was hosted by the chair of the organization, Cassandra Isackson, Director of the Minnesota DOT Office of Aeronautics, and her staff, with assistance from "AirTAP," the Airport Technical Assistance Program of the University of Minnesota.



The view of the Mississippi River from the Intercontinental St. Paul Riverfront hotel. Dave Weiman Photo

the state aeronautics directors at the NASAO Convention & Trade Show were there to get down to the business of managing their state air transportation systems.

Sessions covered dozens of topics essential to directors, including the future of urban air mobility, and guidance and research for state aviation systems; airport needs and revenue sources and strategies for state aviation programs; understanding the intricacies of FAA funding; advancing aviation through partnerships; unmanned aircraft systems legislation; effective airport land-use compatibility planning strategies; and learning how states can help airports prepare for the future.

With over 80 speakers, 40 exhibitors, and 300 attendees, the convention got off to a good start.



Mark Baker of AOPA.



Pete Bunce of GAMA.

NASAO President and Chief Executive Officer, Shelly Simi, welcomed attendees to the convention, as did St. Paul Mayor Melvin Carter. In opening comments, Simi recognized her predecessor, Henry Ogrodzinski, for his 17 years of service to the organization. Ogrodzinski died in 2014 after a long battle with cancer.

The Business of Managing State Air Transportation Systems

Socializing and networking plays an important role at conferences and conventions, but there was no question that

A panel discussion featuring top industry leaders was of great interest to me, and should be to everyone in aviation.



Patrick Waddick of Cirrus Aircraft.



Bill Lentsch of Delta Air Lines.

The panel consisted of the President and CEO of the Aircraft Owners & Pilots Association (AOPA), Mark Baker; the President and CEO of the General Aviation Manufacturers Association (GAMA), Pete Bunce; the President of Innovation & Operations at Cirrus Aircraft, Patrick Waddick; and the Executive Vice President of Flying/ Air Operations at Delta Air Lines, Bill Lentsch.

The discussion focused on the growing demand for employees in aviation, and not just pilots. The opportunities for anyone seeking an aviation career has never been better. General aviation organizations, such as AOPA, GAMA,



Abby Brownell of the Metropolitan Airports Commission, showcased Minneapolis-St. Paul International Airport and its six reliever airports: St. Paul Downtown, Flying Cloud, Anoka County-Blaine, Crystal, Lake Elmo, and Airlake (www.MetroAirports.org). Dave Weiman Photo

the Experimental Aircraft Association (EAA), and the National Business Aviation Association (NBAA), and aircraft manufacturers, such as Cirrus Aircraft and Piper Aircraft, have long invested their time and resources to promote flight training and aviation careers, through their education and scholarship programs, and advocacy. It is nice to see the airlines finally coming onboard with attractive salaries and scholarships.

The exhibition hall at the convention was filled with regional and national companies, presenting their products and services. Many of these firms were also sponsors of the convention. There was much to learn from meeting with exhibitors.

A general session speaker

Jayshree Seth of 3M, formerly

known as Minnesota Mining

which has one of the largest

corporate flight departments

in the country, located at St.

Paul Downtown Airport. 3M

is headquartered in nearby

3M is an American multinational conglomerate

Maplewood, Minnesota.

corporation operating

in the fields of industry,

worker safety, health care,

and consumer goods. The

60,000 products under several

company produces over

world-renowned brands.

and Manufacturing Company,

I felt was exceptional was



Jayshree Seth of 3M encouraged attendees to create a work environment in their organizations that encourages creativity and independence, to empower employees to be more productive.

Dave Weiman Photo

Jayshree Seth is a corporate scientist and leads applied technology development projects for 3M's Industrial Adhesives and Tapes Division, the largest industrial business at 3M. In 2018, she was appointed 3M's first-ever Chief



SEH was represented by Bob Cohrs, Senior Planner, and Benita Crow, Regional Practice Center Leader. Dave Weiman Photo

Science Advocate and is using her scientific knowledge, technical expertise and professional experience to advance science and communicate the importance and benefits of science in everyday life. Her talk focused on creating a work environment that encourages creativity and independence, which empowers employees to be more productive because they feel self-worth and enjoy what they are doing.

Another riveting speaker was the Associate Administrator



D. Kirk Shaffer, Associate Administrator for Airports at the Federal Aviation Administration. Dave Weiman Photo

for Airports at the Federal Aviation Administration, D. Kirk Shaffer. Shaffer is a private pilot, and has more than 30 years of experience as a lawyer, entrepreneur, airport executive, advocate, and regulator. At the FAA, he leads more than 500 employees, manages an annual budget of \$3.35 billion, and is responsible for administering Airport Improvement Program (AIP) grants totaling \$7 billion annually, a topic discussed in length elsewhere in this issue of Midwest Flyer Magazine.

Shaffer's talk focused on the importance of having his staff accomplish certain objectives, rather than looking for reasons not to do something. He believes that FAA District Offices should be viewed as "partners" with states and airport sponsors, working together to achieve the same objectives: airport safety, capacity and security.

All of the speakers I had the opportunity to listen to were outstanding, and it is hoped that the directors of each state aeronautics office will encourage their state airport associations to invite at least one of them to their state airport conference. NASAO Announces 2019-2020 Board Members



NASAO Executive Board: (L/R) Anthony McCloskey (PA), Treasurer; John Binder (AK), Chair; Bobby Walston (NC), Vice Chair; Cassandra Isackson (MN), Immediate Past Chair; and Dave Ulane (CO), Secretary.

NASAO announced the members of its 2019-2020 boards of directors at its awards dinner ceremony at the conclusion of the convention. The NASAO Executive Board is comprised of state aviation directors or their selected representatives. The ushering in of the new board was commemorated by the passing of the gavel from NASAO Immediate Past Chair, Cassandra Isackson of Minnesota, to Incoming Chair, John Binder of Alaska.

Members of the 2019-2020 NASAO Executive Board include:

- John Binder, Alaska NASAO Chair
- Bobby Walston, North Carolina NASAO Vice Chair
- Anthony McCloskey, Pennsylvania NASAO Treasurer
- Dave Ulane, Colorado NASAO Secretary

• Cassandra Isackson, Minnesota – NASAO Immediate Past Chair

Members of the 2019-2020 NASAO Regional Board include:

- Dr. Jeff DeCarlo, Massachusetts New England Region
- Mark Flynn, Virginia– Eastern Region
- James Stephens, South Carolina Southern Region
- Bob Brock, Kansas Central Region
- Kyle Wanner, North Dakota Great Lakes Region
- Dan Moran, New Mexico Southwest Region
- Jared Esselman, Utah Northwest Mountain Region
- Amy Choi, California Western Pacific Region

The NASAO Center for Aviation Research and Education voted Jared Esselman, Director of Utah Aeronautics, as its chairperson. Esselman follows Dr. Jeff DeCarlo, Administrator of Massachusetts Aeronautics, who served as chairperson for the past three years.

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In addition to Online Aviation Training, the NASAO Center also coordinates academic scholarships for college students, and manages the U.S. portion of the International Youth Aviation Art Contest, among other programs.

To help raise funds for additional scholarship and education initiatives, the center has created 2020 Art Contest Calendars. For additional information, email info@nasao.org.

Awards & Recognition

The awards dinner honored those who have made significant contributions to the aviation industry.

The "Kenneth A. Rowe Ambassador of Aviation Award" is NASAO's most prestigious award, established in 1994. Presented in the name of Kenneth A. Rowe, the award honors a state aviation director who embodies the spirit, optimism, and fierce pride in the capabilities of state aviation agencies. The 2019 Rowe Award was presented to Bobby Walston, Director of the North Carolina Division of Aviation, and the 2019-2020 Vice-Chair of NASAO.

NASAO's "State Aviation Distinguished Service Award" honors state aviation personnel (other than the director) who have exceled in their service and dedication to aviation progress and development in their state. Shahn Sederberg of the Colorado Division of Aeronautics received this year's award.

NASAO's "Most Innovative State Program Award" recognizes truly unique and service-oriented state aviation programs, projects, and activities. The State of North Carolina received this year's award for its Unmanned Aircraft Systems (UAS) Program Office.

North Carolina's nationally recognized UAS program brings together cutting-edge technology, partnerships and experience to drive innovation in the state and beyond. The UAS Program Office exemplifies innovation in action, using drones in new and innovative ways to benefit the state and its citizens.

The NASAO Center for Aviation Research and Education recognizes state aviation agencies for their efforts in educating and motivating the public with aviationrelated education programs with its "Aviation Education Program Award." This year, NASAO presented its "Aviation Education & Outreach Program Award" to the Tennessee Department of Transportation,



Michelle Frazier, Director of Tennessee Aeronautics and recipient of NASAO's Aviation Education & Outreach Program Award. Jim Bildilli Photo

Aeronautics Division, for its competitive, 100% reimbursable grant program for nonprofits, local governments, educational institutions and private entities working to advance aviation and aeronautics-related education, career fields and industry throughout the state. Tennessee-funded programs that provide pilot training, aircraft maintenance technician training, and aviation engineering training, are eligible to receive up to

\$200,000 in grants.

The NASAO Board Chair selects an individual to receive the "NASAO Chairman's Award," which goes to an individual who has shown exemplary dedication to the aviation industry and has supported NASAO's mission. This year's recipient is Kathleen Vesely, Assistant Director at the Minnesota Office of Aeronautics.

The President and



Kathleen Vesely, Assistant Director of the Minnesota DOT Office of Aeronautics, received NASAO's Chair Award from NASAO Chair Cassandra Isackson. Jim Bildilli Photo



Joseph Miniace (right) of the FAA Office in Kansas City, Missouri, received NASAO's President's Award from NASAO President & CEO Shelly Simi (center) and NASAO Chair Cassandra Isackson (left). Jim Bildilli Photo

CEO of NASAO selects an individual to receive the "NASAO President's Award." The recipient is an individual who has helped promote the mission of NASAO and provided standout support to the association throughout the year. The recipient of the 2019 NASAO President's Award is Joseph Miniace, Central Region Administrator, Federal Aviation Administration.

The evening also celebrated a renewal of a "Memorandum of Understanding" (MOU) between NASAO and the Federal

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

Aviation Administration. The MOU focuses on aviation education programming and was signed by 2018-2019 NASAO Chair, Cassandra Isackson, and Carl Burleson, Chief of Staff and former Acting Deputy Administrator of the FAA.

Debut of New Modules For Aviation Online Training!

The NASAO Convention marked the launch of three new modules in NASAO's Online Aviation Training Program.

Jviation, Inc., the Diamond Sponsor for NASAO's Annual Convention & Trade show, developed the training system platform, and was onsite to walk attendees through the new program.

The new modules focus on the fundamentals of airport planning, environmental planning and engineering. NASAO's state members and business partners have complimentary access to the training program. Email NASAO for program specifics: info@nasao.org.

89th Annual NASAO Convention & Trade Show

The National Association of State Aviation Officials is dedicated to representing the aviation interests of states and the public before policymakers at the federal level. NASAO works closely with the Department of Transportation, National Aeronautics and Space Administration, Transportation Research Board, and American Association of State Highway and Transportation Officials, and maintains an official memorandum of understanding with the Federal Aviation Administration and the U.S. Department of Agriculture.

The 89th Annual NASAO Convention & Trade Show will be held September 13-16, 2020 at the Hyatt Regency in Greenville, South Carolina (www.nasao.org).

Piper Announces New M600 SLS... First GA Aircraft To Be Standard Equipped With HALO[™] Safety System & Autoland Capability

VERO BEACH, FLA. – Piper Aircraft has announced the next generation M Series aircraft - the M600 SLS, standard equipped with the new HALOTM Safety System - enhancing safety for one of the world's leading personal-use, BasicMed compliant aircraft. It will now also be the first general aviation aircraft in the world to be certified with "autoland" capability.

The HALO[™] Safety System is a compilation of innovative technologies unique to the M600 SLS and the Garmin G3000 avionics suite. The system includes auto-throttle, emergency descent mode, enhanced stability and protection, surface watch, safe taxi, flight stream connectivity and more. However, of greatest significance is the addition of Garmin Autoland – digital technology that safely lands the aircraft at the nearest suitable airport in the event that the pilot is incapacitated.

The HALO[™] system, once engaged, either automatically or by a passenger, gains immediate situational awareness and assumes control of all systems necessary to bring you and your passengers safely to the best suited runway. During all phases of flight, the system communicates with passengers and appropriate air traffic control facilities regarding the new flight plan route and estimated time until landing. HALOTM continually monitors all aircraft system parameters and real-time external inputs as if the pilot were at the controls. It takes into account runway size and orientation, wind, time, fuel range, glide path and considers weather conditions and terrain en route to the nearest suitable runway. Once HALOTM has landed the aircraft, the braking system will activate and bring the aircraft to a full and complete stop. Finally, the engine will shut down and instructions will be provided on how to exit the aircraft.

The M600 SLS raises the bar in Luxury with the addition 44 DECEMBER 2019/JANUARY 2020 MIDWEST FLYER MAGAZINE



The Piper M600 SLS with the new HALO[™] Safety System.

of the EXP interior package as standard equipment. The interior package was designed with a focus on the personal travel experience and enables the customer to select from sophisticated interior color palettes with custom materials, stitching patterns and contrasting threads. Veneer and trim finishes further enhance the sense of unmatched refinement. Additionally, thoughtfully designed interior options, like two toned leather seats and Alcantara fabric, have been added to elevate the passenger experience.

Ownership of a M600 SLS is backed by an exclusive service program for the first five years of ownership. The Ultimate Care Program includes all scheduled maintenance, as well as hourly and calendar-based inspections. Certification of the M600 SLS is imminent with deliveries beginning this quarter through the global Piper dealer network at a price point of \$2.994M.

Piper Aircraft Apprenticeship Program Offers Chance To Earn While Learning

VERO BEACH, FLA. – Piper Aircraft has announced that its first group of apprentices has begun their two-year program. The first nine apprentices, who started work in August 2019, are shadowing skilled aircraft assembly workers and learning all aspects of fabrication and assembly of aircraft. Additionally, they attend technical classes and receive hands-on training



designed to qualify them as journeymen in aircraft assembly. Each apprentice is a paid employee of Piper Aircraft and receives a full benefits package.

"The Piper apprentices are part of a high-tech version of the ancient tradition of apprentices learning a trade requiring specialized skills by working with an experienced professional. This program provides the necessary training, mentoring and support enabling apprentices to successfully pursue a long-term career with growth opportunity as a Piper employee," said President and CEO, Simon Caldecott. As we look to the future and consider our current aircraft sales and order backlog, the apprentice program will help ensure that Piper has a strong and agile workforce for the years to come."

The application period for the 2020 Apprentice Class will open in January 2020. The application can be found on the Piper website: www.piper.com under the Careers tab. For questions regarding the program, email: apprentice@piper.com.





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Midwest Seaplane Pilot

Indiana Seaplane Splash-In Nails Goal of Advocacy



by Mike Marturello

he weather was supposed to be stormy, but it turned out to be sunny and warm, and a bit windy for the 17th Annual Indiana Seaplane Pilots Association Seaplane Splash-In at Pokagon State Park, Lake James, Indiana, September 21-22, 2019. There was a fairly sizable crowd and numerous boaters on the lake, but the weather kept down the number of planes; 12 of an expected 30



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showed up. The event normally attracts pilots from Upper Michigan, Illinois and Wisconsin.

On Sunday, we shared our aircraft with the public, but then the winds became stronger, so we limited flight operations. First, we honored Marcie Hensel for her 94th birthday with a seaplane ride. We also honored several veterans with seaplane experiences and was able to share the wonder of seaplane flight with about 30 visitors of all ages, who also received "Fun-o-Meters" provided by Wipaire. Special thanks to Allison Wheaton, Matt Perry and Ed Shumway for sharing their time and aircraft for the rides, and a special call out to Jay Tuthill, who graciously opened up his Cessna 208 Turbine Caravan for tours. Jay also flew a demo flight, and Tom Glotfelty followed suit in the afternoon in his airplane.

Special thanks to the community for coming out, and to the following people and organizations who helped make the splash-in successful: Indiana Department of Natural Resources; State Parks Administration; the staff of Pokagon State Park and its manager, Ted Bohman; Potawatomi Inn manager, Emily Burris, and staff; Terry Hallet and his staff at Tri-State Steuben County Airport (KANQ); the Lake James Association, which has been a supporter and sponsor of this event for all of the 17 years running, along with the Steuben County Visitors and Tourism Bureau; and all of the volunteers





who assisted with the setup, teardown and safety of the event. We are also grateful for the exposure provided by the Herald Republican and Swick Broadcasting.

Our Saturday evening barbecue and bonfire at Randy Strebig's grass airstrip, located on the other side of the lake, was no less spectacular with the local Land of Lakes Lions Club preparing our evening meal. Randy is president of the Indiana Seaplane Pilots Association and the Indiana Field Director for the Seaplane Pilots Association.

Randy dropped one load of skydivers into his grass strip from his seaplane flown by Allison Wheaton. Rick Rumple carried the American flag in on his jump.

Seaplanes make people smile, whether or not they are flying! The entire event is founded on "advocacy," and I can say without a doubt that we nailed our goal 100 percent!

Until next year, stay informed about events and activities of the Indiana Seaplane Pilots Association at www.seaplanepilots.org/inspa.





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

Dan McDowell, Editor

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Robert W. Anderson Mayor & Airport Commission Chair, International Falls, Minnesota July 16, 1942 - Sept. 20, 2019

by Cassandra Isackson Director, Minnesota DOT Office of Aeronautics

s I reflect on my visits to International Falls, Minnesota, one constant comes to mind; a warm welcome, a smile, a hug, from Mayor and Airport Commission Chair Bob Anderson. Sadly, a visit to I-Falls will no longer begin with that smile from Bob, as he passed unexpectedly on September 20, 2019.

Bob was a true statesman with over 50 years of public service to his community, the state, and the nation, in a variety of roles representing his many interests, and his deep love of the place he called home.

The list of Bob's public service memberships is long and impressive; he was elected twice as mayor and alternately as city council member for the City of International Falls; he held directorships at Rainy Lake Medical Center, Hwy 53 All the Way Task Force, Minnesota Forest Industry Council, Rainy River Community College Foundation, and TruStar Federal Credit Union. Bob's leadership positions as past president of the League of Minnesota Cities, Exalted Ruler of Elks, and chair of the State Senate-appointed Lessard-Sams Outdoor Heritage Council, have provided benefits for all Minnesotans.

As chairman of the airport commission for more than 40 years, Bob has championed over 100 projects at the airport, bringing state and federal dollars to community improvements. It has been my privilege as Aeronautics Director to work with Bob on more recent projects at Falls International Airport-Einarson Field (KINL) that have 48 DECEMBER 2019/JANUARY 2020 MIDWEST FLYER MAGAZINE



Cassandra Isackson

changed the front door to the community.

Plans began in 2015 to expand the airline terminal building, followed by two phases of runway reconstruction. The terminal expansion allowed for facilities to include Customs and Border Patrol, the Transportation Security Administration, the National Weather Service, and an office for the airport commission and the Koochiching Economic Development Authority to share. The project was one of the first in the state to utilize Minnesota General Obligation Bond funds as a match for FAA dollars to deliver the project. The four-year project came in just under \$16 million. Reinvesting in solid runway pavement is next on the list.

> Bob was well aware of a new FAA grant offered to KINL just this September for another \$16 million, as phase two of a four-year runway reconstruction plan.

The Local Airline Service Action Committee (LASAC) was organized in 1964 with Bob Anderson among the founding members. The purpose of this small, but influential organization is to promote airline service to small and medium size communities in Minnesota. The group has provided congressional testimony for the continuation of the Essential Air Service Program, encouraged marketing plans for member airports, provided united support in negotiations with airlines to retain flight schedules and services in the remote areas of our state, and represented important business needs of

those communities to national leaders.

Without Bob's efforts, International Falls, Minnesota would not be welcoming visitors from around the world through their airport front door. It has been an honor and privilege to know and work with Bob. I'm sure everyone who has had that opportunity will say the same. Rest in peace Bob, and thank you for all you have done.



Robert "Bob" Anderson

UAVs, Today & Tomorrow

by Dan McDowell with Tony Fernando

e live in an age where technological advances happen very quickly. Looking at the obvious, think about computers in our homes. Now think about cell phones. Now think about how cell phones have morphed into mega pixel camera platforms, and honest

to goodness computers. These "hand-held computers" contain more computational power than one could have imagined even 10 years ago. They continue to evolve and increase in capability and usability.

Another area of technology that has exploded around the world, and also here in our state of Minnesota, is "autonomous aircraft." They are also known as Remotely Piloted Vehicles (RPVs), Unmanned Aerial Systems (UASs), Unmanned Aerial Vehicles (UAVs), or quite simply "drones." The range from craft as small as a few



The Minnesota Department of Transportation uses drones to inspect bridges and other engineering projects. Dan McDowell Photo

from craft as small as a few ounces to nearly 55 pounds. It matters little what they are called as long as we understand their key features are that they are capable of controlled flight without a human pilot directly onboard the aircraft.

The Minnesota Department of Transportation (MnDOT), Office of Aeronautics, is the state-level regulator for drones (UAS, UAV RPV) throughout Minnesota. We are fortunate to have two expert UAS Program Administrators in Aeronautics, and yes, they are here to help you. They are Anthony "Tony" Fernando, and Katrina "Katie" Gilmore. You can contact Tony at 651-234-7227, anthony.fernando@state. mn.us, and Katie at 651-234-7189, katrina.gilmore@state. mn.us.

I asked Tony Fernando about MnDOT's drones. He replied: "MnDOT operates several drones. As of August 30, 2019, MnDOT had conducted 52 drone operations in 2019 (most operations involve several flights). They are being used, for instance, to complete bridge inspections. Using a drone for some tasks, instead of traditional means can save up to 40% in operating costs. Cost savings alone are going to drive increased use of drones by many businesses, resulting in even more drone traffic. That is why we added a second UAS Program Administrator (Katie Gilmore), to our staff to help facilitate the coming growth in MnDOT drone operations." I then asked if the Federal Aviation Administration (FAA) and the State of Minnesota had specific rules or guidelines about drone operations. Fernando responded: "Absolutely. In fact, the FAA's rules change frequently, as changes and improvements in technologies come about. For example, the requirement for recreational operators to notify airport operators when flying within 5 miles of an airport or heliport went away. It is important to check the FAA's website to stay up-to-date on drone regulations (https://www.faa.gov/uas/).

> Manned aircraft pilots need to know how drones will be operated in case they encounter one; drone pilots need to know how to safely and legally operate their drones.

Fernando continued: "Minnesota statutes requires commercial drone operators to register and obtain a commercial operations license, just like manned aircraft operators. It is important to note that we (MnDOT Aeronautics) have become aware of websites with false information about Minnesota registration, licensing, and insurance requirements."

You can find current and

correct information on our website: http://www.dot.state. mn.us/aero/drones/index.html. MnDOT Aeronautics has also produced a video outreach series with Minnesota TPT: https://www.tpt.org/drone-etiquette/.

With the above information, the question arose about citizens who purchase and operate drones. Are they following the state and federal rules and guidelines?

Tony Fernando responded: "Our biggest problem is operator non-compliance with state registration and licensing."

He continued: "The next biggest issue seems to be a number of operators failing to understand and comply with FAA Regulations. So, we strongly urge and recommend that anyone who buys and plans to operate a drone, should first view our video series. Then go to the links provided in this article and thoroughly review the materials presented there. We want all users of the airspace to be aware of the proper way to utilize their aircraft and to be fully cognizant of the safe and proper methods of operating their craft at all times."

Check out our website for additional information at: http://www.dot.state.mn.us/aero/drones/. You will find a number of frequently asked questions and answers, and links to additional information and resources, as well as videos that demonstrate many uses and capabilities of drones.

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Aeronautics Report

Wisconsin Bureau of Aeronautics

P.O. Box 7914, Madison, WI 53707-7914

David M. Greene, Director (608) 266-3351



www.wisconsindot.gov

International Aviation Art Contest

by Meredith Alt Aviation Education Program Manager WisDOT Bureau of Aeronautics

alling all artists between the ages of 6 and 17...the International Aviation Art Contest is now underway! The Bureau of Aeronautics at the Wisconsin Department of Transportation, in partnership with the National Association of State Aviation Officials (NASAO), invites students to create a work of art that celebrates the adventures and excitement of the world of flight.



Meredith Alt

This year's theme is "Flying Yesterday and Tomorrow." Ancient stories from around the world tell us of those who wanted to take flight. Their dreams started to be realized in the late 1800s, when the pioneers of flight used new technologies to make human flight a reality. Each generation learns from those who come before it, and each helps build a future of new discoveries. Students are encouraged to create their own artistic vision of the past and future of aviation! Entries will be judged on the creative use of the theme. The top three entries for each age group will advance to the national competition. These artists, plus an honorable mention for each group, will receive an award certificate and have their artwork displayed in a special exhibit at the Wisconsin State Capitol in Madison.

Wisconsin participants should send artwork and the authenticity form included in the 2020 Aviation Art Contest brochure to:

> Meredith Alt Wisconsin Department of Transportation Bureau of Aeronautics 4822 Madison Yards Way, 5th Floor, South Madison WI 53705

All artwork for the state competition must be postmarked by Friday, January 17, 2020.

For more information and to download the official brochure, see the WisDOT website at **wisconsindot.gov/ artcontest**. For questions, contact Meredith Alt, WisDOT Aviation Education Program Manager, at meredithl.alt@dot.wi.gov or (608) 266-8166.

"Girls in Aviation Day" Introduces Girls To Aviation Opportunities

ands shoot to the air when a group of girls is asked who would like to present the panel with the next question. The selected girl walks to the front of the hangar and reads from an index card, "Why did you want to be a pilot?"

The panelists, gathered for Madison, Wisconsin's firstever "Girls in Aviation Day" event, consist of four women, all members of the newly formed Four Lakes Chapter of Women in Aviation International (WAI). One is an air traffic controller; the others include a retired United 777 Captain, a student pilot who will become a private pilot very soon, and a newly certificated flight instructor.

Through the question and answer session, it is discovered that two of the women have safely landed an airplane in a cornfield. This surprises even the panelists, who have worked 50 DECEMBER 2019/JANUARY 2020 MIDWEST FLYER MAGAZINE together on aviation activities in the area. "I didn't know you had done that!" commented one of the ladies afterward.

Meanwhile, more than 40 girls, between ages 8 and 11, and their chaperones, are off to the first of a series of handson activity stations designed to present the world of aviation to the girls.

This inaugural event took place at Wisconsin Aviation at Dane County Regional Airport (KMSN) on October 5th, 2019. The newly formed WAI Milwaukee Chapter, also held its first event, as part of a worldwide effort designed to introduce girls to aviation opportunities. This year, over 118 events were held in 18 countries, reaching approximately 20,000 attendees.

In Milwaukee, approximately 50 girls, between ages 8 and 17, took part in unique activities arranged by the WAI



Southeastern Chapter at Milwaukee Mitchell International Airport. Participants heard from a panel of women aviators, visited the air traffic control tower, tried out flying on flight simulators, and participated in a scavenger hunt at the airport. In addition, they boarded a plane and met the crew of a regional jet (CRJ-200) that Air Wisconsin brought in for the event.



"This is so cool!" one girl commented, as they took turns sitting in the cockpit, talking with the pilot.

In an industry in which only seven percent of pilots are women, and women continue to be underrepresented across many positions, the WAI coordinators hope these events help girls see themselves as future aviators, scientists, and anything else they would like to be.



In Madison, the girls participated in activities in a large hangar at Wisconsin Aviation. Stations with names like "She's So Fly" and "Chart Your Course" taught girls about navigation, communications with air traffic controllers, aerodynamics, and other aspects of aviation. Pilots also helped girls climb inside



several small planes on display in the hangar. Toward the end of the event, the girls were told there was a surprise opportunity to board a Sun Country 737 chartered aircraft, if they were interested.

Despite the pouring rain outside the hangar, the girls ran to the entrance of the hangar and lined up with umbrellas to board the plane. otherwise just fly for fun!

Representatives of both WAI chapters were thrilled with the response to the events, with registration full. Both chapters plan to hold events again next year.

If you would like to get involved in future Women in Aviation International events in Wisconsin, visit the WAI website for contact information: https://www.wai.org/



The President of the Southeastern Chapter, Joan Kelnhofer, notes: "We want girls to see that there are exciting careers available to them as engineers, astronauts, pilots, dispatchers, air traffic controllers, and dozens of other jobs within the aviation community." And private pilots in both chapters pointed out, the girls could





Airport runway reconstructions and paving efforts are examples of projects an airport would put on its Capital Improvement Program (CIP).

AT OUR AIRPORTS

How To Create A Capital Improvement Program For General Aviation Airports

by Melissa Underwood

eveloping capital improvement programs (CIP) to guide future investments can seem daunting. Funding sources, priority of needs, airport qualifications, as well as state, federal and local fiscal years, all must be factored into the process. What follows provides some guidelines to help determine what you, as the airport The FAA prepares a national CIP each year based on collective information gleaned from each of the nine regional CIPs across the U.S. Each region has an office that gathers the CIPs completed for the airports in their region. These regions include:

- Alaskan
- Northwest Mountain
- Great Lakes (includes Minnesota and Wisconsin)



Capital Improvement Program (CIP) funding starts at a national level, then funnels through nine regional CIPs before making it to the local level.

sponsor (i.e. manager, commission, municipality), need to include when starting a CIP, tips to streamline the process and other important considerations. (This information is likewise being presented to make airport tenants aware of how airports are funded.)

What is a CIP?

At its simplest, an airport CIP identifies project priorities and funding sources over a period of years and is used to plan for future projects and required funding needs. It is a document that serves as a planning tool for maintaining, developing or expanding an airport. Additionally, a CIP also serves as the basis for how the Federal Aviation Administration (FAA) and state funds are distributed. If a project is not included in your airport's CIP, it will not be considered for federal or state funding.

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- Eastern
- New England
- Central (includes Iowa)
- Western-Pacific
- Southwest
- Southern

Likewise, each regional CIP is assembled from information provided by individual state airport CIPs. To make certain funds are apportioned appropriately, it's important to be in contact with your local department of transportation and FAA representatives early and often.

In order for a CIP to be most effective, airport sponsors should include 20 years of projects. This helps to illustrate the need for aviation funding to local and state governments. The U.S. Congress provides funding to many programs throughout the country. If Congress does not see a need beyond the next five years for aviation funding, they may use the money they have for other initiatives. It's important for airport sponsors to show a need for funding into the future to continue to receive state and federal funding support for their projects.

But, we all know budgets and goals change. So, it's important to review and update your CIP every year.

project cost for most federal projects, leaving just five percent of the total cost up to the airport sponsor. Federal projects need to meet the eligibility and justification requirements explained in the Airport Improvement Program (AIP) Handbook. Depending on the type of project, certain criteria need to be met to receive federal funding. In other words, just because you want a runway extension, doesn't mean your



At smaller state-funded airports, terminal and hangar design and construction projects are often part of their Capital Improvement Program (CIP).

What To Include In A CIP?

A successful CIP includes five parts:

1. The year the project is expected to occur. Make sure you're considering the federal, state and your local fiscal years and accommodating them appropriately.

2. A description of the project. Include an easy to understand title of your project. Some states have other considerations to include in your project description. For example, in Minnesota, it is helpful to add the federal fiscal year you anticipate the project to receive a grant to the project name.

3. The type of project. For example, is the project going to occur on the runway, taxiway, apron or access road? Is your project a planning project or for equipment?

4. Total cost of the project. Cost is the most important element of a CIP.

5. Funding split. Projects eligible and justified for federal funding will most commonly be funded at 90 percent with federal grant dollars and 10 percent with local dollars. Some states also participate in the local share of projects. For example, Minnesota is now providing five percent of the project is justified or that it is eligible for federal funding.

Some projects funded only with a state grant might have various funding rates depending on the state and the project type. Coordinate early and often with your federal and state agency representatives to understand the funding split for your projects.

Airport Classifications

Qualifying for state or federal airport funding options depends on how your airport is classified. Put simply, there are two basic types of airport classifications: national and state.

National Plan of Integrated Airport Systems (NPIAS) airports are those that are eligible to receive federal funding. NPIAS airports can be commercial service airports or general aviation airports. If they meet specific criteria, such as having at least 10 based aircraft or being at least a 30-minute drive time from another NPIAS airport, the airport sponsor can receive federal funding. The FAA AIP Handbook lists projects eligible to receive federal funding. The FAA prioritizes funding projects needed for safety (runway reconstruction, taxiway reconstruction, obstruction removal) and then other projects to maintain the existing airport infrastructure and provide facilities for the user needs of the airport. Other projects eligible for federal funding include master plans, environmental assessments, snow removal equipment, hangar construction, access road rehabilitation, and others. Meet with your FAA program manager often to determine eligibility and justification for your projects. Although the primary funding source for NPIAS airports is federal, they can still receive state funding for their projects.

State-funded airports are those airports that are not included in the NPIAS, but are included in a state aviation system. These are typically the smaller airports that receive state funding for eligible and justified airport projects.

Common Airport Funding Types

The FAA's Airport Improvement Program (AIP) funding was created by the Airport and Airways Act of 1982 to assist in the development of a nationwide system of publicuse airports. Amendments to the program since 1982 have consistently increased funding levels, the participation rate, and eligibility.

The AIP has limits on eligibility. Generally, grant eligible items include airfield and aeronautical-related facilities, such as runways, taxiways, aprons, lighting, and visual aids, as well as land acquisition, planning, and environmental tasks needed to accomplish the airport improvement projects. Some revenue producing items like fuel farms, and FBO facilities may not be eligible for AIP funds. Additionally, equipment eligibility is limited to safety equipment like aircraft rescue and firefighting (ARFF) trucks and snow removal equipment (SRE). Mowers, earth-moving equipment, and airport operations vehicles are not eligible for funding.

The FAA utilizes a priority system to rank development items. Generally, the smaller the airport and the farther the item is from the runway, the lower the priority it receives (e.g. runways have priority over taxiways, which have greater priority than aprons, which have priority over roads, etc.). However, development or equipment required by rule or law has a high priority.

There are two types of AIP funds that an airport will receive: "entitlement" and "discretionary."

Entitlement funding is a main source of funding for general aviation airports. General aviation airports typically do not have scheduled passenger service and serve private, business and smaller charter aircraft.

Each year the FAA gives general aviation airports \$150,000 to spend on justified and eligible projects. However, if the airport does not have a use for the funds, they can roll over the entitlement funds for up to four years, potentially banking up to \$600,000. To access the funds, the airport must meet certain FAA requirements. Unused funds are sent back to the FAA for redistribution to other airports. However, airports can do what are called "entitlement transfers," where they roll unused funds over to other airports to use on their projects. If an airport decides not to do a project one year, they can lend all, or portions of, their entitlement funds to another airport within the state that is working on a project. The airport will then repay those funds back to the first airport in a specified year when it makes the most sense for both airports. By doing this, it keeps the entitlement funds within the state and avoids the funds going back to the FAA to be used elsewhere.

Discretionary funding consists of leftover entitlements collected and redistributed nationally and is typically used on high-priority projects like runways and taxiways. Of note, discretionary grants tend to be awarded later and are usually not received until late in the fiscal year.

State apportionment funding is similar to discretionary funding, but consists of federal funding given to the state to use.

State funding can include many funding types and rates. Examples of state funding are hangar loan programs and maintenance and operation grants. There are also vertical infrastructure funds and other state programs, depending on which state your airport is located.

State bonding bill funds can be used in many states for airport infrastructure improvements. In Minnesota, a bonding bill is typically passed every even year. They require agreement from the state legislature and governor on how the funds should be spent, and bonding bill funds are not guaranteed until passed into law by the legislature.

There are also a number of miscellaneous "grants" that can be used. Two of the most common grants in Minnesota, for instance, are the Department of Employment and Economic Development (DEED) grant, and the Iron Range Resources & Rehabilitation Board (IRRRB) grant.

All funding from both state and federal agencies must be for planning, design, construction or pavement maintenance projects, and cannot be used to supplement the operating expenses of the airport.

Local Funding

Airport revenue and local general fund and tax dollars can also help contribute to airport project funding. Airport revenue can come from things like:

- User fees
- Ramp/tie-down fees
- Landing fees
- Fuel sales
- · Fuel flowage fees
- Land leases
- Hangar rent
- Leasing airport property for agricultural or farming purposes
- Mineral rights

With all of the funding options available, and the differing

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times of year at play, this can easily confuse airport managers. Fortunately, there are a few things airport managers can do to help streamline the process. The following tips can help keep everything straight.

5 Tips To Help Streamline An Airport's CIP Process

1. Develop your own calendar – The calendar year is one of the hardest parts to figure out when developing a CIP. There is the Calendar Year, the State Fiscal Year and the Federal Fiscal Year – and none of them are the same. Do yourself a favor and develop your own calendar to figure out the best timing for putting projects on your airport's CIP.

2. Meet with federal and state agencies often – It is important to coordinate with your federal and state representatives, including the planner, environmental specialist and program manager, to best plan your projects and to determine if environmental work or other projects will push the year of receiving funding to a later date. For environmental and engineering projects, it is important to ensure all planning has been completed prior to initiating and requesting a grant for these projects.

3. Plan early and review your Master Plan and Airport Layout Plan (ALP) – Confirm with the FAA program manager that the proposed project location and layout shown on your ALP still makes sense with current guidance, especially if your ALP is older.

4. Coordinate with local governments – Explaining the purpose and need for funding to your local government agencies is important. Making sure the local share of funding is available the same year as the federal or state grant is available is important for the project to move forward as planned. Keep your local government informed as projects are justified and ready for implementation:

5. Put your projects on the CIP four to five years before you'll need the funding – Just as it takes time for you to plan for your local share, the FAA and states need to plan for their share. It is important to have an accurate CIP for the near-term (five years), especially if you intend to use federal discretionary or apportionment funding. There may be other considerations that could drastically affect your project's viability or timing. Understanding how your project will compete with other projects is important. Consider what airport component your project is (runway, taxiway, apron) and if it is a minor rehabilitation, major rehabilitation, complete replacement or new construction.

Calendar Years Vary Widely

Keeping up on all of the calendar years necessary in an airport CIP can be challenging.

Federal Fiscal Year: October 1 – September 30

State Fiscal Year: It depends on the state. Minnesota's state fiscal year is July 1 – June 30. However, Iowa's fiscal year

shifts every year. Other states are also different. It's important to understand and pay attention to those deadlines and stay in the know.

Local Fiscal Year: Varies by airport sponsor (figure out yours to make sure).

Other Considerations

Understanding project timing considerations and airport classification (federal or state funding) are important in developing an airport CIP, but here are a few additional points to consider:

• Is your planning complete for the project, and is it shown on your ALP?

• What environmental work needs to be completed before you can begin your project?

• What is the local funding balance needed for the project and what year will it be available to use?

• Have you presented your project to the decision-makers and stakeholders for support and approval?

• Is your local department of transportation (DOT) and the FAA aware of your project?

• What type of funding can you use for your project?

• Ensure your airside needs are met for the next three years if you would like to start a landside project with federal dollars (hangars, fuel systems, snow removal equipment).

• How can you best phase your project to balance minimizing impacts to users and project cost?

Summary

An airport CIP is not only a document guiding the future of your community's airport, it also guides the funding of the airport and how it will function in order to meet project needs. It's important your CIP is soundly prepared. Contact your DOT and FAA representatives early and often with your projects. Involve your local units of government, airport committee and/or board early to demonstrate the need and economic benefit of your local airport. Give them a vision so they can begin to designate funds for the local share of project costs. To build a better foundation for Congress to continue to increase the allocation of federal funds to aviation, it's important for every airport to develop a 20-year CIP.

About the author: Melissa Underwood is a senior airport planner and project manager at SEH. She understands that through precise planning and forward thinking, any project is possible.

About SEH: SEH is an employee-owned engineering, architectural, environmental and planning company that helps government, and industrial and commercial clients, find answers to complex challenges. The company is headquartered in St. Paul, Minnesota with 32 offices in nine states. The core purpose of SEH is "Building a Better World for All of Us[®]" (sehinc.com).



Minnesota Education Section

Minnesota Transportation Center of Excellence

sUAS Operations and Sports

by Adam Mahne Independent Contractor & Remote Pilot/ Videographer for Northland Athletics

or the last two and a half years, Northland Community & Technical College has been utilizing small Unmanned Aircraft System (sUAS) technologies to film practice exercises for the college's football team. Very few people would think of placing these two wildly different areas together. However, in as many years, Northland has also gone to and won their championship games.



Author, Adam Mahne, flying a drone at football practice at Northland Community and Technical College.

Flying at about 50 to 75 feet above ground level (AGL), the drone can capture with amazing quality all the players' positions and plays. Usually during practice, there will be about 20 plays to run and the drone can capture all of them, starting and stopping the camera in-between to separate plays. Once complete, the plays can then be reviewed back in the classroom to maximize the effectiveness and correct any errors in play. This helps the players' situational awareness, recognizing what is going on around them, and what they need to focus on to improve.

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Drone imagery of football practice. Notice the broad coverage and perspective advantage of aerial imagery.

The advantages of utilizing drone film over regular film are greatly beneficial. When you film practice with a handoperated camcorder, you don't get the inclusive value needed to see everything; or if you film from the booth, you get a jumble of bodies with no clear indication of who is who. With drone imagery, you have a clear picture of who is where. Also, there is no need for bulky equipment and lengthy setup times; drones usually taking 5 minutes to set up and takeoff.

With all these advantages, use of drones comes with some downsides. The most obstructive factor in flying at practices is the weather. Since football season is during the late part of summer, fall and early part of winter, weather has a big impact. It is a guessing game if you will be able to fly that day or not. Another downside is battery time. The drone most commonly used by Northland only has a battery life of 20 minutes. The filming portion of practice can last 40 minutes to an hour. This requires multiple battery swaps and landings in-between plays. The good part is, if you have a prepared pilot, he can land, swap batteries and takeoff in under 2 minutes, allowing him to not miss any plays.

As technology improves, so will the demand and need for this type of service will greatly increase. As for now, Northland will continue to utilize flight imagery in support of their football team. Maybe in the future, technology and administration will see greater sUAS potential and advantage for more than just practices being filmed. Will we see more colleges and high schools utilizing drones for their sports programs? Only time will tell.

Innovative Tools In Airport Planning



GIS INTEGRATION

Using GIS software, the staff at Bolton & Menk provides airport sponsors (i.e. municipalities) an interactive experience by integrating various databases, such as property parcels, pavement conditions, land-use zoning, and obstructions into a single interface. This interface allows users to see information in a detailed three-dimensional view. It allows the staff to compare

Incorporating the latest technology in developing an airport layout plan can provide crucial information to decision-makers in a visual and interactive manner. The aviation services group at Bolton & Menk uses innovative tools to think outside the box during the airport planning process and beyond. They create successful outcomes for airports by integrating unmanned aircraft systems (UAS) and geographic information systems (GIS) technology into their airport projects.

UAS IMPLEMENTATION

Bolton & Menk's innovation in airport planning is based on using small UAS aircraft to capture highquality aerial imagery during planning, design and construction. This imagery can be used to provide base maps for airport layout plans (ALP) and interactive GIS interfaces, completing airspace reviews, estimating pavement maintenance projects, and providing post-construction airport imagery. Using a fleet of UAS aircraft, Bolton & Menk's licensed UAS pilots can fly over an airport and surrounding property to capture imagery within a few hours. Once processed, planning and engineering staff will review gathered imagery to evaluate existing airport conditions and develop alternatives to assess potential impacts in an interactive, three-dimensional GIS environment.



NORTHLAND COMMUNITY & TECHNICAL COLLEGE

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airport alternatives and visualize safety critical surfaces and setbacks.

Decision-makers will have a better understanding of the relationship between physical attributes on the ground, safety critical areas, and threedimensional airspace. GIS software also allows airport sponsors to use UAS imagery to assess airport infrastructure in a more current environment than previously possible.

If UAS imagery is gathered on a yearly or event-driven basis, sponsors can monitor airport conditions, assess maintenance projects and identify

potential airport problems. The ability to integrate GIS into the decision-making process ultimately leads sponsors to make well-informed decisions on managing airport operations, as well as ensuring success for the airport's future.

For more information on how Bolton & Menk's innovative technology can help your airport planning process, contact Jared Wingo at Jared.Wingo@bolton-menk.com.

2019 FAI World Drone Racing Championship Grand Final To Take Place In China

hina is getting ready to welcome more than 100 of the world's best drone racers in December for the 2019 FAI World Drone Racing Championship Grand Final.

The prestigious competition, which is a highlight in the fast-paced international drone-racing calendar, will be held in Xiangshan Ningbo, December 11-14, 2019.

At a press conference held November 4 in Xiangshan Ningbo, competition organizers said they were ready to welcome the world!

"Drone racing is a fast-growing sport and the FAI is right there at the forefront of this exciting sport," said FAI President Robert Henderson.

The 2019 FAI World Drone Racing Championship Grand Final will be held at a dedicated drone-racing track, built especially for the competition in Xiangshan Ningbo, a coastal city in the southeast of China about 300km from Shanghai.

At 630m long and 4m wide, the track will be divided into three layers. With the ground as baseline, the second layer will be 3.5m high and the third layer at 6m. There will be 14 different kinds of obstacles and 25 flags, including bridges and tunnels.

Competitors will race their drones around the track at up to 180km/h in a series of heats, navigating the course and flying their drones using a first-person-view video headset. Some 108 drone-racing pilots from 27 nations are expected to take part – including 23 juniors and 13 women.

As well as the pilots, 125 other team members will also take part. Each competitor is also allowed one supporter, and



national teams are allowed a team manager.

FAI medals and prize money will be awarded in Overall, Women, Junior and Nation categories. The total prize pot is \$125,000.

China has hosted the FAI World Drone Racing Championship three years in a row. The location of the 2020 edition will be announced soon.

Drone pilots can qualify for the 2019

FAI World Drone Racing Championship Grand Final 2019 in four ways.

1. Placing in the top 16 of the 2019 FAI Drone Racing World Cup rankings.

2. Winning a 2019 Drone Racing Challenger World Cup Series event, held throughout the year.

3. Winning a podium place at the FAI Jeonju World Drone Masters in South Korea, held November 1-3, 2019

4. Through selection as part of their national team. A national team can include a maximum of five pilots (faidroneworld.aero).

FAI, the World Air Sports Federation is the world governing body for air sports and for certifying world aviation and space records. The FAI was founded in 1905 and is a non-governmental and non-profit-making organization recognized by the International Olympic Committee.

FAI activities include aerobatics, aeromodelling, airships, amateur-built and experimental aircraft, balloons, drones, gliding, hang gliding, helicopters, manpowered flying, microlights, parachuting, paragliding, paramotors, power flying and all other aeronautic activities and space records (www.fai.org).



CALENDAR

Include the DATE, TIMES, LOCATION (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. Go to "Calendar" at www.MidwestFlver.com and post your aviation event.

You can also email: info@midwestflyer.com – Or – Mail To: Midwest Flyer Magazine, 6031 Lawry Court, Oregon, WI 53575 NOTAM: Pilots, be sure to call events in advance to confirm dates and for traffic advisories and NOTAMS.

Also, use only current aeronautical charts, etc., for navigation and not calendar listing information.

MIDWEST FLYER MAGAZINE IS NOT RESPONSIBLE FOR THE ACCURACY OF, OR RELIANCE ON, ANY INFORMATION PUBLISHED.

* INDICATES ANY NEW OR UPDATED CALENDAR LISTINGS SINCE THE PREVIOUS ISSUE.

DECEMBER 2019

13 OSHKOSH, WIS. - Wright Brothers Memorial Banquet at the EAA Aviation Museum Eagle Hangar featuring air racing legends Steve Hinton & Steven Hinton. Info - EAA.org/WrightBrothers

FEBRUARY 2020

- 15* BUFFALO (KCFE), MINN. Chili Feed & Cookout 11am-3pm. For further information or to enter a pot of chili in the cookout, contact Laura Herrmann at liherrmann@yahoo.com
- 29* LAKE MILLE LAC, MINN. Iceport 2020 at Mac's Twin Bay on Lake Mille Lac 10am-3pm. Please visit www.facebook.com/CreateLift/ for updates.

MARCH 2020

- **31-4/5*** LAKELAND, FLA. Sun 'n Fun Aerospace Expo. www.flysnf.org/sun-n-fun-intl-fly-expo/
- **16-17*** BROOKLYN CENTER, MINN. MN Aviation Maintenance Technician Conference at the Earle Brown Center.

APRIL 2020

- 1-5* LAKELAND, FLA. Sun 'n Fun Aerospace Expo. www.flysnf.org/sun-n-fun-intl-fly-expo/
- 8* St. PAUL MINN. Minnesota Aviation Day At The Capitol 2020, Contact Tim Cossalter at timcossalter@outlook.com or call 651-269-1221 for more information.
- 29-5/1 ROCHESTER, (KRST) MINN. 2020 Minnesota Airports Conference at the Mayo Center.
- 30-5/3* BRANSON Mo. United States Pilots Association (USPA) Spring FlyOut. 417-338-2225 www.USPilots.org

MAY 2020

- 1-3* BRANSON Mo. United States Pilots Association (USPA) Spring FlyOut. 417-338-2225 www.USPilots.org
- **3-5** ELKHART LAKE, WIS. 65th Annual Wisconsin Aviation Conference sponsor by the Sheboygan County Memorial Airport (KSBM) will be held at The Osthoff Resort. (https://wiama.org).
- **15-17* BRAINERD, MINN. -** MN Seaplane Spring Safety Seminar at Madden's.
- 20-21* St. CHARLES, ILL. 2020 Illinois Aviation Conference at the Hilton Garden Inn. www.illinoisaviation.org
- JUNE 2020
- 1-3* REDWOOD FALLS, (KRWF) MINN. Breakfast 8am-Noon. 507-430-8872.
- JULY 2020
- 20-26 OSHKOSH, WIS. EAA AirVenture Oshkosh 2020. www.eaa.org / airventure
- 22-24 CLINTON, Iowa 20th Annual Cessna 150-152 Fly-In. cessna150152flyin.org
- AUGUST 2020
- 9-12 MIMINISKA LODGE, ONTARIO, CANADA Canada Fishing Fly-Out 3-Night/2-Day Trip. FOR RESERVATIONS: Contact Lynette Mish at Wilderness North toll free: 1-888-465-3474.
- 9-14 MIMINISKA LODGE, ONTARIO, CANADA Canada Fishing Fly-Out 5-Night/4-Day Trip. FOR RESERVATIONS: Contact Lynette Mish at Wilderness North toll free: 1-888-465-3474.
- 12-15 MIMINISKA LODGE, ONTARIO, CANADA Canada Fishing Fly-Out 3-Night/2-Day Trip. FOR RESERVATIONS: Contact Lynette Mish at Wilderness North toll free: 1-888-465-3474.

NOTE: Email info@midwestflyer.com for special group rates for the "Canada Fishing Fly-Out to Miminiska Lodge." SEPTEMBER 2020

13-16* GREENVILLE, SOUTH CAROLINA - The 89th Annual NASAO Convention & Trade Show will be held September 13-16, 2020 at the Hyatt Regency. (www.nasao.org)

To have your aviation event listed, please send your information to us 60 days prior to the event: info@midwestflyer.com



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Avfuel Awards Three Additional Scholarships To Aspiring Aviators



Avfuel scholarship recipient, Trent Long.

ANN ARBOR, MICH. – Avfuel Corporation has selected Trent Long of Pasadena, Maryland; Andrew Traficante of Boynton Beach, Florida; and Ann Hornick of Poplar Grove, Illinois, as the recipients of the 2nd Annual Pilot-in-Training Scholarship.

As a long-term member of the Science Technology Engineering & Mathematics (STEM) magnet program, and captain of a 60-person robotics team, Trent Long will use his \$1,500 scholarship to complete his private pilot certificate in preparation for college where he will major in aviation engineering. Through his education and internship at the Navy Annapolis Flight Center, Long hopes to become a pilot and flight instructor.

Andrew Traficante intends to use his \$1,000 scholarship to complete his flight training at Lynn University while he also finishes high school. At the age of seven, he took his first lesson and has since developed a passion for flying and aerospace engineering.

Ann Hornick, a student and an employee at Poplar Grove Airport in Illinois, will use her \$500 scholarship to complete her private pilot certificate prior to joining the United States Naval Academy or similar program. It is with the support of her airport community that she hopes to inspire other young women to pursue a career in aviation.

These scholarships are in addition to the 21st Annual AVTRIP Scholarship recipients announced earlier, including Wayne Manning of Provo, Utah; Stacy Everitt of Miami, Fla.; and Alayna Hall of Fargo, N.D.

Currently working in the aerial survey and charter business, Manning will use his \$2,000 scholarship to obtain his Airline Pilot Certificate. Everitt, an active participant in Women in Corporate Aviation, will



Wayne Manning

use her \$1,000 scholarship to pursue advanced ratings. Hall will use her \$500 scholarship to finish her degree in Airport Management at the University of North Dakota.

<u>Aircraft</u>

Tarragon Aircraft USA Begins Operations In Pekin, Illinois



The Tarragon

arragon Aircraft USA, LLC has started operations at Pekin Municipal Airport (C15) in Pekin Illinois. The company is an aircraft sales and service company in partnership with Pelegrin Tarragon of Adazi, Latvia. Created, owned, and operated by Michael Cruce and Charles

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Barth, Tarragon Aircraft USA, LLC is the sole provider of Tarragon Aircraft sales and service for the Latvian-built, FAA experimental category airplane.

Michael Cruce operates Cruce Agricultural Aviation, and Charles Barth works for the City of Pekin and is a 30-year veteran of the Air National Guard.

Pelegrin Tarragon and its partners began producing the Tarragon out of pre-peg carbon fiber. Per European standards, the Tarragon is considered an ultralight aircraft, weighing under 800 lbs. empty. The Tarragon is a two-place, tandem aircraft with custom-made retractable tricycle gear. Powerplants and props range from 100-115 hp Rotax engines to 135 hp EPA and Edge-powered Rotax high-performance engines, and UL Power 130 hp engines. The Tarragon has a cruise speed of 170 - 185 mph, and a stall speed with full flaps of 40 mph.

For serious inquiries, call 309-346-3348 (www. tarragonaircraft.com).



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