

NORTH DAKOTA

UMAS Edition

# Aviation QUARTERLY

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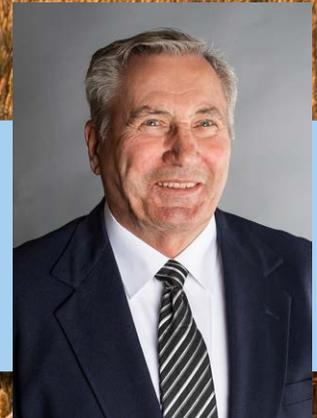
2020 UPPER MIDWEST AVIATION SYMPOSIUM  
March 1-3, 2020 | Grand Hotel | Minot

**A Grand Time**  
*in Aviation: Then, Now...*



2020 Hall of Fame  
Inductee  
**Allen Sauter**

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UPPER MIDWEST  
AVIATION  
SYMPOSIUM

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# North Dakota Aviation Quarterly (NDAQ)

Official Publication of the North Dakota Aviation Council

Statements of fact and opinion are the responsibility of authors alone and do not imply an opinion on the part of officers and members of NDAC, or NDAQ staff. If you've received more than one copy of this newsletter, please share it with a friend.



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## From the Editorial Committee

The articles in this issue showcase the depth and variety of knowledge and perspectives in our local aviation community.

# A Grand Time

*in Aviation: Then, Now...*

We hope they serve as an introduction to all the exciting opportunities awaiting you at the upcoming Upper Midwest Aviation Symposium, held March 1-3, 2020, in Minot, ND. We look forward to seeing you there!

## The Editorial Board

**Correction:** The article in the Fall 2019 issue, "The Integration Pilot Program: Navigating the Future of UAS in North Dakota," should have been credited to the Northern Plains UAS Test Site. Our apologies for the misprint and giving sole credit to the North Dakota Department of Transportation. We hope you enjoyed reading about the use of UAS at North Dakota State University tailgates, during floods, and ingenuitive uses over urban and populated areas.



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## Looking Forward with 20/20 Vision

*Rolling with the theme of our new year, let's bring things into focus.*

In 2020, much of our work surrounding the North Dakota Aviation Council will be focused on outreach and engagement. We have a number of different opportunities that we have either set in motion or are working on the first steps in organizing.

### 20/20 - Bringing Clarity and Focus to Our Identity and Mission

In November, the branding and identity subcommittee presented the board of directors with a number of options to help create clarity between the blurred lines of what is the North Dakota Aviation Council (NDAC) and the North Dakota Aeronautics Commission (NDAC). In addition to the naming challenge of the council, we were also presented options to rename and rebrand the annual Upper Midwest Aviation Symposium (UMAS). In March at UMAS, we will be presenting a new proposed name and brand for the Council and Symposium to members of the Aviation Council, who will vote.



### Executing on Our Mission: Promoting Aviation

This past October, Mike McHugh and I attended a career expo in Leesburg, VA that has had great success over the past decade in engaging and inspiring students to consider a career in aviation. Our goal was to meet with the organizers and attend the event to help us learn more about how we could start something like this across the entire state of North Dakota. With what we have learned, we have begun to reach out to our aviation and education communities to form a planning committee to organize and host an annual career expo. *If you are interested in serving on the planning committee, please reach out to me directly as soon as possible.*

In addition to the career expo as a means of reaching our youth, we have five high schools across the state that are currently offering aviation programs. We would love to see this number continue to grow and would love your help in getting the word out to schools across the state that may have an interest in starting a new Career and Technical Education (CTE) Program. Aviation is a natural fit for schools looking

to build on their STEM education programs. The AOPA has developed a turn-key curriculum available free of charge to schools that apply and are selected to use their program. The application process is currently open and will close on February 28, 2020. [youcanfly.aopa.org/high-school/high-school-curriculum](http://youcanfly.aopa.org/high-school/high-school-curriculum)

If you would like more information on the aviation curriculum and programs available for schools in North Dakota,

please contact Mike McHugh at [mmchugh@nd.gov](mailto:mmchugh@nd.gov).

### Workforce Development Funding Through FAA Reauthorization:

Here is a quick update if you have been following the FAA's reauthorization bill: The bill includes \$10 million for aviation workforce development programs for aircraft pilot workforce and for aviation maintenance workforce, as authorized by section 625 of the FAA Reauthorization Act of 2018. It is currently moving through appropriations and will be given to the FAA for implementation. There are ongoing conversations to consider applying for a grant to fund new aviation education initiatives throughout the state. If you have ideas other than the career expo and high school programs, I would love to hear from you.

### On Approach to UMAS

Lastly, I would like to mention we are holding our first election of officers at UMAS 2020. Our Executive Director, the Staiger Consulting Group, will be helping us through the process as we are currently accepting nominations that will be voted on at UMAS. If you or someone you know would like to invest in your aviation community by serving, we would love to hear from you.



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# Allen Sauter to be inducted into North Dakota's Aviation Hall of Fame

2020 Hall of Fame  
Inductee  
Allen Sauter

North Dakota Aviation



HALL OF FAME

The North Dakota Aviation Hall of Fame committee announces that Allen Sauter has been selected for induction into the state's Aviation Hall of Fame. The induction ceremony will take place on the evening of March 3rd, at the Upper Midwest Aviation Symposium banquet in Minot, ND. Allen Sauter will join the prestigious aviation hall of fame group that currently includes 44 other individuals who have all had a significant impact to the growth, development, and promotion of aviation in North Dakota. For more information on the North Dakota Aviation Hall of Fame, visit [ndacaero.com/hall-of-fame](http://ndacaero.com/hall-of-fame).

Allen Sauter was born on October 2nd, 1941 and was raised in Harvey, North Dakota. Allen's love for aviation started as a child on his family farm where he worked as a flagger for a local aerial applicator. On Christmas Day in 1957, he soloed in a 1946 J-3 Cub on skis at the young age of 16, which began an aviation career that currently spans seven decades.

Allen joined the US Army in 1958 to become a pilot. Once he discovered that he was too young to begin flight training, he decided to attend helicopter maintenance school. Allen excelled in his training and by the end of his enlistment he obtained all FAA requirements for his Airframe & Powerplant Certificate. In addition, he flew all of the aircraft in the Army Base flying squadron, including the L-17, L-18, L-19, L-21 and L-26.

Allen returned home in 1962 to North Dakota and after earning his Commercial Pilot and Flight Instructor Certificate, he began work as a commercial pilot for Combs Airways and Red Baron Lines. During this time, he flew passengers and cargo throughout North Dakota and other Midwest states. He

was also active in the Civil Air Patrol, serving as a Captain and Flight Instructor.

Throughout most of the 1970's, Allen accrued additional qualifications and certifications. He served as the Chief Flight Instructor for Mid-State Aviation in Bismarck where he wrote the first FAA approved multi-engine curriculum for private, commercial, and flight instructor pilots in the state of North Dakota. Allen also wrote and obtained FAA approval for the new GI Bill flight school in North Dakota.

Allen dedicated his life to raising his family while serving as an FAA Certified Gold Seal Flight Instructor and as an FAA Designated Pilot Examiner in North Dakota. Within this position, he trained pilots of all levels including private pilots in Piper Cubs to commercial pilots flying twin-engine jets.

Allen continued his contributions to the aviation industry and to his fellow North Dakotans after completing his career with the FAA. He began his own Bismarck based aircraft pilot service company which employed three pilots. Over a span of 14 years his business flew doctors and nurses from Bismarck to rural communities throughout North Dakota and other Midwest states.

Allen received numerous awards, most notably the Orville and Wilbur Wright Master Pilot Award for 50 years of continuous medical certification with no accidents and no violations of FAA Regulations. As an FAA Gold Seal Flight Instructor, he has provided instruction to over 633 certified pilots throughout his career. Allen has flown 55 aircraft including Cessna Citation Jets and Convair 240 aircraft as well as three helicopter models. He has accumulated over 32,200 hours of flight time throughout his lifetime.

## Join for the 2020 Hall of Fame Banquet

The induction ceremony will take place in Minot at the Upper Midwest Aviation Symposium on Tuesday March 3rd. The social begins at 6 p.m. and the banquet begins at 7 p.m. To learn more about the state's aviation conference or to purchase tickets for the awards ceremony, visit [ndacaero.com](http://ndacaero.com). Questions can also be directed to the North Dakota Aeronautics Commission at 701-328-9650.





Kyle Wanner, Director  
 North Dakota Aeronautics Commission  
 701-328-9650 | [kcwanner@nd.gov](mailto:kcwanner@nd.gov)

# DIRECTOR'S Chair



## State Blue Book Features Aviation in North Dakota

Recently, the North Dakota Secretary of State's office released the 33<sup>rd</sup> edition of the *North Dakota Blue Book*.



This is a publication that is released once every two years and contains current and historical information about the state that is not readily found in other publications. These items include but are not limited to: state statistical data, information about the state's symbols and awards, elected officials, agencies, judiciary, legislative branch, federal-state relationships, education, elections, agriculture,

natural resources, and energy development.

The exciting news about the *2019-2021 North Dakota Blue Book* is that this is the first edition that features "Aviation in North Dakota". Over the last year, our office has worked with various aviation organizations and individuals throughout the state to help provide information for the book. The feature chapter begins with information about the first flight in North Dakota and continues through today's growing aerospace and Unmanned Aircraft Systems (UAS) industry. At the beginning of each of the book's chapters are photos that reflect the state's diverse aviation activity. Our state has an incredibly rich history of aviation and this edition of the *Blue Book* does a great job of presenting a picture of our state's aviation story while highlighting some of the people who have paved the way for aviation to be where it is today.

This spring, we also look forward to inducting another individual into North Dakota's Aviation Hall of Fame, which pays tribute to those aviators that have made significant contributions to aviation in North Dakota. If you would like to learn more about our state's Aviation Hall of Fame inductees, I encourage you to visit the physical location that honors these individuals which is located on the first floor of the Bismarck



Airport Commercial Terminal. Information on the inductees can also be found in physical kiosks that are located at the North Dakota Heritage Center, as well as our two aviation museums in Fargo and Minot.

Additionally, there are also video productions of the last 12 inductees that are available for viewing from the Aviation Hall of Fame section of the North Dakota Aeronautics Commission website. The North Dakota Aviation Council has recently decided to team up with the University of North Dakota Aerospace Network to work and develop additional video features for past hall of fame inductees. I am excited to see these ongoing efforts being made to preserve aviation history in North Dakota!

\*\*\*\*\*

Twenty editions of *The North Dakota Blue Book* are now digitally available to be viewed online, and each edition including the new 2019-2021 version – can be accessed directly from the website of the State Historical Society of North Dakota, [www.history.nd.gov/bluebook](http://www.history.nd.gov/bluebook)

A physical copy of *The North Dakota Blue Book* can also be purchased through the Museum Store at the North Dakota Heritage Center or ordered by calling the Museum Store at 701-328-2822.

# 2020 UPPER MIDWEST AVIATION SYMPOSIUM

March 1-3, 2020 | Grand Hotel | Minot

## A Grand Time in Aviation: Then, Now...



### UMAS Highlights:

#### Danny Clisham -

Known for fresh, lively, knowledge-based commentary, Danny Clisham is one of America's most popular air show announcers. Danny has announced thousands of air shows in his fifty years of announcing.



#### Carlene Mendieta

– Recreating Amelia Earhart's historic 1928 flight, Carlene will share the details of her 2001 flight. The 1927 Avro used for the flight will be on display at the Dakota Territory Air Museum and Carlene will be available to answer questions.



**ELECTIONS:** Join us at general Session on Tuesday for the Election of board members for the 2020-2021 year. Information about candidates will be available on the mobile app.

**Hall of Fame Banquet** and so much more. Find all the details in the App or on our website: [ndacaero.com](http://ndacaero.com)

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North Dakota Aeronautics Commission

701-328-9650  
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# Education Updates



As many of you already know, the labor shortage is here. The aviation industry is currently experiencing a shortage of pilots, mechanics, air traffic controllers, cabin crew, and engineers; it

seems as though every aviation career field is hiring. With the prediction that the worst is yet to come, now is a time, more than ever, to share these career opportunities with our youth.

Here are just a few of the endeavors the North Dakota Aviation Council (NDAC) is working on to promote aviation careers to our youth:

- For the **Upper Midwest Aviation Symposium (UMAS)** in Minot this March, it is important to note that the NDAC provides all students with FREE admission. High school and college students are eligible for free admission to UMAS, funded through a grant from the North Dakota Aeronautics Commission. This is a great opportunity to learn more about the industry and network with North Dakota pilots, mechanics, airport managers, UAS operators and more. If you know of a student who may be interested, please share this opportunity with them and encourage them to attend.
- We are working on an **Aviation Career Expo** for Fall 2020. This annual event, for high school and college students interested in aviation careers, will provide the opportunity to hear from excellent speakers and network with industry representatives from North Dakota and beyond. We hope to be able to provide scholarships to many of these students, which will be awarded at the Expo. We are currently in the planning process for this event and are looking for exhibitors, speakers, and scholarship contributors.
- Through the FAA Reauthorization Act passed last year, along with appropriation of funds in December 2019, the federal government will be granting funds for both **aviation technician programs** and **pilot education programs** for high school students. The NDAC is currently working hard to gather information and put together a viable application to enhance aviation education in North Dakota.

In addition to the initiatives mentioned here, we have many great educational activities happening regularly throughout the state. The University of North Dakota will be hosting a FREE Aerospace Community Day on February 8, 2020. Our aviation museums offer FREE youth camps regularly throughout the year. Aviation Education Programs are available at every high school throughout the state, either face-to-face or via distance education. The Grand Forks Air Force Base will be hosting an Air and Space Expo on August 1-2, featuring the U.S.A.F. Thunderbird Air Demonstration Squadron. And as always, there are many fly-ins throughout the spring, summer, and fall at airports near you.

I encourage every one of you to share your passion for the aviation industry, especially by bringing a young person - or a group of young people - to one or more of these events. There is so much happening in our state for aviation education, it is too much to share in just one article. If you have ideas, questions, or are interested in becoming more involved in the planning of NDAC sponsored programs, please reach out to Darren Hall or myself, Mike McHugh.

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# yoU Matter – Attend the Symposium!

By The Staiger Consulting Group

Why do people attend conferences? While there are no definitive answers to this question, you might be surprised to learn the number one reason people attend conferences is to network with others. We have monitored this over time, following the social and educational benefits which conferences bring to attendees, speakers, and sponsors. Of course, participant agendas can be completely different in this respect and no two events are the same, since all of the key dynamics change from year to year, but there are consistent elements.



about the work you do, and provide you with new perspectives about your work, as people may ask questions that make you think about your project differently. At a conference, you have the opportunity to receive feedback on your work from people who have never seen it and may provide new insights.

## **Here are the main reasons people attend conferences:**

### **1. To network with others**

A big reason for going to conferences is to meet with likeminded people and industry peers. Conferences bring together people from many different areas who share a common discipline or field, and they are a great way to meet new people in your field. At a conference, you will be able to get together with people from a wide range of backgrounds, people you may not encounter through your workplace. As you build your professional network, conferences can become a good place for meeting other individuals in your field that you haven't connected with in a while.

### **2. To expand your knowledge and find solutions to problems**

You will hear about things in your field that will be new to you. These could be new techniques, new types of equipment, emerging data, or new information from aviation thought-leaders. You will get insight into the research of some of the biggest names in your field, in addition to some of the newest faces. Conferences give you the opportunity to talk to these people one-on-one about what they are working on, and they may even give you advice on how to enhance your own work. You have the opportunity to ask presenters questions about their work and the rationale behind it, which you can't do when reading articles.

### **3. To present your ideas and work to others**

This is one of the more obvious reasons for attending conferences: to talk about your work. It's good practice to visit about what you do with a variety of people from similar or completely different fields. You might even consider presenting a more formal program. It will make you more confident

### **4. For people to meet you**

It may not seem like an important thing, but conferences are also a good way for people to meet you. Regardless if you are the CEO of a larger company, a second year grad student, or presenting for the first time, you may meet someone at lunch or in the exhibit hall and you can make a connection that could dramatically impact your professional career or your business. This is especially important when you are looking for collaborators, jobs ideas, or even committee members. Conferences are a great way to get your name and your work out there as you begin to establish yourself in your field.

### **5. Learn beyond your field or interest**

This is a bonus benefit of attending conferences. You may learn things outside your field, and conference attendance may also have sessions for professional development. Chances are, when you go to a conference the attendees are united by a single broad topic like aviation, but other topics will apply to sub-fields of expertise which could help you.

And of course, there are added benefits to attending conferences such as simply getting out of the office for a few days, using the time to enjoy the city, or gaining continuing education credits.

So why attend conferences? We each have our own reasons for attending, but conferences can dramatically enhance both your professional and personal development, as well as provide you with tools and skills which cannot be taught in-house or online. The focused nature of learning at a conference allows you to get a deeper understanding of your topic of interest.

Register now and experience all the benefits of attending the Upper Midwest Aviation Symposium

(UMAS) this March in Minot, ND!

*(See page 7 for more details)*

**A Grand Time**  
in Aviation: Then, Now...

Staiger Consulting Group

Stacy Krumwiede, Bonnie Staiger, Mike Krumwiede

# So, You Got a Drone for *Christmas*

By Professor Robert Lunnie

It's the holiday season and you decided to take the plunge into drone ownership. There are many ways you may have obtained a new Unmanned Aircraft System (UAS) for Christmas. Maybe you scanned the internet for weeks, finding a great deal on the perfect drone and had it delivered to your doorstep. Perhaps you jumped into your grocery assault vehicle and waged battle against other shoppers at 5:00 a.m. on Black Friday. Or possibly you are just a big kid who asked your children to purchase a drone for the family! Regardless of how it transpired, you are now the proud owner of a shiny new and most likely expensive UAS. So now what? Here are a few things to consider before taking your new drone on its maiden flight:

## 1. Unpacking

Take your time unpacking your new UAS and do a function check on all the components as soon as possible. Remember, the "S" in UAS stands for systems; therefore, it is important to make sure all components are working properly, not just the aircraft itself. I learned this lesson a couple of years back, when I purchased my first commercial quality UAS. After diligently waiting for my new gear to arrive, I opened the box, carefully removed all of the components and started inspecting. Although the drone itself was in perfect working order, the controller would not take a charge and reluctantly had to be sent back to the manufacturer. Unfortunately, returning equipment for repair or replacement can take time, thus delaying your maiden flight by weeks.



## 2. Downloading the App and Reading the Manual

Depending on which UAS you purchased, chances are you're going to have to download, install, and update the manufacturer's software on your phone or tablet. Keep in mind, this can take a while and is a necessary evil before taking to the skies. While you're waiting for your app to download,

I suggest taking a few moments to read the owner's manual. Although it is not the most fun aspect of UAS ownership, this is a great way to learn about your new unmanned aircraft. When doing so, pay particular attention to any safety features installed on your UAS.

## 3. Use A Simulator

This is an often overlooked aspect of flying a new drone. Why not take a virtual spin in your new UAS before flying it on a chilly North Dakota afternoon? Even if you are a seasoned pilot, taking time to use a simulator has advantages. First, you can learn more about your drone in the comfort of your home or shop. It also aids in avoiding pilot error by learning the controls and buttons ahead of time. As we know, muscle memory is a very real thing in pilotage and this holds true for UAS as well.

Most reputable UAS manufacturers have training simulators available for their drone customers. If your new drone does not come with access to a simulator, a quick internet search will yield many free options. Understanding the idiosyncrasies of your UAS in the virtual world is much safer than doing it for real. If you don't believe me, grab a cup of coffee, get comfortable in your favorite chair, and search "drone fails" on YouTube. Be prepared to stay awhile!



#### 4. Know the Rules

Did you know that registering your new drone before its first flight might be mandatory? Currently, the Federal Aviation Administration (FAA) requires owners to register their drone if it weighs more than .55 lbs (250 grams) and less than 55 lbs (25kg). There are multiple categories of registration, depending on whether it is being used recreationally, commercially, or in an educational or public safety manner. Not sure which category to use? No worries, the FAA has a user identification tool that will help guide you through the process. Visit the FAA'S UAS website for more information on properly registering your new drone.

#### 5. Wide Open Spaces

Wide open spaces are something we have in abundance in North Dakota and one of the many reasons why UAS is taking off in our state. Just like your first solo or mastering steep turns in the practice area, utilizing our uncongested wide-open spaces is a great place to hone your flying skills.

#### 6. Fly Responsibly

Flying unmanned aircraft in a responsible manner is one of the most important aspects of UAS ownership. The news is littered with stories of irresponsible pilots

flying drones near manned aircraft, taking pictures of unsuspecting neighbors, and causing general havoc with schools and other municipal structures. Flying responsibly is not only a safety issue but a moral obligation as well. Following these few simple rules will keep you, your drone, and your neighbors safe and happy:

- Reasonable expectation of privacy. This is a very important phrase when dealing with UAS privacy issues. Never photograph or conduct surveillance in areas where there are reasonable expectations of privacy. If you are in an area where you wouldn't want to be photographed, chances are neither does anyone else.
- Keep your unmanned aircraft in visual line of sight at all times and never intentionally fly over groups of people. These are not only responsibility issues, they are also regulations.
- Avoid obstacles at all times and never fly near manned aircraft operations.
- Never drink and fly, period. "Eight hours from bottle to throttle" also applies to UAS!
- If you are unsure of where to fly your drone, there are numerous websites that can help you determine a great location. For example, Know Before You Fly is a campaign to educate pilots on the safe and responsible operation of UAS. They have a fantastic website that includes an interactive map to help you decide the best location to safely pilot your UAS.

Getting a new UAS for Christmas is an extremely exciting experience. However, the joy of unwrapping your new unmanned aircraft can be quickly overshadowed by downloading apps, registering aircraft, and knowing where you can safely and legally fly on a brisk North Dakota winter's day. But have no fear, take your time, follow a few simple steps and you'll be taking to the skies in no time. And don't forget to give your children a turn at the controls, if they were your excuse for buying the drone in the first place!



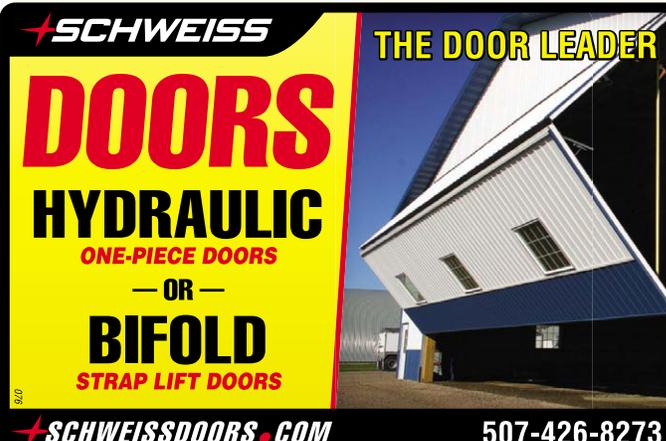
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# Pre-Flight Importance From a Mechanic's Perspective



*By Erik Peterson, Lead Maintenance Technician, Bismarck Aero Center*

From a mechanic's standpoint, I am always amazed – and somewhat scared – at how many people I see jump into their plane that's been sitting on the ramp, fire it up, and take off without so much as a simple check of fuel levels. I have been a certified A&P since 2004 and have worked in General Aviation (GA) in Bismarck since 2011. I earned my pilot's license at the University of North Dakota (UND) in 2002. Due to the fact that the UND aviation environment is much more by-the-book than the regular GA world, I was very surprised the first time I saw someone at an FBO just hop in their plane and go. At UND, as a scared student pilot, I wouldn't have dared to fly in a plane without pre-flighting it.

There are numerous NTSB reports that have lack of a pre-flight as either the cause or a contributing factor that led to an accident. Sometimes NTSB reports seem like they are distant from ourselves, that events like that would never happen to us. From my time as a mechanic in the GA world, I have witnessed many errors that should have been caught in a pre-flight check. Thankfully, it has never caused a problem but could have easily resulted in a catastrophic failure.

We all make mistakes – trust me, as a pilot and mechanic, I know – so I am not here to point blame. It does unnerve me to see some pilots seemingly comfortable with skipping over the simple task of conducting a pre-flight check. It's easy to read NTSB reports and think, "Well that wasn't very smart, I wouldn't let that happen to me!" However, it only takes one little mistake in aviation to cause a life threatening scenario. The following stories are events I have either witnessed firsthand or were shared with me.

When I was getting my pilot's license, I learned about the importance of sumping my fuel tanks in order to catch contaminants or water in the fuel. A slug of water or some

other foreign contaminants can cause your engine to stumble, lose power, or outright quit. In my small UND world, I never got to see firsthand what fuel in the strainer cup looked like, aside from pictures. After UND, my next flying outings were all in rental planes, so once again, I never saw what the water actually looked like.

It wasn't until a few years later when I had the opportunity to fly a non-rental, non-flight school plane that I finally saw the water. The plane was kept in a hangar, but at some point must have been parked outside in either snow or rain. I was very surprised to see the water in my sump cup and it took about four sumps to finally get it all out. It was such a feeling of relief knowing that I caught the problem before the problem caught me. It was at a small airport, and after my run up I wouldn't have had to wait for anyone, so it would have been relatively quick from start up to rotation.

Once I had passed the runway threshold, I looked down at the power lines and swampland off the end of the runway and thought about how bad it would have been to attempt to put it down in that terrain. So even if your plane is always hangared, sump your fuel! You never know if someone had to pull it out for 15 minutes to move something else out, and it was raining for those few minutes. Fuel cap gaskets don't last forever and dry rot on them is something I see quite frequently during annual inspections. It is a cheap and easy fix that should not be skipped.

Another thing I have seen happen more than once in North Dakota is snow plows hitting aircraft tied down on the ramp. In one case the plow hit it hard, but the plane was so small and light the plow driver didn't even know it had happened. Hopefully, the pilot conducted a pre-flight and noticed the missing wing tip and the tail tie-down ripped off. Don't rely

on others to tell you what has happened to your plane when you weren't around. I remember another time where the plow just clipped the very tip of the wing and took out the nav light. Although this wouldn't have resulted in an accident, it would be nice to catch it in time to avoid paying for the replacement parts yourself.

Although pilots do not always think of it, the most critical time to do a pre-flight is after maintenance has been performed, especially an annual inspection. I remember a story a few years back of a pilot thinking the maintenance on his plane had been finished and hopping in it for a flight. In this case the maintenance had not been completed, and the plane was actually waiting for a part to arrive. While it was waiting, the plane was put on the ramp. If the pilot would have looked at the intake of his engine he would have realized that the air filter housing was disassembled and just hanging there. The pilot in me says, "If the mechanic would have flagged the disassembled parts, the pilot wouldn't have missed it". Yes, of course the mechanic should have flagged it, but this doesn't alleviate the requirement for a pre-flight.

However, what if the mechanic did flag the part and our lovely North Dakota winds ripped it off? Sometimes it doesn't matter how obvious a mechanic can make it look to indicate that something is not together or not ready for flight, because it won't make a difference if no one looks.

As I mentioned before, mechanics are not perfect. Just like all humans, we make mistakes. During an annual inspection there are numerous items which are taken apart. There are

also so many variables that can affect the odds of maintenance being performed improperly or parts being put together incorrectly. For example, the majority of annuals require parts to be ordered, which usually take a few days to arrive. After a few days, it can be pretty easy to forget the minor details of a project. In some cases, the mechanic that began the job might now be on vacation, working on another project, or any number of things, resulting in a different mechanic completing the maintenance.

There are always best practices that can be used to prevent things from getting missed or forgotten, such as flagging items which have been taken apart, or documenting their steps for a clear turnover. However, as stated before, we are all human and we all make mistakes. All mechanics and pilots can do is try their best.

I share all this with you in hopes that you will take the time to do a pre-check next time you prepare for a flight. With a few extra minutes and a few simple steps, you can not be the pilot that took off and didn't realize the reason their airspeed didn't work is because their pilot tube cover was left on. Or the person that has an engine fire because they didn't notice the bird's nest on top of their cylinders. Or the pilot that has a prop strike from hitting their own tow bar. Or the pilot that has to test their power-off landing skills when their engine dies over the end of the runway on takeoff because they didn't sump the water from her tanks. Think about it: those few extra minutes could prevent a minor headache, or even save your aircraft – or your life.

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## Night Flying - Are You Ready?

By Tajae Vaene

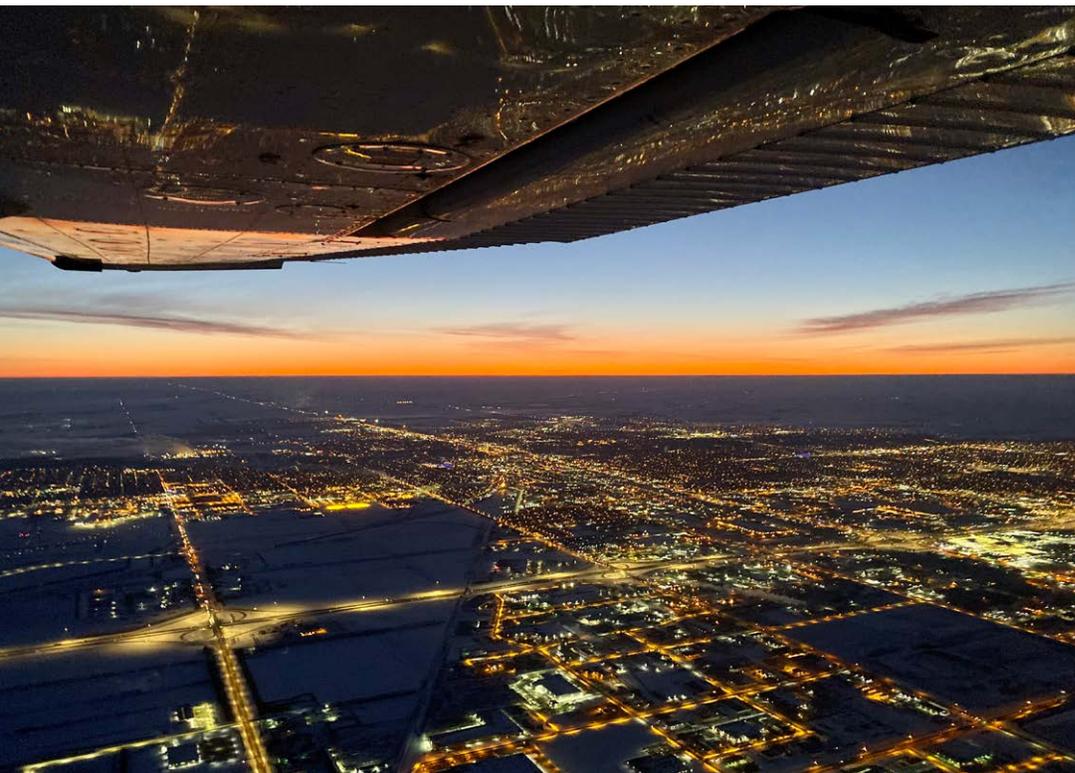
My pre-flight took over a half hour, checking over everything twice, while fidgeting with that silly, cheap flashlight in my freezing fingers. The ramp looked intimidating in the dark. The glare of taxi lights seeped through a background of snow, merging with concrete darkened by the night sky. On this first evening flight after earning my Private Pilot Certificate, I distinctly remember the first hint of apprehension as I looked across the ramp for my trusty yellow taxi markings hidden by streaks of ice and snow.

Looking back, I'm sure I blinded a line guy or two with my not-yet-minted lighting etiquette. Taxiing at night was much more daunting than usual, and I frequented slow scoots to

make sure I didn't accidentally pass important intersections or turns. During takeoff, I was on the edge of my seat watching as the whole city expanded and came alive.

Heading west, I recalled the few hours of night instruction I had received. The roads were best to follow instead of flying a straight line, and I had a keen eye watching my instruments and verifying any weather along my course. I was just beginning to feel like an experienced night aviator, when I looked off in the distance and saw a sea of red lights. "Whoa, what is that?" I wondered as the hair raised on the back of my neck. Just as soon as this crossed my mind, the entire sea again turned black. I frantically searched my navigation chart in order to figure out exactly where I was heading. Turns out, it was a stretch of land carpeted by windmills, all with synchronized blinking lights.

I was then able to sink into my seat with ease and reflect on the intensity of this first solo night flight. It was clear I had so much more to learn, especially when it came to night flying operations. With only a taste of night flying from private pilot training, it is up to the aviator to pursue more knowledge through instructors, courses, and night flying articles. I'd heard it said that night flying is an entirely different animal. Now before you depart for your night flight, I ask you to reflect: are you ready to tame this animal or is it best you seek out a little more guidance from those more experienced?



# International Cessna 195 Club Fly-In & Convention

Bob & Carol Simmers, Event Coordinators

North Dakota once again had the opportunity to showcase its hospitality and ever-changing landscape as it hosted the International Cessna 195 Club's Annual Fly-In and Convention. The club boasts of a worldwide membership in excess of 900 Cessna 195 enthusiasts, of which 75 members and 36 classic aircraft congregated in Bismarck in early September for their yearly get together.

The event kicked off on Sept. 4, 2019 with a fundraising barbecue in Bob and Carol Simmers' back yard. On Thursday, we had great weather for an air tour over the Bakken and the Badlands with a lunch stop at Watford City. We were greeted by Luke Taylor and members of the airport authority and employees, with lunch served by the Smiling Moose Rocky Mountain Deli. We continued south over the Little Missouri River and Medora on our way back to Bismarck. The day concluded with the Foundation Banquet at the Radisson Hotel, which included a warm welcome by the North Dakota Aeronautics Commission Director, Kyle Wanner,

and a presentation by Dr. Robert Roswick. Entertainment was provided by the Strolling Strings, an all-string ensemble made up of local area high school students.

Another day of great weather greeted us on Friday, as we ventured north to the Dakota Territory Air Museum at the





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Minot Airport. Lunch was served in the museum by JL Beers of Minot. Our route home took us over Prairie Rose, the largest dragline in North Dakota. A maintenance clinic was held after returning to Bismarck, primarily covering the 195's propeller. The evening was spent at Fort Abraham Lincoln with a themed meal, a tour of the Custer House, and a visit from one of General Custer's sergeants who entertained us and the kids.

On Saturday, the weather turned against us with rain and low ceilings. We had scheduled Young Eagle rides but we were unfortunately unable to fly. The ladies spent the morning at the Heritage Center and had lunch at the Apple Creek Country

Club. The men spent the day "Hangar Flying" with a taco bar sponsored by the North Dakota Aviation Council. The annual meeting and banquet were held Saturday evening at the Stonehome Brewing Company.

After breakfast at the annual Bismarck Fly-In and Drive-In pancake breakfast, hosted by Bismarck Aero Center and Puklich Chevrolet, the Cessna 195 Club departed for their respective homes. All members left with an urge to return and see more of what we have to offer in North Dakota. Special thanks to Jon Simmers and Shae Helling, who helped plan this event.



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# Flying Through North Dakota Aviation History

By Penny Rafferty Hamilton, Ph.D.

Before we needed airports, we had to have airplanes. North Dakota has always been an “early adapter” for anything aviation. On July 19, 1910, at the Grand Forks Air Meet, Wright Exhibition Team member Archibald Hoxsey astounded the crowd in his Wright Model B.

Orville Wright is quoted as saying about these early years, “Flight was generally looked upon as an impossibility, and scarcely anyone believed in it until he had actually seen it with his own eyes.” In those early years, aeroplanes were viewed more for their entertainment value than for commerce. The demand for seeing aeroplanes in flight was high, and fantastic sums were paid for even marginal demonstrations. Wilbur Wright reported to his company’s board of directors that between March and August 1910, the Wright exhibition team earned \$186,000 (equivalent to over \$5 million in 2019 dollars).

In the early 1900s, cars in North Dakota were restricted to town speed limits of five to eight miles an hour so flying must have seemed miraculous to many. On June 9, 1911, a Curtiss biplane named “Sweetheart,” piloted by Robert “Lucky Bob” St. Henry flew at the Fargo Fairgrounds before an audience of 12,000 spectators. According to Census Bureau documents in 1910, Fargo only had a population of 14,331!

July 12, 1911, was another big day for North Dakota aviation history when Thomas McGoey flew the very

first North Dakota-designed and built aircraft, called the Kenworthy-McGoey flying machine at Grand Forks.

In these early years, “shared use” of large areas at race tracks and fair grounds for “air exhibitions” were the norm. After the well-publicized air event, the large open space went back to its original purpose. Over time, as air commerce, especially the



Hatton native, Ben Eielson won the 1928 Harmon Trophy for his flight over the North Pole. Alaska’s Eielson Air Force Base honors this North Dakota and American aviation legend.

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U.S. Air Mail Service, expanded across the country, dedicated site-specific airport design was mandated to get this important service.

In July 1916, Bismarck hosted its first flight. Airports began to develop across North Dakota in the 1920s. Most began from humble beginnings, from cow pastures or donated acreages by early aviation and business boosters. For example, Fargo honors Martin Hector, who first leased and then donated the original 50 acres of land to the city.

In September of 1927, Hector allowed, without cost, the City of Fargo to use a 160-acre-tract north of the city known as Hector Field. On March 27, 1931, in a formal dedication, Hector presented Hector Field as a gift to the city. In later years, Margaret Hector, his daughter-in-law, would donate additional parcels to the city for airport expansion.

Did you know that the United States has over 20,000 public and private use airports? According to the Central Intelligence Agency, the U.S. has about one-third of all the world's airports and the most of any single country. North Dakota has 89 public use airports. Airports are so important to our communities, as they are often used to honor our aviation legends.

Casselton Robert Miller Regional Airport honors Vietnam combat pilot Bob Miller. While a commercial airline pilot, he played a key role in the airport's growth, as well as serving as a founding member of the Fargo Air Museum. He is in the North Dakota Hall of Fame.

Another important airport is Mercer County Regional



North Dakota Aeronautic Commission

Many North Dakota airports celebrate our notable aviators and aviation pioneers. Mercer County Regional Airport Al Joersz Field (KHZE) which recognizes Hazen native and decorated combat pilot, Major General Eldon (Al) Joersz.

Airport Al Joersz Field (KHZE) which recognizes Hazen native and decorated combat pilot, Major General Eldon (Al) Joersz. A former Vietnam-era Air Force pilot and Wing Commander, Joersz was chosen as a flight instructor for the SR-71, a long-range, high-altitude, strategic reconnaissance aircraft nicknamed "Blackbird" and "Habu." On July 28, 1976, Joersz jointly set the World Air Speed record flying over 2,193 miles per hour, making the North Dakota aviator one of the world's fastest pilots.

A very early North Dakota aviation pioneer is Carl Benjamin "Ben" Eielson, born in Hatton. One of our nation's premier

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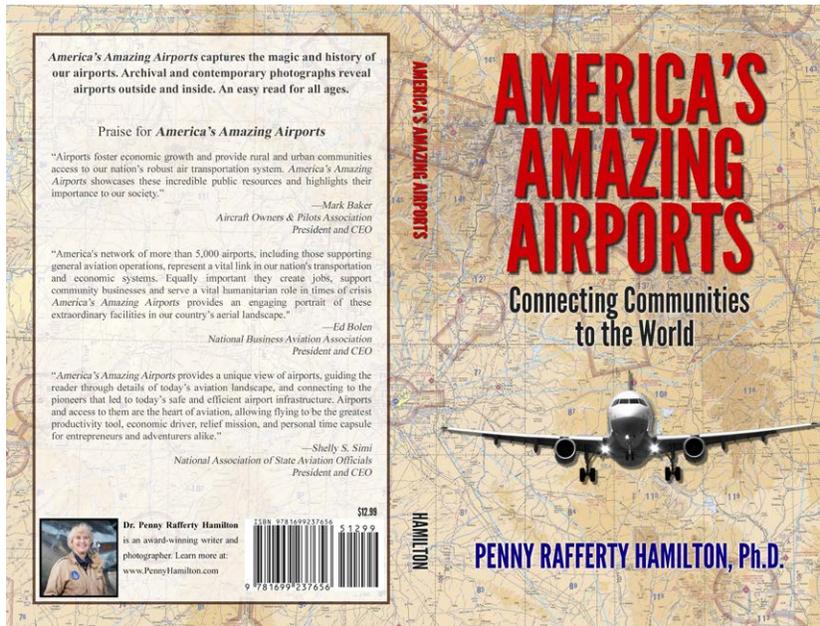
military airports, Alaska's Eielson Air Force Base, is named in his honor. Eielson was a legendary aviator, airmail pilot, and celebrated explorer. At age 20, Eielson began his aviation training in the World War I U.S. Army Air Service. By 1918, he was an early volunteer for the newly formed U.S. Army Signal Corps aviation section. At the end of the war, he returned to Hatton to work in the family business. He formed North Dakota's first flying club, Hatton Aero Club. In 1923, Ben became the sole pilot for the Farthest North Aviation Company, formed in Alaska. By 1924, Eielson was Alaska's first air mail pilot on the dangerous Fairbanks-to-McGrath route. He flew that air route in under three hours, when that distance

by dog sled took up to 30 days. In 1926, he even flew the first air mail route from Atlanta, Georgia to Jacksonville, Florida. In March 1927, with George Hubert Wilkins, the Australian polar explorer, Eielson explored the drift ice north of Alaska.

They touched down in Eielson's airplane as the first land-plane descent onto drift ice. In April 1928, Eielson and Wilkins became the first to fly across the Arctic Ocean from North America over the North Pole to Europe. Later, these adventurers became the first to fly over other polar regions when they were on an Antarctic expedition. In the Antarctic summer of 1928-29, they charted by air several islands previously unknown. These adventurous flights brought Eielson his lasting fame. He was decorated with

the Distinguished Flying Cross and won the 1928 Harmon Trophy for the greatest American aviation feat of the year. In the summer of 1929, Ben returned to Alaska as a local, national, and international hero. He then established Alaskan Airways for the Aviation Corporation of America. Sadly, in 1929, Eielson died in an airplane crash in Siberia attempting to rescue personnel from a cargo vessel trapped in the ice of North Cape. Even with all those worldwide adventures, Ben Eielson never forgot his North Dakota roots. He came full circle and was buried in Hatton.

North Dakota has a stellar cast of aviation pioneers and contemporary leaders whose vision and hard work created our amazing airport system.



*America's Amazing Airports written by aviator, Penny Rafferty Hamilton, is available in print and eBook at [www.Amazon.com](http://www.Amazon.com) ISBN: 978-1699237656 (A portion of the proceeds is donated to the Spirit of Flight Foundation [www.SpiritofFlight.com](http://www.SpiritofFlight.com))*



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# New Position, Same Mission: Flowers Promoted to National FAASTeam Aviation Inspector

One of North Dakota's own is now working out of the FAA's Washington offices, while remaining right here in Fargo, ND. Congratulations to Jay Flowers!

Jay has spent his whole life watching safety in aviation in our state and as he says, he is "never going to stop." Now working nationally in policy and procedure, Jay remains dedicated to aviation in North Dakota. "As an Airman, CFI, Charter Pilot, Aviation Safety Inspector, FAASTeam Program Manager, and now National FAASTeam Aviation Safety Inspector, I find myself looking out for the state even more than before." The National FAASTeam is highly dedicated to maintaining and providing the safest aviation system in the world.



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# AAND Year in Review

By Matthew Remynse, President, Airport Association of North Dakota

I think it's important to reflect on the exciting year the Airport Association of North Dakota (AAND) had in 2019 while at the same time looking into 2020.

The 2019 legislative session has to be the highlight of 2019; together, AAND and the North Dakota Aeronautics Commission were able to secure \$20 million in funding for airport infrastructure projects through Operation Prairie Dog. This is a great success for airports and will no doubt help with our infrastructure needs moving forward. In addition to the \$20 million from Prairie Dog, an additional \$20 million was also secured for the runway projects in Dickinson and Watford City. In addition to the funding bill, AAND testified against a bill that would take away an airport's ability to use the quick-take method in an eminent domain proceeding and on a bill that would allow commercial airports to contract with Transportation Network Companies (TNC). The AAND, along with several other organizations, were successful in defeating the eminent domain bill, but unfortunately couldn't get the TNC bill passed.

During the session, AAND participated in Aviation Day at the Capitol. Led by the North Dakota Aviation Council, Aviation Day brought together several aviation organizations

from throughout the state. Together, we were able to promote the benefits of our industry to legislators, while also describing the needs of the industry. As in the past, AAND held its legislative social which allowed our airports managers to speak with legislators about the value of our airports and again, our needs. Overall, the session, Aviation Day, and the social were a great success!

2019 bought a new member to the AAND board; Rodney Schaaf from the Bowman Airport is representing District 5, which is the southwest and south central portions of the state. Rodney has stepped into this role effortlessly.

In 2019, AAND was able to sponsor a snow removal training class at the Grand Forks Airport. The sponsorship reduced the registration fee for North Dakota participants. The AAND also provided funds to the Gerald K. Olson Memorial Scholarship. Chris Zubke was selected for the 2019 scholarship and noted that the scholarship has given him confidence and will help him move forward with his airport management degree at the University of North Dakota.

This fall, many North Dakota airport managers traveled to Aberdeen, SD to participate in the FAA Fall Conference. The conference had a lot of good information related to updated FAA policies and procedures. I'm glad the conference is going again and was happy to see all the participation from North Dakota.

Moving forward to 2020, AAND and its members are looking forward to a fun and educational Upper Midwest Aviation Symposium. At that time, we'll be developing our goals for the 2021 session, electing our officers for the year, and identifying opportunities to help our membership and grow our industry.

As we start the new year, I hope 2020 is just as exciting and educational for aviation in North Dakota as the past year. I look forward to seeing everyone at the symposium! Remember, always check the NOTAMS.



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# POWDER RIVER MOA UPDATE

by Rodney Schaaf, Bowman Regional Airport

The 28th Bomb Wing of Ellsworth AFB held an outreach briefing on November 15, 2019, in Bowman, ND. The meeting was hosted by the Bowman County Airport Board to update residents of the four local counties with upcoming LOW level military operations, as Powder River 3 Training Area directly impacts Baker, MT and Bowman, ND airports. George Stone, the Ellsworth AFB Airspace Liaison Representative, and Rodney Schaaf, representing the BWW Airport Board, presented the briefing, updates, mission profiles, and local concerns about LOW Level operations (500 feet AGL).

The LOW Level operations are scheduled to start in late spring of 2020. One communication tower in southeast Montana, as well as another proposed communication tower

in northwest South Dakota, will complete the recall system. A 60 to 90 day test will then be conducted to ensure military aircraft can be recalled by Air Traffic Controllers (SLC) to allow IFR or emergency civil aircraft to arrive or depart Baker and Bowman airports. Powder River 3 MOA is still restricted to a HIGH MOA (12000 feet MSL to FL 180) until the recall system is tested. Rodney Schaaf explained the HIGH MOA has had little impact on local airport operations. VFR aircraft generally operate below 12000 feet MSL, while IFR aircraft might have to descend early or delay climb until clear of the area or enter Gap 3.

Each year, AOPA hosts a council meeting to make recommendations to further improve the MOA system.

## Position Open



The North Dakota Pilots Association has an opening for secretary on its executive board - limited responsibility with good mentorship provided.



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Story and Photos by Connor Murphy/UND Today



Yoon said he looks forward to increased enrollment of Korean students at UND Aerospace and recruiting more well-trained and professionally prepared pilots for Korean Air, a company whose slogan is 'Excellence in Flight.' Photo by Connor Murphy/UND Today.

Korean Air signs partnership agreement to open career path for UND student pilots

During a joint signing on Monday morning, Byung Il Yoon, vice president of Korean Air's Flight Crew Training Center (left) and Paul Lindseth, dean of the John D. Odegard School of Aerospace Sciences (right) codified a new Pathway program for UND's commercial aviation students. Photo by Connor Murphy/UND Today.

UND now is creating partnerships across the aviation industry worldwide, an announcement on Monday confirmed.

For the first time, the University's aviation program will have a career pathway established with an internationally based airline.

Representatives of Korean Air were at the John D. Odegard School of Aerospace Sciences to sign an agreement, making official a program connecting an increasing number of South

Korean aviation students at UND to careers in their home country.

"I would like to express my sincere appreciation for UND's support to our Korean students,"

said Byung Il Yoon, vice president of Korean Air's Flight Crew Training Center, who signed the agreement with Paul Lindseth, dean of the Odegard School. "This Pathway program will be a good chance for Korean Air to recruit well-trained pilots.

"So many Korean students want to become pilots, and I'm sure more will apply to UND in the future."

Lindseth also spoke following the signing, making note of the 'first' for the nation's leading aviation school.

"It's a distinct pleasure to have this first signing with an international air carrier at the Odegard School," Lindseth said. "This is a significant event and it shows, once again, the importance of what we do here at UND and in our aviation programs."

## **International recognition**

This partnership came amid an influx of Korean students pursuing commercial aviation degrees at UND. Chester Fritz Distinguished Professor Kent Lovelace, director of industry relations, said Korean Air has been aware of the movement for the past four or five years.

The current number of enrolled Korean students at UND is close to 80.

A dozen or so students came to the signing ceremony hosted in Robin Hall, and stayed afterward for a meeting with Korean Air representatives.

Asked how the Pathway opportunity came about, Lindseth cited name recognition and UND's growing presence in Asian aviation markets. For instance, Air China and All Nippon

Airways, in China and Japan, respectively, contract with the UND Aerospace Foundation for training.

And, as UND Today has reported, Korea Aerospace University hosts an ongoing summer exchange with UND. Aviation professors have gone across the globe to teach courses at South Korea's largest flight school, and UND students have had the chance to take those courses and have them count toward their degrees.

"There is a demand for high-quality training worldwide," Lindseth said. "Our reputation is out there, and that's why they seek us out. Also, [Korean] students have had a good experience here. Word has been able to spread about the quality at UND."

Yoon said that while Korean Air's policy is to interview all of its applicants, the company trusts that pilots trained by UND are going to be well-versed in the basics and proficient professionals.

"Airmanship and professionalism – those are the key points for a pilot," Yoon said.



Min Jung Oh, alongside Yoon, spoke to a group of Korean students following the signing event. He said South Korea's airline industry has grown significantly in the past 10 years, which has led to more students coming to the United States for training. UND now enrolls close to 80 Korean students in aviation. Photo

## Response to changing industry

Korean Air's Pathway program requires that students in the commercial aviation program get their commercial license, go through an interview process and be hired as a certified flight instructor at UND. According to the memorandum of understanding, students need to work three semesters at UND as instructors. The total flight time ends up being around 1,000 hours, which is a minimum for Korean Air.

"We would like pilots to have more than that, but it's up to them beyond 1,000," said Min Jung Oh, a Boeing 787 captain for Korean Air. "They come to us when they think they are ready. We'll always be in contact with them when there are openings."

Essentially, if the students want to pursue graduate degrees or higher levels of training, it's their choice. The Pathway has also been established with Embry-Riddle Aeronautical University, where Oh trained and earned his degree. He's been flying with Korean Air for 20 years.

The experienced captain said that until around 10 years ago, South Korea had only a couple of airlines. Then localities started to establish their own lines, one after another. With the aviation business growing so fast, students eager to train as pilots wondered where to go for training. Oh said with the new partnership established, UND has a good chance to increase its reputation among Korean aviators and draw increased enrollment.

"The quality of an airline comes from people – it's a service," Oh said. "So we want to find better pilots. We want pilots with good backgrounds and good training, and we find that at universities such as UND."

He continued by saying Korean Air has been steady in its numbers, but with a forecasted growth in the number of aircraft over the next five years, and with retirements looming, the company wants quality pilots ready to fill positions.

"You can tell this is a big school that has seen a lot of investment," said Oh of UND. "What we're looking for is growth and change. When things stay the same, you're going backward."

Universities have to adapt to the current business, and that's what I see at UND. You guys are working on the future, and I'm impressed."



Growing up on a cattle farm east of Ashley, North Dakota, Jen Boehm dreamed of traveling, and travel meant airports. Six years of working on civil engineering projects at Denver International gave her access to one of the world's largest. These days, Jen's wanderlust has her leaving footprints at campgrounds all over her home state while bringing her years of airport engineering experience to projects at Hector International, Bismarck and many other North Dakota airports.

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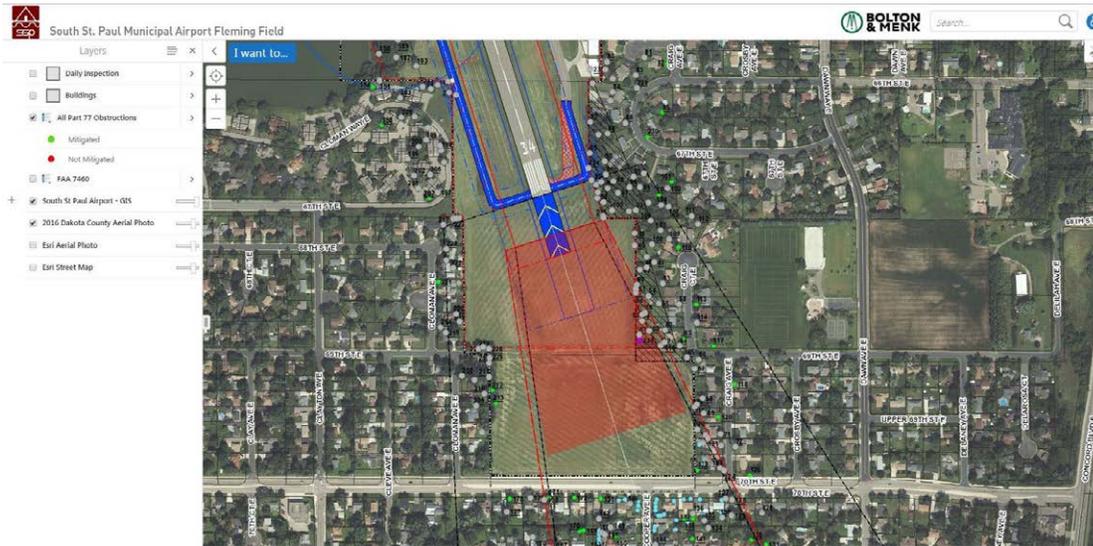
# Innovative Tools in Airport Planning

By Jared Wingo and Chris Gardner

Incorporating the latest technology in developing an airport layout plan can provide crucial information to decision-makers in a visual and interactive manner. Our aviation services group uses innovative tools to think outside the box during

attributes on the ground, safety critical areas, and three-dimensional 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.



the airport planning process and beyond. We create successful outcomes for you by integrating unmanned aircraft systems (UAS) and geographic information systems (GIS) technology into our airport projects.

## UAS IMPLEMENTATION

Bolton & Menk's innovation in airport planning is based on using small UAS aircraft to capture high-quality aerial imagery during planning, design and construction. This imagery can be used to provide basemaps for ALPs and interactive GIS interfaces, completing airspace reviews, estimating pavement maintenance projects, and providing post-construction airport imagery. Using our fleet of UAS aircraft, our licensed 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.

## GIS INTEGRATION

Using GIS software, our staff provides airport sponsors 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 ability to compare airport alternatives and visualize safety critical surfaces and setbacks. Decision-makers will have a better understanding of the relationship between physical

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# Talking Trail Lead Writer

## Fargo Air Museum Talking Trail

By Micaela Gerhardt

Traveling in inclement weather is a familiar feat for North Dakotans, but flying in an open-air cockpit amid heavy snowfall and freezing temperatures is a different story—one that visitors at the Fargo Air Museum are invited to hear.

The Fargo Air Museum has partnered with Talking Trail, a mobile app tourism company based in Bismarck, North Dakota, to premiere a new audio attraction that features the remarkable stories of over thirty different pilots and aircrafts on exhibit. Now, visitors can listen to the tale of General Darrol Schroeder's treacherous, 1500 mile mid-winter flight while admiring the yellow-winged Fairchild PT-19 he piloted during it.

Shawn Brannan, director at Talking Trail, said, "We feel fortunate and lucky to have the opportunity to partner up with Jackie Williams, the Fargo Air Museum director, and all the incredible staff and volunteers, to share the rich history of these aircrafts, pilots and veterans."

Aviation experts and amateurs alike can learn about museum founder Bob Odegaard's stint as a pilot in a feature length film and how skydiving led his fellow founder, Gerry Beck, to a career in aviation. The Talking Trail audio recordings also highlight stories about North Dakota's Fighter Aces, fighter pilots with five or more confirmed kills or victories

distinguished for their determination, skill, and sharp eyes — able to spot enemies as even the smallest specks in the sky. Additionally, the audio recordings include interactive trivia,

tributes to fallen pilots and military heroes, and vivid descriptions of adventurous flights and significant restoration projects.

Brannan's favorite recording tells the story of the Minuteman Missile. "It has fun music and a cool story that dates back to the Cold War," Brannan said. "It's a rich history that I didn't know about, and that's what I like about Talking Trail and what we're doing. We're trying to share these rich nuggets of information people didn't know they wanted to learn, but once they do it's awesome."

In its mission to promote aviation through education, preservation,

and restoration, the Fargo Air Museum hosts the Fargo AirSho, a monthly Veterans Coffee Hour, and tours for local students, among other events, and now visitors have the unique opportunity to re-discover the wide-open North Dakota skies through exciting new stories.

Jackie Williams, director at the Fargo Air Museum said, "We love the new level of engagement the Talking Trail has brought to our museum! Repeat visitors have expressed how much they appreciate learning more about the exhibits they thought they knew, and once the new visitors download the app or call in, their faces light up with enjoyment. Plus, now they stay at the museum even longer, which is great."

The Fargo Air Museum is open Tuesday-Saturday from 10 a.m. - 5 p.m. and Sunday from 10 a.m. - 1 p.m. Visitors can download the Talking Trail app for free.

Adventurers can continue to explore with Talking Trail at sites all over North Dakota, by visiting places like the Fort Lincoln State Park, the Dakota Air Territory Museum, the North Dakota Sports Hall of Fame, and the Old Red Old Ten Scenic Byway, amongst other notable historic and cultural sites throughout the state.

Check out its website at [www.talkingtrail.com](http://www.talkingtrail.com) to learn more.



# Master Pilot Award

By Jerome Behm

*I cannot remember a time in my life when the sky did not beckon me. Neither can I remember a time when I was not mesmerized by the science of pinwheels, wind mills, fans, weather vanes, windsocks, and propellers. Just the sight of any of these things has always held my interest and imagination captive. Airplanes held even more fascination for me growing up, as I would eagerly watch them until they disappeared from my view.*

I distinctly remember at about three years old, I asked my dad why birds did this - and then I stretched out my arms to imitate their effortless gliding through the air. I imagine my dad was quite tired of my endless questions and he simply answered, "Because they see airplanes doing that." At the time I was completely satisfied by that answer, while looking back it today it makes me chuckle.

As a child, I promised myself I would someday be a pilot. I didn't know how I would accomplish this goal, but I knew I would do it. I was never a stranger to hard work and determination, and have always lived my life on challenges. My dad used to say that "necessity is the mother of invention," and in this case it applied to my dreams of aviation too.

I did not tell anyone about my lofty dreams and goals, as I did not want to hear anyone say that I couldn't do it or that I wasn't smart enough. This dream remained a very guarded secret I kept hidden for many, many years. I never even told my parents about it, but I am sure they knew aviation fascinated me.

While studying the Diesel Maintenance program at the North Dakota State College of Science (NDSCS) after high school, I wandered down to the Wahpeton Airport one day. There I found two men in the wood quonset, where one was spraying lacquer on the wings of a Piper J-3 Cub as the other fellow watched. The man spraying lacquer was Edwin Littke of Littke Aircraft Service, a man of few words. The other man was Ralph Moes, the self-designated airport manager who happily answered all of my many questions. I told these fellows that I would like to get a job working at the airport.

Edwin Littke finally spoke and said to me, "Well, I don't think this is a very good deal. First of all, I can see that you are young and you probably don't have any experience with aircraft maintenance. You should have a mentor to work with in that case. Secondly, I am a teacher at the NDSCS and I wouldn't be here during the week to be able to work with you. It just doesn't look like a good deal to me". I had everything to gain and absolutely nothing to lose, so I quickly responded, "Well, this looks like a very good deal to me. I am a NDSCS student and wouldn't be able to be here during school hours everyday, but I would be able to work after school and on weekends. Besides, I am willing to work for nothing in order

*"How far back does your dream to fly go?"*



to learn a little bit about flying!" Ed Littke stopped spraying lacquer immediately, looked me straight in the eye, and said, "I can always use some help like that!" Without hesitation, I picked up a broom and started sweeping his shop.

Today, when people ask me how I started flying I always tell them it was with a broom in my hands. I worked approximately 40 hours per week as a student, but it was a glorious time in my life and I was always in seventh heaven while working in that airport maintenance shop. It was while working for Edwin Littke that the late Gerald Beck of Tri-State Aviation at Wahpeton also received the modest start of his aviation career. Gerry and I were the best of friends and had great respect for one another.

I worked for Ed both years I was in school in Wahpeton, with my salary being only what I learned on the job. All of the businessmen and local Wahpeton pilots at the airport knew me as the "kid who worked for Littke and who wanted to fly". The moral support in that atmosphere was immeasurable, and I received lots of rides and encouragement. Ed gave me dual flight time in John Wicklein's Super Cub, though he wasn't a flight instructor, and taught me so much about airplanes and flying.

On March 17, 1967, I made my first solo flight in a Piper J-3 Cub with Orvin Sanden from Wyndmere as my flight instructor. I slowly progressed, and with financial help from a couple of the local guys I was able to pay for a ground school course, held at the Fergus Falls Airport. I didn't have transportation of my own to make the bi-weekly trip to Fergus Falls, MN, so Bryce Smith of Smith Motors, Inc. and his wife Murl offered me the opportunity to ride with them in the evenings for the duration of the training course. Bryce had been a B-17 bomber pilot during World War II and his wife and son Buzzy were also taking the ground school course. He was a prominent car dealer in Wahpeton and owned a new Mooney Executive 21. In all of those trips to Fergus Falls, I never rode in anything less than a brand new Oldsmobile or Cadillac.

In my second year in Wahpeton, Ed bought a run-down 1946 Aeronca 7CCM Champ and we rebuilt it during the school year. By April, it was airworthy and I was building flight

time in the early mornings and in the evenings after school. By this time, Mel Wefel from Wefel Flying Service was back at the airport and was doing flight instruction and aerial spraying. Mel had two new Piper Cherokee 140's and helped me prepare for my private pilot check ride, which I received from Joe Devorak at Fergus Falls, MN, on April 5, 1969. I was 21 years old and made a deal that same day to buy a 1939 Piper J-3 Cub Sport. I owned an airplane before I ever owned a car, which is certainly not a statement that a lot of people can make.

The U.S. Army intervened and I sold the J-3 before entering active duty. Aviation was still my main interest and I was able to find Army training which qualified me as a crew chief and door gunner on the "Charlie" model Hueys. I had always wanted to be an army aviator, for which I needed to become a commissioned officer, so I applied for Officer Candidate School (OCS) and was accepted. I started with 39 prospective officer candidates in my class, of which there were only 13 of us remaining at graduation. I was 26 years old when I became a U.S. Army Second Lieutenant, and was proud that I'd proved to myself I had what it took to be a leader of men.

After my time as an Army Aviator, I returned to the farm in North Dakota and continued to add ratings and build my experience - from county weed control to even flying for a movie documentary! All of these flights have been very rewarding and have allowed me the opportunity to use my skills in General Aviation (GA) to support the needs of agriculture and the local community. I have always made it my strictest duty to promote aviation safety in all areas and to favorably promote GA in as many ways as I possibly can. Whenever I have the opportunity to take someone along as my passenger, I want them to have a very favorable and safe experience. My hope is he or she will want to fly again and will tell others what a fun and memorable experience it was.

My Piper PA-12-150, "Mom's Worry", is still in the hangar on the farm and I fly it as often as possible. It underwent an extensive rebuild in 2010 and 2011, and is like a new airplane now but with many more modifications and changes than it had when it rolled off Piper's assembly line in 1947. I often tell people that if I had lived my life without learning to fly, I would have lived my life in vain. It is always a joy to see the smiles on my passengers faces as they experience the exhilaration of flight.

As I look back on my 50 plus years of flying, I still think about being so reserved that I wouldn't tell anyone during my formal schooling years of my dream to fly. That peer pressure vanished shortly after high school and I realized that if I didn't accomplish my goals, I was the only one to be held accountable for the failure to do so. I came to understand that I was the only individual who could stand in my way. It was then that I assumed an assertive posture and attitude and used all of my talents and abilities to fulfill my dreams and goals. My involvement in aviation and learning to fly has been the most personally gratifying thing I have ever done with my life, and it has opened doors of opportunity and added joys that I never would have experienced otherwise.

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# CALENDAR *of* EVENTS

*Check out the online calendar  
for details on these events:*

## **February 2020**

UND Aerospace Community Day  
Feb 08  
Grand Forks UND Aerospace

## **March 2020**

UMAS 2020 — Mar 01-03  
Grand International, Minot, ND

## **June 2020**

Planes and Pancakes — Jun 07  
Y19 Mandan, ND

AOPA Regional Fly-In - Jun 19-20  
Casper, WY

Barnes County Municipal Airport fly-in —  
Jun 20, KBAC Valley City, ND

## **September 2020**

International Peace Gardens Fly-In —  
Sep 07 NDS28 - Dunseith

Hettinger Fly-in Breakfast — Sep 12  
KHEI Hettinger, ND

*Please send your event dates to [ndaero@nd.gov](mailto:ndaero@nd.gov).*

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