

NORTH DAKOTA AVIATION ASSOCIATION

FLY-ND

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QUARTERLY



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North Dakota Aviation Association

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CONFERENCE

March 5-7, 2023 • Bismarck Hotel

FLY-ND **QUARTERLY**

The official publication of the North Dakota Aviation Association

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FLY-ND Quarterly, P.O. Box 5020, Bismarck, ND 58502-5020

The Quarterly is published four times a year (winter, spring, summer and fall).

Advertising Inquiries: editor@fly-nd.com

Advertising deadline is the 1st of the preceding month.

Cover photo by Jeremy Skalicky – see page 20.



From the Editor

Welcome, new and returning readers, to the fall issue of

the Fly-ND Quarterly! As the days grow shorter and colder, I hope you will have plenty of time to read through the many articles within these pages. From award ceremonies to recent aviation event recaps to updates on UAS growth in our state, there's a wide variety of topics to choose from. And don't forget to mark your calendars for the annual **Fly-ND Conference from March 5-7, 2023**, in Bismarck, ND; we hope to see you there for an excellent few days of networking, inspirational speakers, and more!

Wishing you clear skies and unlimited visibility,
Nicolette

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Justin Weninger, Chairman
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CHAIRMAN'S COMMENTS

It's Time to Celebrate...

Hello again to all of our readers, I hope this issue of the *Quarterly* finds you doing well!

I am very proud to announce that the North Dakota Aviation Association (NDAA) was recognized by the National Business Aviation Association (NBAA) as this year's recipient of the Outstanding Excellence by a Local or Regional Group Award winner. This award was presented to the NDAA at the annual NBAA Convention held in Orlando, FL this past October. Our organization was recognized for its hard work in transforming the Association to its current structure, for the success we have had in implementing the career expos, and the great success of our scholarship program.

This really is an incredible honor to be given to our organization, and with it comes many thank yous. Thank you to all of our board members, past and present, who have helped in bringing all of these ideas to fruition. Thank you to all of the volunteers on our committees that we organize throughout each year. Thank you to all of our sponsors, donors, and exhibitors. And thank you to all of the people

that work hard behind the scenes to ensure the organization and all of its events go off without a hitch. THANK YOU! This award is for you and because of you! **Thank you for making the NDAA an Outstanding Excellence organization!**



NDAA members receiving the 2022 Outstanding Excellence by a Local or Regional Group Award at the NBAA Convention in Orlando, FL.



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Kyle Wanner, Director

North Dakota Aeronautics Commission
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DIRECTOR'S Chair



Aviation Hall of Fame Updates

I am excited to announce some major enhancements that have recently been made to the North Dakota Aviation Hall of Fame. Last spring, our office met with individuals from the Bismarck Air Museum Foundation and was informed that the group had made the decision to no longer pursue the establishment of a facility in Bismarck. They made the decision to donate the remainder of their funds to a project that would enhance aviation history, and the North Dakota Aviation Hall of Fame was the avenue that was chosen. I want to thank the Bismarck Air Museum Foundation for the donation and further commend them for their multi-year effort to preserve North Dakota's history.

After this meeting, the North Dakota Aeronautics Commission (NDAC) staff collaborated with the North Dakota Aviation Association (NDAA) to discuss options that could be considered for improvements to the Aviation Hall of Fame. It was decided that an investment would be made into new software, which would be able to house the information, pictures, and videos of our hall of fame inductees. This software was

developed and is now available to access from the Hall of Fame portion of the NDAA's website at www.fly-nd.com.

Additionally, a kiosk was purchased to house the software and further enhance the physical location of the North Dakota Aviation Hall of Fame, which is situated next to the ticket counter of the lower level at the Bismarck Airport Terminal. A new electrical hookup was provided from assistance from the Bismarck Airport and now the kiosk is a fully operational centerpiece of the room. Past visitors to the Hall of Fame have only been able to view and read the information included within each inductee's plaque. Now, this new interactive kiosk will enhance the experience by allowing people to further dive into the history of each Hall of Famer, where pictures and videos are available. We hope that in the future, similar kiosks can be installed at our North Dakota Aviation Museums and Commercial Service Airports

to help promote our state's proud aviation history and heritage.

In our efforts to continually improve the Aviation Hall of Fame experience, I also want to announce that if you have pictures or videos of hall of famers that were inducted prior to 2009, we could use your help. North Dakota's Aviation Hall of Fame was established in 1996 and currently honors 47 individuals. In 2012, we began an initiative to develop a video production for each Hall of Fame candidate and we are currently working behind the scenes with the University of North Dakota's Aerospace Network to develop additional video materials for past hall of fame inductees. We currently

have 17 videos that have been produced of the most recent hall of fame inductees. We are interested in gathering information on hall of famers that do not have current videos or pictures beyond the individual's headshot. If you happen to have media files of past Hall of Famers that you would be willing to provide to us, please reach out to the NDAC by giving us a call at 701-328-9650 or e-mailing us at ndaero@nd.gov.



The new kiosk that was installed at the physical location for the Aviation Hall of Fame at the Bismarck Airport Terminal

Additionally, we want to make known that opportunities also exist to create scholarship endowments to honor any of our hall of fame inductees, while also helping to assist the next generation of aviators. We would enjoy working with any interested individuals that would like to help find a way to continue to share and preserve the history and heritage of these amazing individuals.

Lastly, I invite you to spend some time to view the recent enhancements to the Hall of Fame, whether in person or online at www.fly-nd.com. It's important to set aside some time to learn more about the incredible aviators that have paved the way so that all of us are able to utilize, participate, and enjoy our current aviation system.

Wishing you smooth flying. Kyle

Do you know anyone that would be deserving of consideration for induction into the North Dakota Aviation Hall of Fame?

The North Dakota Aviation Hall of Fame was established in to honor those who have made major achievements in aviation within North Dakota. ND Aviation Hall of Fame inductees must have the following attributes:

- Major achievements in aviation in North Dakota
- Significant contributions to the development of others in aviation in North Dakota.
- Special service to the state of North Dakota in aviation activities.
- Activities that bring credit to North Dakota aviation, either nationally or internationally.
- Significant contributions to the local community or the state of North Dakota that are not related to aviation (i.e.; service clubs, church related, political activities, etc).

To nominate an individual, the nomination form is due to the North Dakota Aeronautics Commission office in the fall of each year. The form may be found on the Hall of Fame portion of the ND Aeronautics website at www.aero.nd.gov.

Please contact Kyle at the ND Aeronautics Commission if you have any questions regarding the process.

North Dakota Aviation



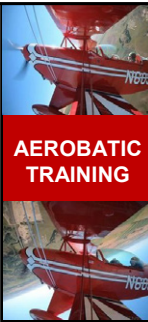
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NDAC Highlights from the NASAO Conference

In early September, 2022, the North Dakota Aeronautics Commission (NDAC) was in attendance at the National Association of State Aviation Officials Conference (NASAO) in Greenville, SC. This is an annual gathering of state and federal aviation officials, as well as representatives from all facets of aviation, to network and discuss current and future issues within aviation. There were 33 states in attendance and this year's theme of "Future Forward" covered a vast array of issues that impact aviation across the United States. North Dakota's aviation team participated on multiple panels and NDAC staff member Mike McHugh received two national awards for his work on a state and national level to enhance and promote aviation education initiatives. It was a great showing from North Dakota!



North Dakota provided a general session presentation and discussion on the implementation of the ND Statewide Beyond Visual Line of Site Network, VANTIS. Pictured from left to right: Frank Matus – Thales, Jim Cieplak – NPUAS Test Site, Kyle Wanner – ND Aeronautics, Trevor Wood – NPUAS Test Site.



ND Aeronautics Commissioner Kim Kenville (far left) participated on a panel discussion that discussed the future aviation workforce.



NDAC Staff member Mike McHugh received the NASAO "State Aviation Distinguished Service Award" for exceptional work throughout his career to develop and enhance aviation education opportunities throughout North Dakota and the United States. Pictured from left to right: Mike McHugh – ND Aeronautics Aviation Education Coordinator, Kyle Wanner – ND Aeronautics Commission Director



NDAC Staff member Mike McHugh received the NASAO "Chair Award" for his work throughout the past year to provide strategic direction to the NASAO Center for Aviation Research and Education. Pictured from left to right: Tony McCloskey – NASAO Chair and Director of Aeronautics in PA, Mike McHugh – ND Aeronautics Aviation Education Coordinator

*Congratulations, Mike!
Thank you for all you do for
aviation in North Dakota!*

North Dakota Aviation Association Scholarships

Non-Endowment Fund



Endowment Fund

A non-endowed scholarship fund that provide one-time scholarships for North Dakota students needs your help!

Our Goal was \$10,000 by the October Career Expo and we met that plus some. We were able to award over \$13,000 at the event last month.

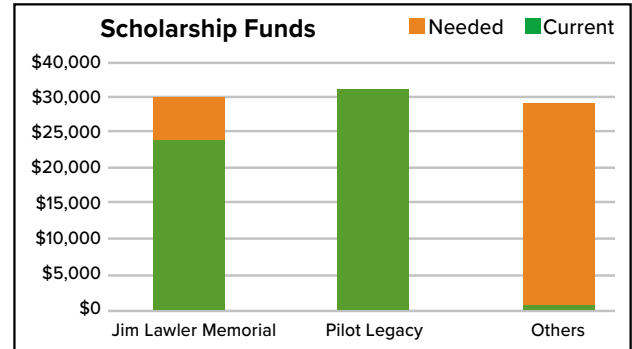
You can indicate what specific area you would like your gift to go towards:

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ENGINEERING, REIMAGINED

North Dakota Taking the Lead in UAS Flight

By Julie Theisen, Director of Business & Program Management, Northern Plains UAS Test Site

The history of North Dakota aviation is impressive. The future of North Dakota aviation is even brighter, thanks to its leadership in unmanned aircraft system (UAS) infrastructure and technology.

The Northern Plains UAS Test Site (NPUASTS), in partnership with Thales USA, a global technology leader and air traffic management provider, is in the process of creating Vantis, the statewide UAS system that will facilitate beyond-visual-line-of-sight (BVLOS) flights across North Dakota. The program can be expanded into other states and regions, allowing commercial and innovative opportunities.

James Cieplak, Vantis' Program Director, recently spoke to an economic group in Minot, ND, and shared how the system will work and what commercial possibilities will be available as Vantis takes flight.

The first point was how UAS is actually a misnomer, in terms of all of the people behind "unmanned" flying.

"It takes more men and women to fly an unmanned aircraft now, per FAA regulations and rules, than it does a manned aircraft," said Cieplak, who has spent a long career in implementing advanced aviation-systems technology.

As the UAS industry grows, more and more people will be employed in it, both with direct piloting on the ground, as well as support industries. Vantis will make UAS (or drone) flights possible for longer distances, as well as safely integrated with traditionally piloted aircraft.

Investing in the Future

Thales USA is the system integrator for Vantis, deploying communications and surveillance infrastructure across the state, which enables operators to pilot UAS remotely and detect other aircraft in the airspace.

When completed, Vantis will serve as a highway in the sky for UAS, opening up capabilities in a variety of industries including oil and gas or utility inspections, retail and medical deliveries, or agricultural enhancements.

The state of North Dakota has made a multi-million-dollar investment through its legislature because it sees the economic possibilities, including uses not even envisioned yet. The state built on its decade-long history of UAS research, development, and commercialization at the NPUASTS to start the system now known as Vantis.

"This is about commerce and economic development, not just putting up infrastructure," Cieplak said.

Scalable beyond North Dakota

Positioning North Dakota as the leader within the UAS industry is the goal, and the economic benefits of being first to market in this particular space. In testing and facilitating repeatable and economically viable UAS flights, Vantis is developing an economic model that is scalable beyond the state. As Vantis expands beyond North Dakota, it will be able to generate revenue from service fees that go to the state's general fund.

"We are looking at additional revenue sources from Vantis. One is the ability to put this aviation infrastructure not just here in North Dakota," Cieplak said. "All of that infrastructure can then be monitored from here, and we can actually have a fee for service for replicating this and putting it in other states."

Vantis utilizes North Dakota's fiber optic infrastructure to connect test sites in Williston and Watford City to its newly opened Mission and Network Operations Center (MNOC) in Grand Forks. The MNOC just celebrated its grand opening in June 2022 and will serve as the system's heart, as it expands across the state to Bismarck or Minot, and eventually beyond its borders.

The system has already had real-world applications, as its groundwork helped North Dakota assess and prioritize utility repairs this spring following a blizzard. By utilizing drones to inspect damage in remote and inaccessible areas, utility companies were able to restore power more quickly to residents.

In the future, what is learned and perfected with Vantis can be applied to other fields of autonomy, not just in the air. The system can be used to help public transportation, snow removal, or any number of ideas. Cieplak said the program is looking at how it could be applied to agriculture and roads, as well.

For now, every BVLOS flight stakes North Dakota's reputation as an aviation leader even further.



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FLY-ND An Inspirational Success: CAREER EXPO The 3rd Annual Fly-ND Career Expo

Over the last year, the North Dakota Aviation Association (NDAA) has accomplished quite a bit in expanding opportunities for youth in North Dakota. Most recently, this October, the association hosted the third annual Fly-ND Career Expo at the Fargo Air Museum in Fargo, ND. This event continues to build off of the success of last year's Career Expos, with more than 170 students attending this year's expo. We appreciate all of the exhibitors that shared their passion for the industry with all of these students and the sponsors that helped make the event happen.

Students were able to hear about the industry from Karen Ruth, an A330 captain for Delta Airlines, as well as a panel of students pursuing aviation in the collegiate environment. Students were exposed to careers in a cross section of the

industry including pilots, mechanics, air traffic control, military, game and fish, engineering, unmanned aerial systems, and many more. The event provided a great opportunity for the

aviation community to rally together, share experiences with high school students, and network among themselves. There was great energy during the event.

In addition to the learning opportunities during the event, students were awarded \$13,500 in scholarships. I am excited to see the scholarship opportunities for these students grow! These aviation scholarships help ease the financial burden for many students. I am constantly

amazed by the donations of individual and corporate donors, and am also very pleased to see a couple of scholarship funds have now become endowed and will fund an annual scholarship.



Career Expo 2022 was a great success!



Inspiring Presentations



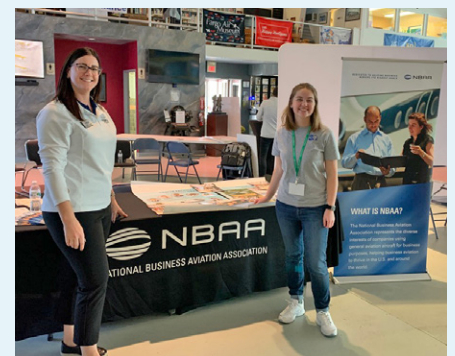
Exhibitors inspiring attendees.



Inspiring Presentations & Attendees



Scholarship Winners



Many connections were made.

The work of the NDAA, including the Career Expo and other events and fundraising throughout the year, led to the Association receiving the 2022 National Business Aviation Association's (NBAA) Excellence by a Local or Regional Group Award. I am pleased to see the accomplishments of the NDAA be recognized at the national level, and I hope to see enthusiasm continue for future events like the Career Expo.

The 54th Helicopter Squadron Visits Glenburn Public School

The 54th Helicopter Squadron landed a UH-1N "Huey" at Glenburn Public School in Glenburn, North Dakota to allow students to tour the aircraft Sept. 27, 2022.

The community event was brought to fruition from a simple conversation involving 1st Lt. Sarah Melton, a 54th HS pilot and a local girl in a café.

"One of the little girls I met in the café asked me 'Who are you, what do you do?' and I said, 'Well I fly helicopters up on base'," said Melton. "And she said, 'You fly helicopters!' and I said, 'Yeah do you want to see a picture?' and her eyes just lit up."



Melton took the conversation to heart and decided she wanted to give the opportunity to all the kids in the Glenburn community a chance to see the helicopter up close and meet with the air crew.

After months of coordinating with her squadron and the school, Melton was able to get all the required permissions to land a helicopter at the school's softball field.



Upon arriving at the school, the air crew was greeted by students ranging from kindergarten to seniors in high school.

"It was cool to see them make the connection, to get to see them climb in and look at all the buttons and move the control sticks," said Melton.

Being able to contribute to the community youth was



important to Melton, as she felt she could provide some inspiration for the kids who may one day want to join the armed forces.

"If they don't have any family members who work on base, they don't really have a connection to it," said Melton. "Especially, to see a lot of the little girls who had never thought about becoming pilots or military at all. It was cool to give them the option and opportunity to see they can do whatever they want."

Reprinted with permission from the 5th Bomb Wing Public Affairs

“Heater...ON”

“Defroster...ON”

Aviation Flashback: Staying Warm at Altitude

For those that have flown in this climate before, the time is now for those winter fronts and blankets we pulled out of storage a few months back. Winter fronts crack or may need some repair or replacement, engine blankets may need mending or even cleaning, and there is no time like the present to inspect your heating system for cracks or leaks from all the flying we did this last summer and fall.

With the source of heat most of us use, it's time to remind everyone of that silent killer: carbon monoxide. Carbon monoxide (CO) poisoning is a safety issue that pilots tend to ignore, even though it is the most common industrial poisoning accident in the United States. When carbon monoxide poisoning occurs, it can have significant and fatal consequences for aircraft occupants. The most common symptoms of carbon monoxide exposure are shown in Table 1. These symptoms are typical for an individual with normal hemoglobin at sea level. You can expect these symptoms to worsen at altitude and/or appear sooner than they otherwise would. Wide personal variations may also occur, depending on the circumstances and whether or not the individual smokes.

Protection from CO Exposure

First and foremost is pilot education and awareness. Pilots must understand the danger posed by carbon monoxide poisoning and should be alert to the symptoms. Any unusual cabin smell or sensation of illness should call for immediate troubleshooting:

- **Turn the cabin heat fully off.**
- Increase the rate of cabin fresh air ventilation to the maximum.
- Open windows if the flight profile and aircraft's operating manual permit such an action.
- If available (provided it does not represent a safety or fire hazard), consider using supplemental oxygen.
- **Land as promptly as possible.**
- Do not hesitate to let Air Traffic Control know of your concerns, and ask for vectors to the nearest airport.
- Once on the ground, seek medical attention.
- Before continuing the flight, have the aircraft inspected by a certified mechanic.

Table 1: Carbon Monoxide (CO) Blood Levels and Possible Symptoms

Percent CO in Blood	Typical Symptoms
<10	None
10-20	Slight headache
21-30	Headache, slight increase in respirations, drowsiness
31-40	Headache, impaired judgment, shortness of breath, increasing drowsiness, blurring of vision
41-50	Pounding headache, confusion, marked shortness of breath, marked drowsiness, increasing blurred vision
>51	Unconsciousness, eventual death if victim is not removed from source of CO

Safeguards

The best protection against carbon monoxide poisoning is to avoid exposure:

- Aircraft operators and pilots must ensure that heating/ventilation systems and exhaust manifolds in their aircraft are all in good working order, as specified by the manufacturer and the Federal Aviation Administration (FAA).
- Certified mechanics must conduct all required inspections.
- Special attention should be paid to older aircraft because of corrosion or simple wear and tear.
- A certified mechanic should verify firewall and aircraft structural integrity and seal any defects.
- Finally, several devices are available to monitor for carbon monoxide. The least expensive are handheld or stick-on colorimetric devices that change color in the presence of carbon monoxide. While effective, they are not perfect or foolproof and **do not last forever, with most only lasting for a few short months**. Powered detectors for aviation

use are available as either portable or panel-mounted units and provide greater reliability.

Don't become a statistic. Learn to prevent and avoid this deadly threat to your flying safety.

The above is an approved excerpt from MEDICAL FACTS FOR PILOTS Written by G.J. Salazar, M.D.

For more information on CO contamination detection and prevention, go to AC20-32B.

Training and proper maintenance all take time and dollars, the outcome of which is priceless in the world of safety.

Fly Safe! Jay M. Flowers,
Pilot/CFI and Safety Advocate
701-226-6283
jay.m.flowers@faa.gov



This article is reprinted from a previous edition of the Fly-ND Quarterly.

Thank You to Our Readers

NDAA Executive Director's Note

By The Staiger Consulting Group

Welcome back, everyone! What an exciting past couple of months it has been for the North Dakota Aviation Association (NDAA)! We were thrilled to host the second annual **Summerfest event in Williston** this past August. It was a day of clay shooting and golfing for aviation enthusiasts across the state, who came together to network and raise money for scholarships. An exciting evening followed, with a steak dinner hosted by Overland Aviation and the Williston Air Show performers, who showed off their aerobatic talents the next day at the airport. It was two days of awesome events led by a great group of volunteers.

October brought the third annual **Career Expo**, held at the Fargo Air Museum in Fargo, ND. This event consists of industry leaders, exhibitors, aircraft displays, guest speakers, and of course scholarships! The goal is to provide students with information and resources that will help them look beyond the horizon and develop a vision for their future. There were static displays of aircrafts from all aspects of the industry and numerous companies exhibiting at the event, who shared with students what their role is in aviation. In addition, we award over \$13,000 in scholarships to deserving aviation students. Again, this event was led by an amazing group of volunteers, and we were thrilled to have over 170 students, instructors, exhibitors, and supporters in attendance.

Finally, the NDAA was honored to be recognized by the National Business Aviation Association (NBAA) with the **Excellence Award by a Regional Group** for all the progress this organization has made over the past few years! Several members of the board attended the NBAA national conference in Orlando, FL, to receive this prestigious award.

We would also like to offer a huge thank you to all the hard-working volunteers and committed **NDAA board** members, who see all the possibilities of this industry in our great state. It also couldn't be done without the support

of every member, sponsor, exhibitor, and friend to our industry. Your continued support and participation are noticed and recognized. Preparations have already started for the **2023 Fly-ND Conference**, which will be held March 5-7 in Bismarck, ND. If you have any ideas for speakers or sessions, we encourage you to reach out and share your ideas with us. We are looking forward to another great conference and hope to see you there!

As the new year fast approaches, I love the last few months of the year almost as much as the first day of January! The last few months feel like the best time to end the year strong and feeling prepared for the best start of the new year. It is time to start ramping up for a great start to 2023. What a perfect time to get involved and give back! What might that look like for you? Well, there are so many options to get involved in the NDAA; I hope you consider how you can make a difference!

Stacy & Mike Krumwiede

NDAA Executive Director



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UAS Summit and Expo was held in Grand Forks, ND

The 16th Annual UAS Summit and Expo was held in Grand Forks, ND, this past October. There was an excellent turnout, with over 600 attendees, more than 60 speakers, and dozens of exhibitors.



The UAS Summit & Expo started as a small gathering of regional stakeholders. Now, 16 years later, the event in the Northern Plains of North Dakota has become a yearly major event for UAS experts from around the world. It's the original epicenter of drone research, earned its place as the Silicon Valley of Drones and as you'll see from the commercial, government and military flight activity filling the sky of the Northern Plains and beyond every day, it has truly become America's UAS proving grounds.




"Duck!" may make for a funny punchline, but bird strikes are no laughing matter!



Consider this your friendly reminder to keep an eye out for our feathered friends while you fly! Photos of a recent bird strike on a local commercial aircraft.





Do you have a family member or friend who is:

- An active duty or retired military member
- Works or worked in military aviation
- A North Dakota resident

We will be highlighting local service members in upcoming *Quarterly* issues!

Email editor@fly-nd.com for more information.



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Destination: Hillsboro Regional Airport (3H4)

Exploring North Dakota Airports

Looking for a new destination this fall? Plan a visit to Hillsboro Regional Airport, just four miles south of Hillsboro, ND! The North Dakota airport passport stamp can be found in the general aviation terminal.

Here are a few local attractions to explore:

Hillsboro Airport Flight Simulator

- Interested in getting some simulator time just for fun or to maintain your instrument currency? Hillsboro Airport is home to a new certified flight simulator. They have a free introductory flight, as well as basic and premier membership plans available.
- Visit www.flyhillsboro.org for more information and contact information.

The Clubhouse: Indoor Golf & Practice Facility

- The Clubhouse is an indoor golf simulator, practice facility and party rental space featuring a Full Swing golf simulator, putting green, TVs, theater chairs and kitchenette. The facility is located in the heart of downtown Hillsboro.
- 16 W Caledonia Ave Hillsboro, ND 58045
- Contact Ryan Opdahl at (218) 779-2658 to schedule a time, or visit their Facebook page for more information: www.facebook.com/profile.php?id=100057530225890.

If you work up an appetite while exploring Hillsboro, here are a few recommendations:

The Hillsboro Cafe – a community-centered gathering spot where the focus has been on great food and friendly service in a “Welcome Home!” atmosphere.

Hours: Tues-Fri, 7 am to 2 pm; Sat, 8 am to 2 pm

Address: 3 N Main St Hillsboro, ND 58045

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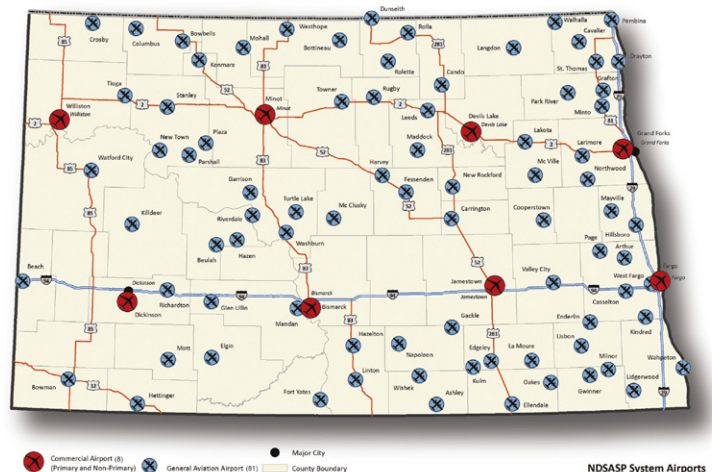
ATTENDANCE: MON-FRI 8am-5pm
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PUBLIC AIRPORTS IN NORTH DAKOTA

Museum Youth Education Updates for 2022/2023!

We are thrilled to announce our newest education programs at the Fargo Air Museum: The Lil Flyers Club and the EAA Young Eagles Build Night- Pietenpol Workshop!

The Fargo Air Museum (FAM) has officially launched our Lil Flyer Club, where our educators and volunteers take our education program on the road. We visit rural schools in the Fargo-Moorhead area to bring our STEAM and aviation curriculum to smaller schools, to expand the aviation passion and education in our great state.

Since our September launch, we have visited Kindred, Harwood, and Maple Valley Elementary schools with our aviation camps. serving over 125 fourth graders. We have had a very successful couple of months with amazing feedback from students, faculty and parents! We plan to continue building this amazing program and add additional schools throughout the year.

We have also partnered with the EAA Chapter 317 to offer specialized camps at the museum, where 10 to 17 year old students are building a full scale Pietenpol wooden aircraft! The kids have built jigs, assembled wing ribs, and are currently working on the tail assembly. Once the aircraft is complete, covering and all, we will have students sign the fuselage and hang it on display at the FAM for all to see!

The next series in the EAA Camps will focus on aluminum construction, as we continue to dive deep into the various aircraft construction methods. Stay tuned for



updates as we continue expanding our education program.

We truly believe aviation is such an amazing industry, where anyone can become a part of our passion for flight. We need doctors, maintenance, pilots, technology, engineering, business, and marketing, and so much more. Pretty much any degree can be a fit for the aviation industry. As you can see, education is a large part of what we do at the FAM. From our basic free camps to our highly interactive Intro to Aviation courses, there is always something going on at the Museum to continue sharing our love and passion for aviation.

I am very thankful for all our sponsors, donors, friends, staff, our Board of Directors and the community. And a special thanks to the North Dakota Aeronautics Commission (NDAC) for grant support, which allows us to continually expand our education programs!

We could not have a special place like the Fargo Air Museum without your support! So on behalf of myself and staff at the FAM, thank you and include a stop at the Museum this fall.

Ryan Thayer is the Executive Director/CEO of the Fargo Air Museum. He has been part of aviation since birth, received his solo license at 16, and his private pilot's license at 18 from UND as well as an Entrepreneurship Degree. He has always been passionate about aviation and business and is thrilled to be able to pursue both of his passions at the Fargo Air Museum.





Sparking the Next Phase of Aviation

By Jamie L. Leonheart, Capt, USAF, Director & Design Lead,
North Spark Defense Laboratory

*It
Started
With
Some
Sticky
Notes...*

It all started with a pile of sticky notes and a dream.

“Oh, those are my ideas to change things around here.” Master Sergeant Jesse Gentile explained. “I’ve been trying to get leadership to buy into them, but none seem to want to take the risk.”

“Let’s get them done, then.” Lieutenant Daniel Leonheart replied. With that, a friendship and North Spark began.

From Billy Mitchell, who fought to establish the asymmetric advantage of airpower within the U.S. Army, to Medal of Honor winner Jimmy Doolittle who pioneered instrument flight in World War II, the U.S. Air Force has been formed by rebels, rule breakers, and innovators—the kind of people who are not content to keep the status quo. It’s in the nature, the DNA, of every member of the Air and Space Forces, to always get better and never settle for good enough.

The Chief of Staff of the Air Force is the highest-ranking uniform-wearing member of the Air Force. This office is currently filled by General C.Q. Brown. Gen. Brown has four action orders: A, B, C, and D. Action order B is focused on eliminating bureaucracy. As a Spark Cell, North Spark joined a network of similarly minded Airmen at bases around the world to disrupt the bureaucracy to solve local problems at the local level with innovative solutions.

In short order, Jesse and Dan established a Maker Space with 3D printers, virtual reality (VR) modeling, whiteboards, and drawing and drafting materials. Soon after, their tenacity brought about the establishment of the Zero Ground eSports Center, which was designed to attract and retain talented Airmen and civilians, increase connectedness, and strengthen resiliency at Grand Forks Air Force Base (AFB).

North Spark quickly outgrew the framework of the Spark Cell, and in August 2021, the Air Force Research Laboratory granted Defense Innovation Laboratory status. Thus, North Spark Defense Laboratory was born. As the second Defense Innovation Laboratory in the Air Force, North Spark is authorized to enter into Cooperative Research and Development Agreements (CRADA) with commercial industry, and Educational Partnership Agreements (EPA) with academic institutions. With more responsibility comes the need for more space, and in April 2022, North Spark held a grand opening at its new laboratory that transformed the old base golf course clubhouse into a sleek, modern, collaborative workspace.

Gaining Momentum

The transition to a new space came with other transitions. Master Sergeant Gentile became Mr. Gentile, retiring after 22 years of honorable service. Lieutenant Leonheart, now Captain Leonheart, moved overseas, leaving direction of North Spark to a new team. The new team—Lieutenant James Dontis, Master Sergeants Nicole Pope, and Brent Harland—maintained the momentum, formalizing an agreement with the University of North Dakota (UND). Leveraging the experience and resources of UND's Center for Innovation, North Spark's pace accelerated dramatically. Classes, internships, partnerships with industry, and Small Business Innovation Research contracts have grown exponentially since the April 2022 Grand Opening.

As the North Spark team continues to grow, they continue to look for bigger challenges to tackle. Senior Airman Pieter VanSpronsen has helped Airmen 3D print parts for dorm windows and heritage aircraft displays. Space Force Captain Adam Bordeau, an Artificial Intelligence and Machine Learning engineer, has automated workflows and crafted disruptive digital solutions to save Airmen countless hours a day. Master Sergeant Brent Harland fights day and night to bring the newest technology to Airmen, and facilitates training to drive home a new culture of innovation in the Air Force.

Looking to the Skies

Captain Jamie Leonheart, wife of founder Dan Leonheart and the latest Director of North Spark, chose to aim even higher: "Once I started working at the lab, I quickly realized we were in a key position to work to establish Grand Forks AFB as the Autonomous UAS Center of Excellence for the Air Force." The Air Force has been flying a largely-autonomous system from Grand Forks AFB for almost 10 years: the RQ-4 Global Hawk. This is a system that is flown on a programmed path with a keyboard and mouse, not a joystick and throttle.

Furthermore, being collocated with Grand Sky – the world's only air park dedicated to Unmanned Aerial System (UAS) operations, provides North Spark and the Air Force Base with unprecedented connectivity to industry partners who are like-minded and implementing some of the most cutting-edge technologies in the world of UAS.

North Spark Lines of Effort

Autonomous UAS

Air Force pilots are the best of the best, but they are a finite resource. Operating safely in a congested air space is a heavy lift and moving some of that burden to AI to allow for increased applications of UAS is our highest priority.

Health & Safety

Only 23% of Americans between 17 and 24 meet the qualifications for military service. Keeping our Airmen Fit to Fight is imperative, and North Spark is committed to exploring initiatives to monitor, evaluate, and improve health as well as make the workplace environment safer.

Intelligence, Surveillance, & Reconnaissance

ISR is the lifeblood of the 319 Reconnaissance Wing, and North Spark seeks to bring the future faster by exploring new technology, particularly artificial intelligence and machine learning, that can transform data into information for decision makers.

Quality of Life

North Dakota can be a challenging place to live and work for those not native to the area. North Spark champions initiatives that improve Airmen's lives and helps lift their mood and fuel their motivation.

Training & Productivity

We cannot expect that the same training and same technology that we have used since the Cold War can help us win in the next conflict. North Spark is disrupting the normal flow of training and day-to-day productivity by delivering smart solutions that free Airmen from mundane data-entry tasks and allow them to brainstorm the next evolution in warfighting capability.

In addition, UND has a world-famous, top-tier aviation program and UAS program as well. The expertise that the faculty and students of UND bring to the UAS ecosystem here in Grand Forks is an invaluable asset to the community. The industrial base in Grand Forks is also full of companies focused on UAS and autonomy. There are so many companies based here, large and small, that are focused on this sector.

The Future is Autonomous

The future lies with autonomous systems, according to Senior Advisor to North Spark, Lt. Col. Mike Dunn: "The human is the slowest link in many of today's weapons systems. We cannot continue to rely on manned

systems and human-level speed. Autonomous intelligence, surveillance, reconnaissance, autonomous aerial refueling, and autonomous air mobility are well within reach. We must be able to sense, make sense, and act at machine speed."

From the entire North Spark team: "We at Grand Forks AFB are fortunate to be in Grand Forks, ND, the center of an established ecosystem for UAS and autonomous operations. Grand Forks AFB is fully committed to being a full partner with industry and academia, now and as we pivot into the future of what's next. We are ready to bring game-changing technology to American Airmen. Do not underestimate the power of the rebel, the rule-breaker, the innovator. SEMPER AD MELIORA!"



JIM CHRISTIANSON

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Garrison Dam Recreational Airpark Volunteer Event

On October 1, 2022, approximately 20 volunteers gathered at the Garrison Dam Recreational Airpark in Riverdale, ND, to give the airport a fresh look. The group was made up of North Dakota Aeronautics Commission staff, aviation enthusiasts, members from the Mandan EAA chapter, and the Recreational Aviation Foundation.

The project consisted of multiple improvements to the site:

- New cones were installed throughout the airport on the runway, apron, and segmented circle.
- Excessive tire tie-downs on the apron were removed.
- Multiple new information signs were installed.
- Excess trees and shrubs were removed from the perimeter to enhance safety and airport appeal.



Thank-you to all of the volunteers who helped make the event a success!



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Want to enjoy all the benefits of being a NDAA Allied Member too? Join today at www.fly-nd.com!

Help her achieve her dream . . .

Do you remember your first time in an airplane? Do you remember the thrill the first time you flew solo? Do you remember the people along the way that supported your dream to fly?

Help the students of today (and tomorrow) experience that same thrill by donating to one of the scholarship funds at FLY-ND.com.

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Harvey Fly-In & Terminal Dedication

On September 24, 2022, the Harvey Airport hosted their Pancake Breakfast Fly-in. At the event, the airport also held a dedication to rename the terminal building in honor of North Dakota Aviation Hall of Famer, Al Sauter.



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Allen Sauter Public Terminal

Al grew up in Harvey, learned to fly in Harvey, and started his career as a Certified Flight Instructor (CFI) in Harvey. Senator Hoeven and representatives from the North Dakota Aeronautics Commission (NDAC) were also present at the event to congratulate Al and the community on the terminal dedication.



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Exciting Happenings at the Dakota Territory Air Museum

Dakota Territory Air Museum's Scholarship Program

Since 2017, the Farstad Foundation and Jeff Farstad have donated \$150,000 toward the Dakota Territory Air Museum's (DTAM) scholarship program, to assist students in advancing their aviation careers. This past summer, the museum awarded 13 students' scholarships to assist in their aviation endeavors.

The Dakota Territory Air Museum's 26th Annual Sweepstakes

The annual sweepstakes is the DTAM's largest fundraiser. This year, we gave away a 1945 Piper J-3 Cub. This year's winner was Jeffrey Holowienko from Erie, PA. Over the course of the last 25 years, the annual sweepstakes has generated in-excess of \$2.5 million gross, with approximately \$750,000 in expenses. Revenue generated from our sweepstakes has come from all over the world, with the vast majority coming from the United States. For the 2023 27th Annual Sweepstakes, we are planning to give-away this beautiful 1941 Interstate Cadet. Tickets will go on-sale in March 2023.

Dakota Territory Air Museum Hosts Events

Over the course of the summer season, the DTAM has hosted several public events. In June, we held *The Forgotten War: Korea* in the Flying Legends Hangar. We welcomed twenty Korean War veterans from across North Dakota, as well as approximately 150 guests in attendance. The program for the afternoon commemorated American involvement in the Korean War with guest speaker Maj. (USMC Ret.) Trygve Hammer, and with assistance of the local chapters of the Veterans of Foreign Wars, Disabled American Veterans, and American Legion.

In July, the museum partnered with the Dakota Cruisers Car Club for this year's *Wings and Wheels* event. This year, we welcomed the International Cessna 180/185 Club for the event. The Cessna Club brought approximately 40 additional aircraft to the museum grounds and the Dakota Cruisers brought approximately 150 vintage cars, trucks, and motorcycles. We had approximately 1,000 guests enjoy the displays, food trucks, and axe-throwing!

In August, the museum held *Welcoming Home Our Vietnam Veterans* in the Flying Legends Hangar, where we welcomed approximately seventy-five Vietnam

Veterans from around North Dakota, as well as approximately 125 guests in attendance. The program for the afternoon commemorated American involvement in the Vietnam War and featured guest speaker Maj. (USMC Ret.) Trygve Hammer, the Minot Air Force Base Honor Guard, and assistance from the local chapters of the Veterans of Foreign Wars, Disabled American Veterans, and American Legion. At the end of the August event, we held our 26th Annual Sweepstakes Grand Prize Drawing where we gave away a 1945 Piper J-3 Cub.

In September, the museum celebrated the contributions of women in aviation with *Women, Wine, and Wings*. Documentary producer Nick Spark was the guest speaker for this year's event. His documentary, "Pancho Barnes and the Happy-Bottom Riding Club," was screened and he hosted a Q&A after the screening. Approximately 50 guests were in attendance for Women, Wine, and Wings.

The museum's final public event for 2022 was the Night at the Museum Hangar Dance and Silent Auction at the end of October. Music, dancing, food, drinks, re-enactments, and a silent auction were on the program for the evening. The proceeds from the silent auction benefit museum operations throughout the year.

Please visit our website for more information on future events: www.dakotaterritoryairmuseum.com.



Please join us in welcoming our newest Commissioner, Steve Blazek

Steve Blazek is a Senior Vice President of Business Banking at First International Bank & Trust in Fargo, ND. He has more than 38 years of experience in the banking industry and helps business customers find lending, deposit and treasury management solutions to help reach their financial goals.

Steve grew up in Fargo and earned both a bachelor's degree and master's degree in Business Administration from North Dakota State University. He is a past or current member of a number of community organizations, including the Municipal Airport Authority for the City of Fargo, Fargo

Planning Commission, Fargo Air Museum, Fargo AirSho, Fargo Post 2 Baseball Club, FM Kicks Band, El Zagal Shrine, ND American Legion State Band, Lake Agassiz Concert Band, FMWF Chamber of Commerce Military Affairs, and ND Governor's Task Force MIND.

Outside of work, Steve is interested in "all things" aviation. He is a private pilot and enjoys music, sports, community engagement, and development.



Do you have an interesting aviation story, event or photos to share?



Whether you've hosted a recent airport event, heard an inspiring aviation story, or have an exciting flying adventure to share...

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Submit your ideas or stories for consideration to: editor@fly-nd.com



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The advertisement for Mandana Aero Center. At the top is the logo, which is a black shield with a white border. Inside the shield is a white airplane flying over a landscape, with the word "MANDANA" in a banner above it and "AERO CENTER" in large letters below it. Below the logo, the text "Offering Aircraft Maintenance, Avionics and Flight Instruction" is written. Below that is the website "Mandanaero.com" and the phone number "701.663.9925". At the bottom is a photograph of a small, white, single-engine aircraft with red and blue stripes on the fuselage, parked on a tarmac.

The 6th Annual Props & Hops Lends Support to Local Aviator

On October 6, 2022, the 6th Annual Props & Hops event was held at the Mandan Regional Airport - Lawler Field. The event rallied local aviators and area businesses to help support long-time aviator Kelley Bethke in his battle against prostate cancer. "The event brings the community and local aviators together for a night of fun and support for our friend Kelley," says committee member, Dean Affolter.

This year, Props and Hops generated \$17,000 in net proceeds, through ticket sales, silent auction donations, corporate sponsors, and private donors. 100% of the proceeds were passed along to the Bethke family to provide some joy and relief.

"As a selection committee, we look every year for a way to help within our small local aviation community. Those around the Mandan Regional Airport know the good person Kelley is. We want to rally around him and his family and show him that he is not alone. Kelley is a very deserving beneficiary." Says committee member Lyle Kinnischtzke. "We hope the community will come out to help us raise money and support his fight against cancer."

The event featured regional craft and light beers, along with Mandan's famous Robby's ribs. Entertainment for the evening included live music, a silent auction, and a conversational aircraft static display. Special thanks to Dr. Danny and Paula VanBuskirk for bringing their T-6, Bob and Carol Simmers for bringing their C195, and Taylor Anderson with Cirrus Aircraft for bringing her SR-22 to the event!

Props & Hops appreciates the support from over 20 regional and aviation sponsors. Our Stein and Boot Level sponsors of \$1,000 or more include Silicon Plains, Cirrus Aircraft, Signature Events, Northern Plains & Equipment-Mandan, BNC National Bank, and the Mandan Aero Center.

Props & Hops is a state and federally registered 501c3 nonprofit organization that was founded in 2017. The organization's mission is to bring positive attention to the aviation community by showcasing the benefits that the airport brings to local communities and raise funds for aviation related causes that are tied to Bismarck/Mandan and surrounding area. The organization designates a selection committee made up of five local aviators to determine an annual beneficiary within the surrounding aviation community. Props & Hops has been able to donate over \$80,000 to selected causes over the years.



Happy Hooligans Fly High for Hawkeye Fury

The 119th Wing, also known as the Happy Hooligans, recently completed a first of its kind exercise, partnering with the Iowa Air National Guard's 132nd Wing for Exercise Hawkeye Fury, Des Moines, Iowa Sept. 11 to 26, 2022. (National Guard story and photos by Senior Master Sgt. Michael Knodle, 119th Wing Public Affairs)

The exercise focused on the ability for the Hooligans to set up two MQ-9 Reaper remotely piloted aircraft (RPA), ground control station (GCS) and personnel to a deployed location and for the 132nd Wing to effectively utilize the MQ-9 in support of state and local government emergency response efforts.



119th Wing Launch and Recovery Element crew chiefs recover an MQ-9 Reaper after a mission in support of Exercise Hawkeye Fury at the Iowa National Guard base, Des Moines, Iowa, Sept. 20, 2022.



119th Wing weapons load a GBU 12 missile on an MQ-9 Reaper prior to a mission in support of Exercise Hawkeye Fury at the Iowa National Guard base, Des Moines, Iowa, Sept. 19, 2022.

The 132nd Wing, while operating an MQ-9 mission, has none of these aircraft at their National Guard base. This exercise was an opportunity to have this remotely piloted aircraft operate on their flightline and for Airmen to see them employed in person.

Another aspect of this exercise is to further develop partnerships between the different units and to work jointly with other Department of Defense (DoD) partners to operate

the aircraft locally and showcase the potential of the MQ-9 to assist with local domestic operations (DOMOPS).

The Hooligan Airmen benefited from the opportunity to practice Agile Combat Employment (ACE) skills, packing up personnel and equipment, deploying to another base and providing launch and recovery for two MQ-9 aircraft each day.



119th Wing Launch and Recovery Element crew chiefs recover an MQ-9 Reaper after a mission in support of Exercise Hawkeye Fury at the Iowa National Guard base, Des Moines, Iowa, Sept. 20, 2022.

Partnerships like this make the Happy Hooligans a leader in providing training opportunities for the entire Air National Guard RPA enterprise. Photo 1: 119th Wing Launch and Recovery Element crew chiefs recover an MQ-9 Reaper after a mission in support of Exercise Hawkeye Fury at the Iowa National Guard base, Des Moines, Iowa, Sept. 20, 2022.



A 119th Wing Launch and Recovery Element crew chief recovers an MQ-9 Reaper after a mission in support of Exercise Hawkeye Fury at the Iowa National Guard base, Des Moines, Iowa, Sept. 20, 2022.

119th Wing Launch and Recovery Element crew chiefs recover an MQ-9 Reaper after a mission in support of Exercise Hawkeye Fury at the Iowa National Guard base, Des Moines, Iowa, Sept. 20, 2022.



Article reprinted with permission from the NDNG.

A Q&A with *Jan Hartle*

Longtime Minot Airport ATC Tower Manager

Where did you grow up? If not in North Dakota, how long have you lived here?

I am originally from Washington, IL, which is mid-state, just across the Illinois River from Peoria. It's a small farming community of about 6,000, but has grown over the years to 16,000 now. The main crops there are corn and soybeans, instead of all varieties of wheat and sunflowers. So, just a different look to the fields here, but the small town atmosphere is the same. We have been here 32 and a half years. We were stationed at Minot Air Force Base (AFB) in 1990 and decided to make North Dakota our home, after we both retired from the U.S. Air Force.

My husband was in Vehicle Maintenance and Control, which did all the scheduling for maintenance for the entire vehicle fleet at the base, as well as handling accidents and such. We met in Sacramento at Mather AFB and married there. We love the openness of North Dakota, it is truly a beautiful state, and we raise Deutsch Kurzhaars (true German Shorthair Pointers) and my husband loves the bird hunting here. Those are the main reasons we stayed.

When did you first become interested in aviation?

Growing up back home, Dad and Mom would take my sister and I to the airport on a Sunday afternoon, when you could park close to the airport just to watch the planes come and go. It was cheap entertainment for kids. I always loved watching them but never really seriously wanted to fly. My great-uncle was a B-17 waist gunner in WWII, killed in action over Holland almost at the war's end, so aviation was there in my blood as well. When I was in junior college, just before I joined the Air Force, I got a tour of Peoria Tower and that's when I really got hooked on air traffic control. I knew that's what I wanted to do.

Where did you train for your ATC career?

I received my training in the Air Force at Keesler AFB, in Biloxi, MS. At the time, it was a five-month course, probably a lot more intense than it is now. The washout rate was extremely high then, at 87%.

How many towers have you worked at?

My first base was at Williams AFB, AZ, which is now Mesa Gateway Airport. I worked in radar there in the Ground Controlled Approach (GCA), which mainly did Precision Approach Radar (PAR) finals. It was extremely busy, as it was

an undergraduate pilot training base, the busiest in the Air Force at the time. I then went to Mather AFB, CA, worked in the GCA there until it closed.

Then I moved up the tower. It was the 10th busiest tower in the Air Force, as it was the navigator training base. They had a Strategic Air Command (SAC) wing of B-52's and KC-135's, as well as EC-135's that could launch the Minuteman III missiles. It was very congested airspace with three airports within seven miles of each other, all trying to stay out of the other's way. It was absolutely the best place to learn to work tower traffic. As I said, I met my husband there and from there, I went to Incirlik AB, Turkey, for a year, while he went to Korea. From there, we both returned to Ellsworth AFB, SD, for four years, then we went to RAF Alconbury, UK, for three years, ending up at Minot AFB. I was TDY several times while at Alconbury and went TDY to Bosnia while at Minot. So I've worked in about eight different towers, including Magic City Tower.

Who has inspired you in your journey as a Controller?

It would have to be my chief controller at Ellsworth AFB. He not only taught me how to be more organized, but also taught me how to treat people who worked under you and was great at working traffic. I'll always be thankful to him.

When did you first start at MOT? When did you become Tower Manager?

I started July 7, 1997. I retired from the Air Force on Friday the 5th and started at Minot on Monday, the 7th. I was glad I was able to start right away, as I wouldn't be rusty from not working for a while and then coming back. I had worked in both the tower and the Radar Approach Control (RAPCON), so I was familiar with the airspace and General Aviation traffic already. I just had to learn how to work it in the tower. I became the manager in May 1996, when the air traffic manager decided to retire, and remained the manager until I retired. So I had two full ATC careers, 22 years in the Air Force and 25 years as a contract controller with Midwest ATC.



Air Traffic Controller (noun)

A hawk-eyed pilot whisperer. Able to hold a conversation with five pilots simultaneously with fearsome accuracy.



What has been the most rewarding part of your career?

That one's tough, but I'd have to say it's the controllers I've worked with over the years. I've worked with some truly outstanding people, who have helped me grow as a controller and become the best I could. But it's also getting people safely to and from places they need to go, and definitely helping the Minot community during the flood of 2011. The tower conducted over 1,300 helicopter operations alone, most of them in the valley where we couldn't see them, just giving traffic advisories of who was in the valley, all without a single incident. Anything we could do to help the community, we were glad to do, including keeping sightseeing tourists out of the airspace. There were too many important recovery flights going on, not to mention the loss of people's homes that didn't need to be seen.



Do you have a favorite story from your time in ATC?

Again, that's kind of tough, but there's one that always sticks in my mind. It was here at Minot and a student was returning from the southwest practice area to the traffic pattern. Since the tower does not have radar, we always ask for position reports and rely heavily on their accuracy. He had initially said he was seven miles east, so I told him to report a two mile right base Runway 31. I had other traffic arriving from the north, so I asked his position and he said five miles east. I kept looking and looking but couldn't see anything, so I asked him his position, and again he said five miles east, over the trestle bridge. I immediately turned around, looked to the southwest and sure enough there he was, over the trestle bridge. I told him if he was over the trestle, it was physically impossible to be five miles east, unless the bridge moved. He then corrected his position rather sheepishly and came in to land. Still makes me laugh to this day, only time I had to point out that a bridge couldn't move.

What are your plans for retirement?

Right now, I'm mostly just going to enjoy life, spending more time with my husband and furkids, visiting my sister and her family in Minneapolis, MN, and just watching the snow go by this winter and not having to worry about getting out in it. Next summer, I hope to have a larger garden, be more involved in dog training, and do lots of walking to get ready for the Susan G. Komen 3Day Walk for the Cure in San Diego next November. My husband and I hope to do some traveling, once he decides to retire. I'll keep in touch with the controllers and airport staff, but that will probably be it as far as aviation is concerned. After being a controller for 47 years, it's time for a change.

What advice would you give to someone interested in becoming an Air Traffic Controller?

If you decide to become a controller, look at your options on how to become one. The military is a great experience, especially the Air Force, as that's all you do in the Air Force as opposed to the other branches. The FAA Academy is a good way to start and they do have periods where they hire off the street to go to the academy in Oklahoma City. There are a few private ATC schools but they are pretty expensive. Probably 75% of the FAA is made up of prior military controllers. If you can get a tour of your local tower, set one up with the manager, they are usually happy to accommodate. High school students can request a job shadow, especially here in Minot. Talk with the controllers, as they can give you a lot of good insight into the job. It is an absolutely great career where every day, every hour, is never the same.

*A sincere **thank you** to Jan for the lasting impact you have made on North Dakota aviation during your career, and congratulations on your retirement!*

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UND, FAA Program to Help Veterans Dreaming of Flight Takes Off

\$2.5 million program will help veterans pay for flight lessons



Elizabeth Bjerke, associate dean of UND Aerospace, President Andy Armacost, Sen. John Hoeven and Robert Kraus, dean of UND Aerospace, speak about the Vets 2 Wings program on Thursday, Oct. 6. The program aims to help veterans pay for flight lessons. Photo by Arjun Jagada/UND

UND has been awarded \$2.5 million in a cooperative agreement from the Federal Aviation Administration to assist U.S. military veterans with paying for flight training and providing extra support to ensure a successful transition to the airline workforce.

The Vets 2 Wings program (V2W) was announced to UND aviation students on Oct. 4, in a visit by FAA administrators. Through V2W, veteran students who have already obtained a private pilot's license can apply for funding assistance to cover the cost of advanced flight training. There are about 100 veteran aviation students at UND, and efforts are underway to recruit 40 current students into the program, as well as 15 new students.

Goals of the program are to provide a pathway for veterans to obtain the Airline Transport Pilot (ATP) certification needed for an aviation career as a pilot, and to address the national pilot shortage.

U.S. Senator John Hoeven, R-N.D., was instrumental in securing the V2W funding. On Thursday, Oct. 6, Hoeven visited the John D. Odegard School of Aerospace Sciences to commemorate the veteran flight training program.

"Our nation is facing a severe pilot shortage, and we need a new generation of qualified pilots to help ensure continued access to safe and reliable air service, which is vital to our economy and quality of life," said Hoeven. "It only makes sense to leverage our world-class flight school at UND and offer this opportunity to veterans. Through the funding we secured, we are establishing a pipeline from UND to commercial airlines to help meet the demand for new pilots, while better supporting veterans who want to pursue this career."

Significant need for pilots

According to the FAA, regional airlines are being seriously impacted by the pilot shortage. Between 2013 and 2016, the Regional Airline Association reported that more than 150 airports lost at least 20% of their departures, and 52 airports lost at least 50%. Nearly 30 airports lost 75% of their departures and 18 lost 100%.

"The FAA is working to create a robust pipeline of skilled and diverse aviation professionals," said Acting FAA Administrator Billy Nolen. "We know we must



Nick Lento, division manager with the Federal Aviation Administration, speaks to veterans at UND on Oct. 4. UND and the FAA have entered into a cooperative agreement to help veterans pay for flight lessons. Arjun Jagada/UND

think differently about recruiting the next generation, and that includes making programs available to reach this workforce where they are and in a format they will embrace.”



UND President Andy Armacost, Sen. John Hoeven and Robert Kraus, dean of UND Aerospace, make their way to a media event announcing the Vets 2 Wings program.
Photo by Adam Kurtz/UND Today

UND President Andrew Armacost offered praise for V2W, saying it helps open the doors to a needed career for the nation’s veterans.

“We are pleased and proud to participate with the Federal Aviation Administration on this cooperative agreement for veteran students,” Armacost said. “Our veterans have truly earned these educational resources through their honorable service to our nation, and these funds will assist our dedicated students in realizing their dreams of becoming commercial pilots.”

Robert Kraus, dean of UND Aerospace, said he appreciates the opportunity the funding gives to support veteran students.

“This program provides a second wind to help our veteran students get across the finish line and into their second career of service — as professional aviators,” Kraus said.

Elizabeth Bjerke, associate dean of UND Aerospace and principal investigator of the V2W program said she is deeply grateful to Sen. Hoeven for working with the FAA to secure funding.

“It wouldn’t have been possible without his support and vision,” Bjerke said.

Veterans assisting veterans

Bjerke said she is proud of the administrative team she assembled to help her oversee the V2W program. She said she wanted to involve UND administrators who have served in the U.S. military, so veterans could participate in

implementing a program specifically for veterans. Of the six-member team, four people are veterans.

Alongside Bjerke, those administrators include: Jason Evans, assistant aviation professor and U.S. Air Force veteran; Shane Mendez, Aerospace Success Center coordinator and U.S. Navy veteran; Andrew Frelich, assistant director of veteran & military services and Army National Guard veteran; Laurie Baumgartner, finance manager and U.S. Army veteran; and Dick Shultz, director of flight operations.

“It was great to be able to put together the right administrative research team to work with these students,” Bjerke said. “They also are going to be serving as mentors. I hope we can use this program well to improve services for all our veteran students.”

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General Aviation Moves Closer to an Unleaded Future

FAA approves GAMI unleaded avgas STCs for entire GA piston fleet

On September 1, 2022, the FAA signed off on supplemental type certificates to allow General Aviation Modifications Inc.'s 100-octane unleaded fuel (G100UL) to be used in every general spark-ignition engine and every airframe powered by those engines. The move was hailed by the industry as a major step in the transition to an unleaded GA future.

The FAA's approval of the use of G100UL fuel in all piston aircraft directly addresses the industry's long-standing goal of finding solutions that can be used for the entire GA piston fleet.

"I'm proud of GAMI, the industry team, and the FAA for persevering over the long term and getting a fuel that the FAA has recognized as a viable alternative to low lead," AOPA President Mark Baker said. "It's vital that we find solutions to what has been plaguing general aviation since the seventies. It's certainly the biggest issue I have dealt with in my time at AOPA."

"This is a big deal," Baker added, "but there is a lot of work yet to be done."

In 2021 the FAA approved STCs for GAMI covering a

smaller number of Cessna 172 engines and airframes, and then expanded those STC approved model list (AML) to include essentially all lower-compression engines. Though that was seen as an encouraging step forward in the years-long path to supply unleaded aviation fuel to the piston aircraft fleet, the STC's did not include aircraft needing the higher-octane fuel that accounts for two-thirds of avgas consumption. Today's announcement by the FAA addresses the needs of those higher-compression engines.

GAMI co-founder George Braly said, "This is a big day for the industry. It means that for a lot of our general aviation communities, and especially for a high fraction on the West Coast, relief is on the way. And it means that our industry will be able to go into the future and prosper, and provide the essential infrastructure for this country for everything from Angel Flights to critical training of our future airline pilots."

Braly thanked the GA community for its support through this long process. "Without it we couldn't have gotten this done," he said.

*"I think the days of cleaning
spark plugs every 50 hours are
going to be behind us for good,"
Braly said.*



GAMI's Braly has said that Ann Arbor, Michigan-based fuel supplier AvFuel is standing by to manage the logistics and distribution of G100UL, and said he is open to partnerships. "Our arrangement is that any qualified refiner or blender of existing aviation fuels will be eligible to produce and sell it subject to the quality assurance requirements that the FAA has approved," he said.

The timing for when G100UL will reach airports is still uncertain. "It's going to take a while to manage the infrastructure including manufacturing and distribution," Braly said. The supply chain "is still a very wounded infrastructure and that's not going to make the process any easier, but we have a handle on how to do this, and with the support of the major players I think we can do that. It's going to be limited to begin with, but it can be ramped up rapidly," he said.

Baker said it's important to get any fuels approved for use to the California market as soon as practical, in light of the fact that some municipalities have prematurely banned the sale of leaded avgas and threatened a safe and smart transition to unleaded. "It is a politically charged issue there, and this will help keep our airports open with fuel that works with all aircraft."

While the cost of the fuel has not been determined, Braly said the small batch production process that will initially

earmark the arrival of G100UL at airports means that the fuel will cost slightly more than leaded avgas. "Small volume batches cost money," he said. "Until we can get [production] revved up that we're making millions of gallons at a time, there will be an incremental [additional] cost," he said.

"It's not going to be unreasonable," Braly added. "Pilots in America will not be paying what they're paying for avgas in Europe today."

Owners can also expect to see engines that operate more efficiently. "I think the days of cleaning spark plugs every 50 hours are going to be behind us for good," Braly said.

Swift Fuels Inc., an Indiana based company, has received FAA approval for its 94-octane unleaded fuel, and has expanded its distribution, particularly to the West Coast. Swift Fuels' 94-octane fuel meets some, but not all, of the demand of aircraft with lower-compression engines. The company is developing a 100R unleaded fuel with more than 10 percent renewable content.

In addition, two fuel candidates are currently in the PAFI testing process.

All fuel manufacturers continue to be encouraged to follow through with their own formulations, Baker said. "We'd like to see several fuels available that all work together and blend together. Competition is always a good thing for the markets."

Article courtesy of the AOPA.

A promotional graphic for the Fargo Air Museum's new membership benefits. The background is a light blue sky with white clouds. On the left, there is a red and white biplane. To its right, a large orange banner with a black outline reads "New Membership Benefits" in bold white text. Below the banner, there are two columns of bullet points listing the benefits. At the bottom right, there is a QR code and a URL. The Fargo Air Museum logo is in the top left corner.

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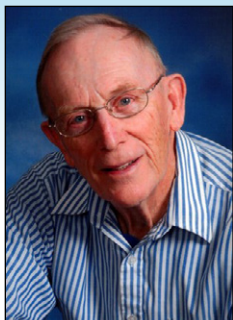
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Eternal FLIGHT



Raymond "Ray" Schafer, 88, Bismarck, passed away on October 9, 2022.

Raymond was born June 16, 1934, to Joseph Valentine and Elizabeth (Martin) Schafer in Glen Ullin. He was raised in Bismarck and received his education through St. Mary's Grade School and High School. He attended Bismarck

Junior College and graduated with a Bachelor of Arts degree.

Like many teens do, Ray started working as a grocery boy. He joined the National Guard in November 1952 and remained a Guard employee until his retirement in July 1994. His career allowed him the privilege of traveling and receiving training in many states. For about 12 years beginning in 1955, Ray was on active duty during the Berlin Crisis and active duty for training and was stationed at the NCO Academy in Ft. Leonard Wood, Missouri. Ray received aircraft mechanics, flight operations, and flight simulator training at Gary Air Force Base in San Marcus, Texas, Ft. Eustis, Virginia, and Ft. Lewis, Washington, as a mechanic and had a helicopter pilot training in Ft. Rucker, Alabama. Ray became a warrant officer in 1979

after his pilot training. In Bismarck, Ray was a free-lance charter pilot for Capital Aviation, OK Aviation, and Executive Air. From 1964 through 2005, Ray served as the Civil Service aircraft mechanic and supervisor for the ND Army National Guard at the Bismarck Airport. HE was a recipient of a variety of merit awards for top performance and was academically the outstanding aircraft mechanics student during his many training courses.

Ray was a member of Experimental Aircraft Association (EAA), Aircraft Operations Pilot Association (AOPA), ND Pilot's Association, Civil Air Patrol, ND National Guard Officers Association, Corpus Christi Church, and the YMCA for many years. He enjoyed hunting, gardening, and watching sport. His most ardent love was flying. He had 9000+ flying hours which included 2000+ hours of helicopter flying and 7000+ hours of fixed wing flying. Ray married Ruth Heupel in 2002 in Bismarck.

Ray is survived by his wife, Ruth, Bismarck; brother, Jim (Barb Pederson) Schafer, Minnesota; sister, Angeline Ding, Fargo; and eight nephews and five nieces.

He was preceded in death by his parents; brothers, Richard and Steve; and one brother-in-law, Armin Ding.

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Pilot Michael Lents is an Assistant Professor of Aviation at the University of North Dakota. A Master-CFI of Aerobatics since 2013, he specializes in Aerodynamics, Aircraft Systems, Human Factors and Aerobatic Flight. He coaches the UND Aerobatic Team, leading them to 10 National IAC Collegiate Championship Titles.



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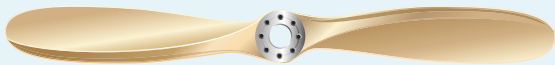
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these events: aero.nd.gov/events

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