

Aviation QUARTERLY

Vol. 28 • Issue 2

North Dakota Aviation Council

Spring 2016

Honoring our Heritage *Preparing for the Future*

Celebrating a successful symposium and aviation events throughout our state.



Thankful for our Exhibitors



A friendly welcome at the registration desk from Jim Lawler and Fred Adams



Matt Guthmiller wows the crowd with his story of his solo trip around the world



Mingling during Opening Social



Kyle Wanner, Chairman, presents Gary Ness his plaque for induction into the ND Aviation Hall of Fame.



Kyle Wanner, Chairman, presents Gary Ness his plaque for his induction into the ND Aviation Hall of Fame



Dick Rutan, banquet speaker, told of his Voyager Flight adventures



Enjoying Exhibitors Night



ND Aeronautics Commission Listening Session



Thankful for our Exhibitors



Passport Award Recipients



Matt Remnyse, AAND



Trevor Woods, provides updates on UAS happenings



Jon Simmers - Chairman

Announcing



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What's new at Aeronautics?



New Employee at North Dakota Aeronautics Commission

Gaye Niemiller has joined the North Dakota Aeronautics Commission as its new Administrative Officer. Her previous experience includes working as an Accounting Manager with the Mandan Park District, and more recently, as the Human Resource Officer for the North Dakota State Tax Commission Office. Please feel free to stop in to meet Gaye and help welcome her to this exciting new opportunity.

Welcome, Gaye!

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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ND Aeronautics Commission: www.state.nd.us/ndaero/

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*Jon Simmers, Chairman
North Dakota Aviation Council*

CHAIRMAN'S COMMENTS

New Faces!

Whew! The 2016 Upper Midwest Aviation Symposium (UMAS) is behind us. With attendance of nearly 450, we are calling this year's event a success! A special thanks goes out to the North Dakota Aeronautics Commission staff for their partnership with the North Dakota Aviation Council (NDAC) in putting together another great event. We also need to send out a special thanks to all of our Council Members, Sponsors, and Site Committee members for making Bismarck a great host city for UMAS.

As many of you may recall, our theme at UMAS this year was "Honoring our Heritage, Preparing for the Future." I believe the responsibility of volunteerism parallel's this. We honor those long time volunteers for the great work and dedication they have put into NDAC. We also need to prepare our organizations for the future.

In today's society, there is such a huge pull for your time. Most folks work more than 50 hours/week, have dual income

households, and tremendous pressures to run the kiddos around. Our time is cut short, and as a result, we easily get burned out with volunteerism.

As a result, those of us that have been involved in NDAC for a while, know how much effort goes into it. Instead of getting burned out, each of us needs to prepare NDAC for the future. I'm so excited this year, as the NDAC has SIX first time members!

Every healthy volunteer organization must have a mix of folks that continue to be passionate with a mix of new faces and new ideas that will continue to energize the organization. This notion isn't about kicking old faces out of the organization, yet more of a focus on taking turns and sharing the workload. Given our past experiences with Minot as the host city for UMAS, the passion for aviation that exists in Minot, and many of the new faces on the Council from the Minot area, we are anticipating another great UMAS in 2017!



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Kyle Wanner, Director
North Dakota Aeronautics Commission



DIRECTOR'S Chair

Statewide Economic Impact and Pavement Condition Studies Completed

The North Dakota Aeronautics Commission is pleased to announce the completion of two statewide studies. The Economic Impact of Aviation in North Dakota and the Statewide Pavement Condition Index updates are both ready for public viewing from the studies page on the aeronautics commission website at www.aero.nd.gov.

A fact sheet for the Economic Impact Study can be found on pages 5-6 of this edition of the *North Dakota Aviation Quarterly*. Feel free to remove that page from the quarterly and share the information with as many people as you can.

Economic Impact of Aviation

The North Dakota Aeronautics Commission recently completed a research project to estimate the annual economic impacts that all facets of aviation have on North Dakota's economy. The Commission's research has concluded that the annual economic impact from the State's 89 Public-Use Airports has increased 47% since the last study was completed in 2010.

North Dakota's public-use airport system consists of eight commercial service airports and 81 general aviation airports. Economic impacts were measured for activities associated with airport management, on-airport aviation related businesses, capital investment, and spending by visitors to North Dakota who utilize the public-use airports. Since the last study in 2010:

- Jobs supported by North Dakota airports have grown from 8,872 to 12,217 – a 38% increase.
- Annual payroll for these airport jobs has grown from \$366 million to over \$505 million.
- Annual state and local sales tax revenues for airports and airport supported activities have increased from 31 million to over 60 million – a 93% increase.
- Estimated annual economic output of the airports has increased from \$1.06 billion to \$1.56 billion – a 47% increase.

The numbers from this study clearly show that our public airports have proven that they are valuable assets and that they continue to act as important economic engines for our communities.

The Commission's research also considered the economic impacts from other facets of aviation in North Dakota. This included the annual economic impacts associated with Air Force Bases in Minot and Grand Forks, as well as, North Dakota businesses that are engaged in producing aviation and aerospace products. These other aviation and aerospace related activities

provide an additional \$2.1 billion in annual economic output and support approximately 20,000 additional jobs that have an annual payroll estimated at \$931 million.

When the \$1.56 billion in annual output from the public-use airports is combined with the output from other aviation and aerospace related activities, all airport, aviation, and aerospace related activities have a total estimated annual economic output of \$3.66 billion. This output represents approximately eight percent of North Dakota's Real Gross State Product, which proves that airports and aviation are major drivers and contributors to North Dakota's economy.

The Aeronautics Commission website provides a video presentation of the results, the full technical report, the statewide executive summary, a one page fact sheet, legislative summaries for each state legislative district, and individual airport reports. It is my hope that the aviation community can utilize the information from this study to continue to educate decision makers regarding the benefits that aviation provides to our communities.

Pavement Condition Index (PCI)

Over the past year, the North Dakota Aeronautics Commission has also been working to update the pavement condition index (PCI) at the paved public airports within the state. This is a project that the commission updates every three years.

Pavement represents the largest investment for airport infrastructure, therefore, being able to maintain pavement at a high level for an extended period of time is critically important. Airports in North Dakota have utilized PCI information to evaluate pavement conditions since the 1980s. Having this information readily accessible makes it easier for community members to present the information to multiple governmental entities or interested groups when discussing the need and timing for future projects.

New and improved functionality exists on the state's interactive PCI database that now contains updated data from the 2015 pavement inspections. I encourage you to take an interactive tour of the pavement condition study by visiting the North Dakota Aeronautics Commission website.

The commission and its staff worked very hard to ensure that each of the two studies were produced at a very high level, and we hope that the information can be utilized so that we can continue to improve and enhance aviation throughout the State of North Dakota.

Wishing you smooth flying, Kyle

Facts on the Economic Impact of Airports in North Dakota

Airport Economic Impacts

North Dakota's 8 commercial and 81 general aviation airports provide and support significant annual economic impacts. Airport related benefits come from activities associated with airport management, airport tenants, capital investment, and spending by visitors to North Dakota who arrive on commercial airlines and general aviation aircraft. Economic impacts for the 89 airports are measured using employment, annual payroll and annual economic output.

A 2015 study completed by the North Dakota Aeronautics Commission shows there are significant positive economic impacts associated with the state's public-use airports. As shown below, there has been a notable increase in impacts between 2010 and 2015:

Annual economic impacts from public-use airports have increased from **\$1.06 billion** to **\$1.56 billion**, a **47%** increase.

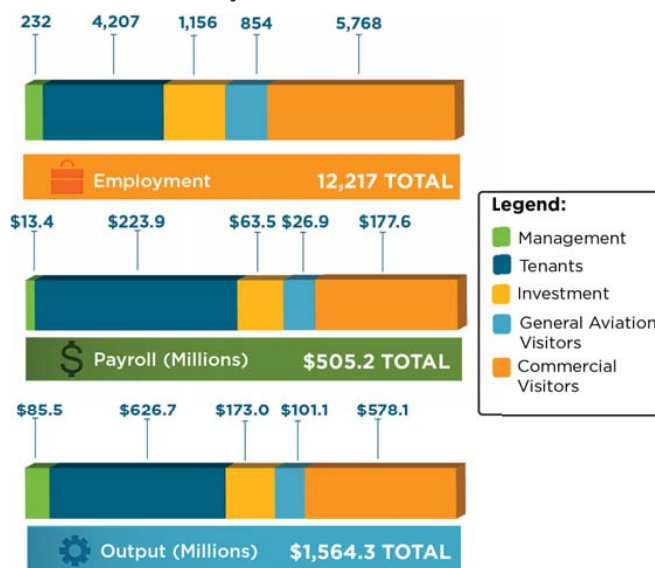
Jobs supported by North Dakota airports have grown from **8,872** to **12,217**, a **38%** increase.

Annual state and local sales tax revenues from airport supported activities have increased from **\$31.1 million** to over **\$60 million**, a **93%** increase.

The significant annual economic impact from North Dakota's 8 commercial and 81 general aviation airports comes from **five** centers of economic activity.

Airport Management	Activities undertaken by airport employees to operate the airport on a daily basis.
Airport Tenants	Aviation related businesses that provide airport, aircraft, or customer services.
Capital Improvement Spending	Average annual investment made to maintain, improve, or expand an airport.
General Aviation Visitors	Spending by general aviation visitors to North Dakota that support hotels, restaurants, and other visitor related activities.
Commercial Visitors	Spending by commercial visitors to North Dakota that support hotels, restaurants, and other visitor related activities.

Economic impacts for North Dakota airports are measured using three indicators: employment, annual payroll, and annual economic output. For airport management and airport tenants, output is equal to their cost for purchasing goods and services to run the airport or their business. For capital investment, commercial visitors, and general aviation visitors, output is equal to average annual spending for airport improvements or annual spending by air visitors while they are in North Dakota.



2015 Total Annual Economic Impacts from Public-Use Airports

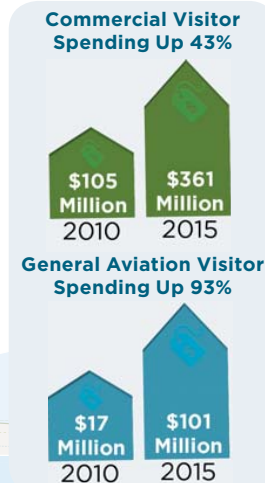
Jobs: 12,217

Payroll: \$505.2 million

Output: \$1.56 billion

Air Visitors to North Dakota

Since 2010, all air visitors to North Dakota have increased from **543,300** to **915,290**, an increase of 68%. Business travel to North Dakota has increased exponentially, leading to significant increases in visitor spending for both visitors arriving on general aviation aircraft and on commercial airline flights. Study surveys show business travelers are staying longer and spending more.



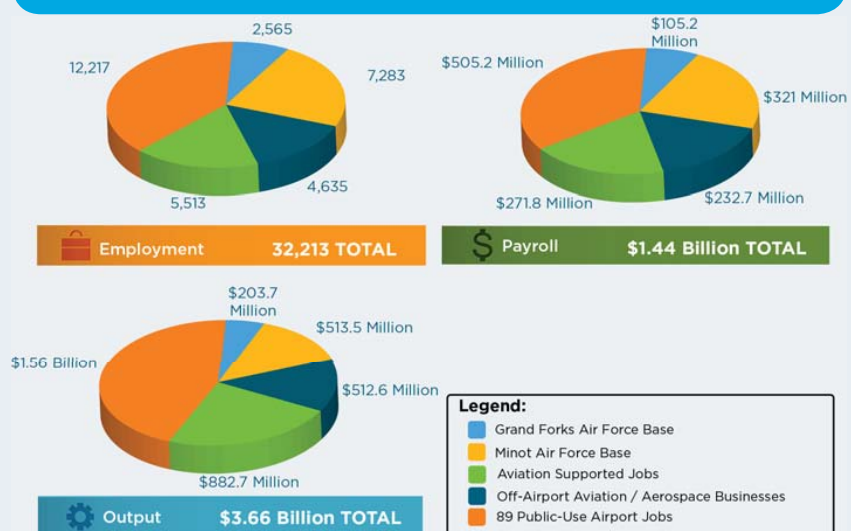
Other Economic Benefits from Aviation and Aerospace

Aside from economic benefits from North Dakota's public-use airports, there are other off-airport aviation and aerospace activities in North Dakota that provide additional economic benefits. These include benefits from:

- Grand Forks Air Force Base
- Minot Air Force Base
- Off-Airport Aviation and Aerospace Businesses (including aerial applicators)
- Jobs with Improved Efficiency from Aviation

When airport, military, and off-airport aerospace and aviation activities in North Dakota are combined, they provide the annual economic impact shown to the right. Included in the aviation supported jobs are over 100 aviation and aerospace related jobs at the University of North Dakota; these jobs are in addition to University jobs located at Grand Forks International Airport.

Annual Economic Impacts From Airports, Aviation, and Aerospace



TOTAL FOR ALL AIRPORT / AVIATION / AEROSPACE IMPACTS

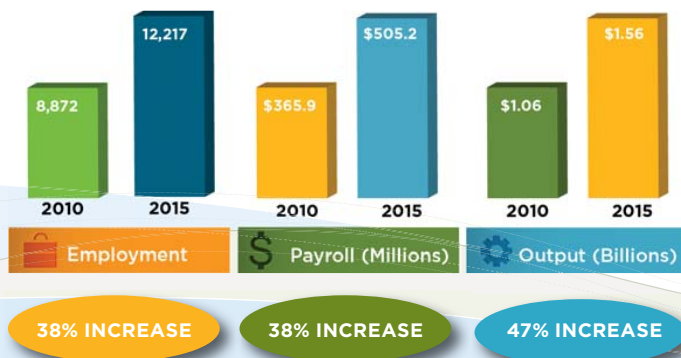
Total Employment:
32,213

Total Payroll:
\$1.44 billion

Total Output:
\$3.66 billion

Increasing Economic Benefits

Economic impacts from North Dakota's airports were previously estimated in 2010. Information presented here shows how economic impacts from the commercial and general aviation airports in North Dakota have increased over the past five years.



The North Dakota Statewide Economic Impact Study shows that when all airport, aviation, military, and aerospace activities in North Dakota are considered:

- **32,200** jobs for all airport/aviation/aerospace related activities account for an estimated **8%** of North Dakota's total employment which is estimated at **413,000**.
- The **\$3.7 billion** in total annual output for all airport/aviation/aerospace related activities accounts for an estimated **7%** of North Dakota's Real Gross State Product estimated at **\$48.2 billion**.



Thanks Malinda!

Malinda Weninger has been the Administrative Officer for the North Dakota Aeronautics Commission over the past 32 years and has announced that she will be retiring. She has done an incredible job over her time with the agency in helping to keep the state office running smoothly. She is also appreciated for all of her support for the North Dakota Aviation Council and her help in planning many of the Upper Midwest Aviation Symposiums.

We all wish Malinda the very best, and we thank you for all of your efforts to help the aviation community through the years!



Forever Grateful

By Malinda Weninger

As I come to an end of my career of 32 years with the North Dakota Aeronautics Commission, I want to say that I am forever grateful. I am grateful for the steady employment opportunity that I was able to have, grateful for the friendships I have made, and grateful for the opportunity to work with people who have a passion in life for what they are doing.

I have had the pleasure of meeting so many individuals across the state of North Dakota. When a little town is mentioned in outside conversations with someone, I very often can say "oh I know someone there!" I have enjoyed working with the airport boards and personnel across the state and getting to know them. I have gained so much knowledge over the years regarding aviation and its value.

Thank you to the North Dakota Aeronautics Commission, Commission staff, and the members of the North Dakota Aviation Council. I have so enjoyed working with everyone over the years, and I thank you for the acknowledgement you have given me. I will miss you all dearly.

As I depart with a heavy heart, my wish is that "our paths may soon cross again." –*Take Care.....*

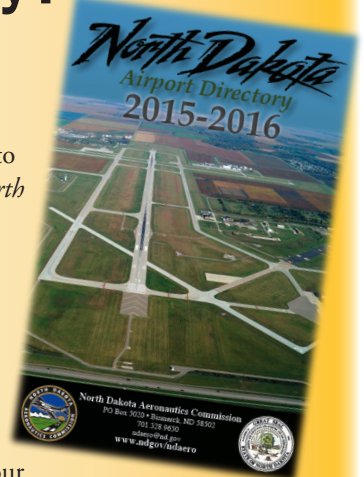
What's new at Aeronautics?



Do you have a great photo to share with the Aviation Community?

Enter in the first North Dakota Aeronautics Commission's photo contest for a chance to see your photo on the front cover of the *North Dakota Airport Directory*.

Winning artwork will be displayed on the cover of 2017-2018 Directory.



Visit our website for more information and to submit your photo – AERO.ND.GOV

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Mike McHugh, Education Coordinator
North Dakota Aeronautics Commission



It's fly-in season

Spring not only brings longer days, warmer weather, and spending more time outdoors, it also begins another year of fly-ins. I hope that you have the opportunity to get out to one, or more, of the many fly-ins this summer around North Dakota. Not only do fly-ins provide some of the best food around, it is fun to socialize with others who share an interest in aviation. In addition, you never know what aircraft might be turning onto final. It is not uncommon to spot a warbird, a glider, or a brand new aircraft at a fly-in.

Many of our communities do an amazing job hosting fly-ins. This is an opportunity to get the local community to the airport, show off the value the airport brings to the community, and get youth interested in aviation. Whether it is a morning breakfast fly-in or movie night on the ramp, getting the community to your airport will help increase awareness of the value that your airport brings to the community. Having visitors at the airport is

also a great time to clean up and get the facility looking good for the season.

I challenge each of you to attend at least one of our many fly-ins this year, and for bonus points, bring a younger person with you. Attend as a family, or bring one of the kids, grandkids, nieces, nephews, or other youth. Whether you fly or drive, you are sure to be welcomed with enthusiasm. For a list of fly-ins around the state, check out the last page of this edition of the *North Dakota Aviation Quarterly*, or visit the events page on our website: <https://aero.nd.gov>. While you are at these airports, do not forget to pick up your passport stamp.

If your airport is hosting a fly-in or other event, contact our office to have the event listed on our webpage. Documents, such as the economic impact study for your airport, are useful to have on hand. These documents can be found on our website and printed as needed.

Stay safe and have a happy fly-in season!

GOING TO A FLY-IN? *Take someone with you!!*



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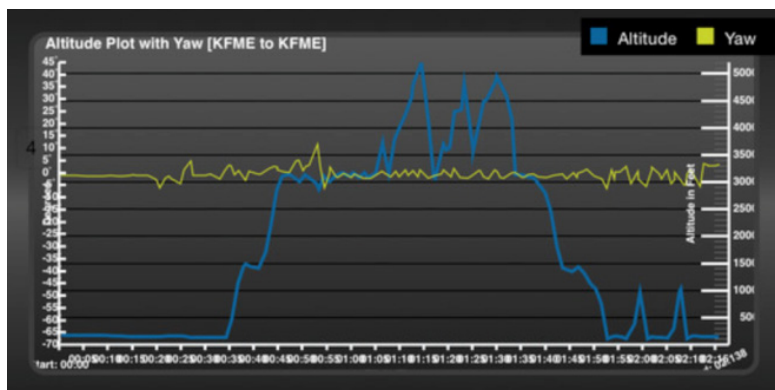
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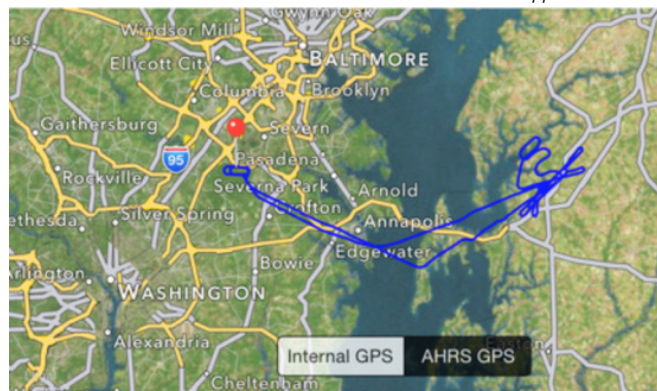
Flight Data Monitoring for General Aviation

The number one goal of every pilot with every flight should be to make the next flight the safest he / she can make it. There are many ways to make this possible, from a thorough preflight, to making sure you get a good weather briefing. But, as we all know, accidents still happen. In fact, the accident rate in general aviation has stayed relatively flat over the past decade or so, and general aviation still does not have the exemplary safety record that the commercial air carriers have achieved. So, what makes the commercial carriers have such a low accident rate? Is it the experience level of the pilots involved? Yes, some may be more experienced, but that is definitely not always the case. One of the ways that the airlines are able to have safer operations is by being proactive in their approach to safety. Airlines have programs dedicated to this proactive approach. These flight safety programs rely on collecting data and contributing that data to an overall Safety Management System (SMS). One of these programs is Flight Data Monitoring (FDM), also known as Flight Operational Quality Assurance (FOQA). This program involves downloading recorded data from the aircraft and analyzing it for adverse events and trends. The recorded data contains many different parameters, such as, airspeed, vertical speed, altitude, etc. The data is removed from the aircraft either physically via solid state disk or media or via wireless transmission. The data is then downloaded into a software system that analyzes the data for adverse events, such as,

unstable approaches or high bank angles. If a trend is identified, the data can be used to inform pilots of the issue and a fix to the problem can be implemented. The idea being, what you don't know, you can't fix. Of course, commercial operators have high powered computer systems with analytical software that enables them to have this type of program. The problem for the average general aviation pilot is that these systems have a high dollar cost associated with them. The commercial operators have large budgets and can afford a robust FDM program. The FAA identified this cost as a limitation to general aviation pilots wanting to get involved in FDM. Because of this, the FAA, through the Center for General Aviation Research, partnered with the University of North Dakota to create an FDM program for general aviation that is free for any pilot or operator to use. The National General Aviation Flight Information Database (NGAFID) is an open source FDM program that any pilot can contribute their flight data and analyze their flights against a predetermined set of events that will trigger based on that flight data. Event examples include, high bank angle, excessive pitch, and high approach speed. Most modern general aviation aircraft have some sort of recording device on them. What about those pilots flying not so modern aircraft? There's a FREE app for that! Developed by MITRE, the General Aviation Airborne Recording Device (GAARD) app turns an Apple or Android device into a recording device with basic parameters recorded while in flight.



GAARD App Screenshots



After the flight is complete, the data can then be downloaded into the NGAFID system. The flight data is secure and only accessible by a password that the individual user knows when the NGAFID account is created. Pilots or operators can look at their flights and see what events their flights might have triggered in a graphical format or even visually in a flight animation. De-identified NGAFID data is then shared with the FAA's Aviation Safety and Information System (ASIAS) via MITRE for proactive safety analyses of the aggregated GA data collected for the entire country. The FAA cannot see the NGAFID data nor use it for enforcement or punitive actions. To sum this all up: FDM can help make aviation safer, there is an app to record data, and there is a free, secure system to download and analyze your flights. Plus, by participating in the NGAFID and ASIAS, you are helping to not only improve your safety of flight, but the overall safety of general aviation. Any pilot or operator who is interested in setting up an account, downloading and analyzing their flights, or if you just want more information, please visit us at www.ngafid.com. You can sign up for your free account from this page, plus there is a link for the Apple IOS and Android GAARD app. If you have any questions about the NGAFID, FDM, or even how to get data off your aircraft, please contact me at bwild@aero.und.edu. Fly Safe!

Brandon Wild is an Assistant Professor of Aviation at UND. Prior to joining the faculty at UND, Brandon held FOQA Analyst positions at United Airlines and UPS and was FOQA Manager at Northwest Airlines and Delta Air Lines.



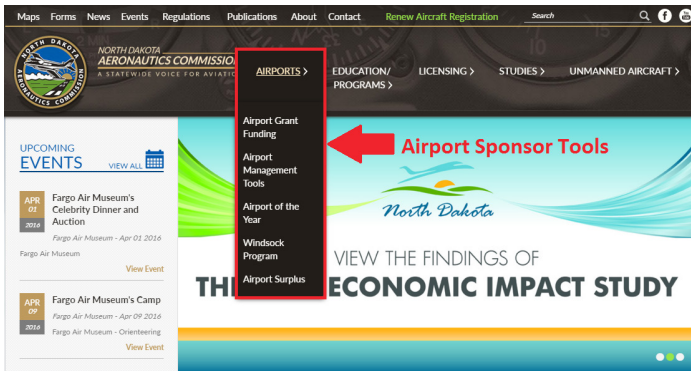
Jared Wingo, Airport Planner
North Dakota Aeronautics Commission



Airport Management Tools and Airport Surplus

A few months ago, the North Dakota Aeronautics Commission rolled out a revamped website to provide improved services and information to the flying public. As a result, we have been able to include tools designed for airport managers and sponsors.

By traveling to our new website: www.aero.nd.gov, airport sponsors can select multiple pages dedicated to airport management under the AIRPORTS tab. These pages include: Airport Grant Funding, Airport Management Tools, Airport of the Year, Airport Surplus, and the Airport Windsock Program. A visual depiction of the AIRPORTS tab on the new NDAC website is shown below.



Operations. As new resources become available, we will update this page to reflect new publications. In addition, we have also linked the NDAC Airport Planner Map as a quick reference for sponsors and other folks that may have questions concerning North Dakota airports.

The second topic focuses on our new Airport Surplus page. Once arriving at this page, sponsors can view equipment and parts including: lights, signage, snow removal equipment, tractors, etc. Each piece of equipment also has a short description, as well as, contact information for the airport manager who has listed the equipment or the NDAC airport planners. If you are interested in participating in this program, please call Ben or me about your surplus airport equipment.

Enjoy the warmer weather coming up, and periodically check our website for updated fly-in schedules and other information pertaining to aviation in North Dakota.

This article focuses on two new tools designed to educate airport sponsors and assist in repurposing surplus airport equipment at our 89 public airports.

Under the Airport Management Tools page, sponsors can review Airport Cooperative Research Program (ACRP) studies dedicated to a number of topics, including Capital Improvement Funding, Wildlife Management, and Guides to Managing Airport

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Rod Brekken

Eyes to the Future

This year I received an invitation to make a presentation for a local high school job fair. I jumped at the chance! I love talking to kids! I love telling them all the great opportunities and experiences that have happened to me in my career and hoping it will make a positive difference in their career choices. This job fair was for juniors and seniors in a very large school. No, we didn't have huge crowds, but we had quality attendance! That's the important thing. I invite the local schools to our work place to expose them to the aviation industry jobs in hopes they will make aviation their career choice. I participate in a career day for freshmen students held every year at a large convention center in our city. We get HUGE crowds there! But when I stop to compare all these career choice exposure opportunities I am fortunate to be involved with,

I have a feeling that the smaller the crowd, the more careers we positively influence toward aviation. As we all know, aviation is a "small community" in the big picture of occupations. We need to make "big noise" to attract the people whose heart and soul should be in aviation. The thing is they may not even know their heart and soul belong in aviation until they get that first big positive experience! That's our job! As they say, the first impression is the one that counts. We need to make that first aviation impression the best it can be! Volunteer your time, your experience, and your "aviation heart" to making sure that any kids' first aviation experience is the best it can be! I wish you fair skies, tailwinds, and a steady rudder until next time!



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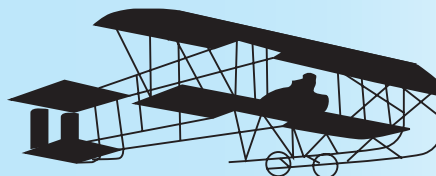
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North Dakota Aviation



HALL OF FAME

Free Golf Ball Drop and Fly-in

On Sunday June 19, the "JT Rice North Dakota Chapter of Pilots for Christ" will be hosting a FREE Golf Ball Drop and Celebration fly-in. This is the fourth annual ball drop for the organization, and this year, the members would like to give back in appreciation of all that has been given to them through donations of time, talent, resources, and funding. The organizations treasurer, Debbie Tracy, stated "This year we could give back by offering free golf ball drop tickets to those who attend. I think it would be a wonderful thing to do, giving away the ball drop prizes."

With that in mind, the group formed a prize committee, and they decided on an: Apple Laptop, Gas Grill, iPad Mini, and \$700.00 in cash prizes which will be given away with free ball drop tickets, distributed on the day of the event. As in past celebrations, the event will also have an all faith service, a featured speaker, free lunch, free airplane and helicopter rides throughout the event.

The organization is anticipating an attendance of 250-400 for the celebration. This year they are expecting more pilots to fly in than in past years, with a new 3000' cement runway that will accommodate a wider variety of planes to land at the Maddock Airport (6D3). The group would like to see 50-100 planes fly-in for the event. The event has had pilots fly-in from Wyoming, Washington, Michigan, South Dakota, and of course, from all around our great State of North Dakota. In the past, the event has always had wonderful media coverage, both television and newspaper.

The Chapter is looking forward to having you and your friends fly-in for the JT-Rice North Dakota Chapter of Pilots for Christ Fourth Annual Golf Ball Drop. It should prove to be a very fun and entertaining fly-in. Plan to attend this fun filled family event!

The JT Rice-North Dakota Chapter of Pilots for Christ serves the State of North Dakota, with free urgent air and ground transportation, with focused service on ambulatory patients seeking treatment at distant medical locations, terminally ill patients seeking to return home to family, pastors and missionaries within

the scope of their duties, with additional considerations to veterans, and the general population with valid urgent transportation needs.

The organization is always in need of pilots willing to help serve the citizens of North Dakota that are in need. They invite you to consider joining in their service efforts by becoming a member.

For more information on membership you may contact: Patrick Tracy, President, JT Rice North Dakota Chapter of Pilots for Christ, Int., PO Box 100, Maddock, ND 58348; 701-739-9024



JT Rice North Dakota Pilots for Christ
4th Annual Golf Ball Drop

Ball Drop Date
Maddock Municipal Airport
June 19th
Maddock, ND 58348

Ball Drop Tickets
~FREE~
At the Event
8:00am - 11:00am

- Grand Prize**
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NDPAMA Awards



Jeff Boe and Jay Flowers (r), FAASTeam, present the Diamond Award to Bismarck Aero Center, represented by Jason Wondra. Fargo Jet Center, Bismarck Aero Center, and UND, who have all met the criteria of each technician having completed FAA continuing education requirements. Accepting on behalf (l to r) is Jason Wondra, Bismarck Aero; Mike Clancy, Fargo Jet Center; and Dan Kasowski, UND Aerospace



Jeff Boe, FAASTeam, (l) and Jay Flowers, FAASTeam, (r) present the 2016 General Aviation Avionics Technician of the Year from Fargo Flight Standards District Office and the 2016 General Aviation Avionics Technician of the Year award from the FAA Great Lakes Region to Dave Mohn, Fargo Jet Center



Banquet Awards – March 8, 2016



Jason Wondra and Kent Picard present the ND Aviation Mechanic of the Year Award to Tanner Sotvik, Devils Lake Aero Service PG

(Right) Kent Picard (l) and Jason Wondra (r) present the NDPAMA \$1,000 scholarships from Bismarck and Mandan Aero Centers and NDPAMA to Holly Cofer and Cody Zingraf, both students at Thief River Falls Northland Aerospace. Two other award recipients, sponsored by Fargo Jet and Minot Aero Center, not pictured are Sam Delfs and Keegant Knobloch, with Lake Area Technical Institute in Watertown, South Dakota.



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North Dakota Aviation



HALL OF FAME

Dunn County Airport – Weydahl Field is Awarded 2015 General Aviation Airport of the Year

The Dunn County Airport has received the “2015 General Aviation Airport of the Year” award. The award was presented on March 8, 2016 at the Upper Midwest Aviation Symposium held in Bismarck. The award is sponsored by the North Dakota Aeronautics Commission in partnership with the Airport Association of North Dakota. This award is for excellence in maintaining safety, project management, and community awareness.

Presenting the award was Matthew Remyne, President of the Airport Association of North Dakota and Kyle Wanner, Director of the North Dakota Aeronautics Commission. Accepting the award for the Dunn County Airport in the attached photo included (from left to right) the Dunn County Airport Chairman Mike Schollmeyer, Airport Manager Gregg Synnes, and Dunn County Commissioner Daryl Dukart.

Accomplishments for 2015 were: In June 2015, the Dunn County Airport hosted an airport dedication ceremony celebrating the completion of two years of airport planning and construction. Deemed at one time as the “Busiest Closed Airport in North Dakota,” due to the proximity of the Bakken Oil Fields; the



residents of Killdeer and Dunn County now have an airport that all can be proud of. This construction project included a new 4,200' X 60' asphalt runway, taxiway, and apron to accommodate current and future air service needs for Dunn County.

In addition to the re-opening of the airport, the airport has also been able to install a fuel system, the first system since the late 1990's. The

airport board envisions the growth of activity as people become aware of the services and benefits an airport provides to the local community.

As the only airport in Dunn County, airport board members have worked hard to provide awareness about aviation to the local community, including providing introductory rides to children, as a way to encourage aviation in the surrounding area. In addition, the airport has been utilized by organizations, such as the North Dakota Game and Fish Department, Dunn County Sheriff's Department, Killdeer Fire Department, and the West Dunn County Fire Department.

The Dunn County Airport is congratulated for a tremendous year of accomplishments.

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Jamestown Regional Airport is Awarded 2015 Commercial Service Airport of the Year

The Jamestown Regional Airport has received the "2015 Commercial Service Airport of the Year" award which was presented March 8, 2016 at the Upper Midwest Aviation Symposium held in Bismarck. The award is sponsored by the North Dakota Aeronautics Commission in partnership with the Airport Association of North Dakota. This award is being provided for excellence in maintaining safety, project management, and community awareness.

Presenting the award was Matthew Remynse, President of the Airport Association of North Dakota and Kyle Wanner, Director of North Dakota Aeronautics Commission. Accepting the award for the Jamestown Regional Airport was the Jamestown Regional Airport Chairman Jim Boyd, Airport Manager Samuel Seafeldt, and Board Members Keith Veil, Katie Andersen, Brent Harris, Jeff Wilhelm, and Craig Neys.

Accomplishments for 2015 include: The Jamestown Regional Airport posted a record setting increase in airline passenger numbers in 2015. The ability to provide a full year of reliable jet service to Denver allowed over 8,600 passengers to board a commercial flight at this airport which resulted in a 128% increase from the 2014 boarding numbers.



This past year, the airport completed the construction of a new eight-unit T-hangar which will greatly help to provide growing benefits for the general aviation community. The airport was also able to upgrade its Aircraft Rescue and Fire Fighting truck to help enhance safety for larger aircraft flying into the community.

The airport has been working diligently to promote aviation education in conjunction with the Jamestown Public Schools, James Valley Career & Technology Center, and the University of Jamestown. The eventual goal of this two year high school program will allow students to earn college credit through the University of Jamestown.

The airport has continued to market and promote their facilities through events such as: the Jamestown Drag Racing Association Annual Weekend Rally, Jamestown Area Chamber of Commerce Business after Hours, and through sponsoring the local Ice Fishing Derby. They also partnered with SkyWest in a marketing and advertising campaign to bring more local traffic to the Jamestown Regional Airport.

Jamestown Regional Airport is congratulated for a tremendous year of accomplishments.

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High Schoolers Get A Taste of Aviation

By Owen Blickensderfer

The Mott-Regent school system tried something new this Spring. For four days, normal classes were partially suspended, and local professionals were invited to teach informational classes to high school and junior high students. Classes included Judo, photography, soap making, meat processing, cake decorating, and even tracking game animals. Local flight instructor, Owen Blickensderfer, offered an Introduction to Aviation class, which included a one-hour ground school and a preflight inspection demonstration. In all, 23 students also enjoyed a fifteen-minute flight. Naturally, a few of the students had never been a passenger in a small aircraft before. Everyone agreed that flying in an airplane was a lot more fun than taking a test in chemistry.



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My Journey

By Alyssa Mastel



Most high school graduates don't know what to tell people when asked what they are going to study in college. That was no different for me. Coming out of high school I was interested in many different areas, but couldn't nail down what I wanted my future career to be. After two years at Bismarck State College (BSC), I graduated with my Associate of Science degree. It was then I knew I wanted something different. I wanted to be challenged.

Growing up in Bismarck, I remember always being fascinated by planes, but I never thought of aviation as an opportunity for a career. I had no family in aviation, hardly ever flew on planes, had barely any experience in the field at all. But, what I did have, was interest. Not long after I graduated BSC, a friend of mine studying to become a pilot at the University of North Dakota (UND) sparked my interest in the aviation program there. Her stories of flying and all the specialties in aviation gave me the urge to try something new. So, I decided to take a challenging adventure and study Airport Management at the UND.

Everything I experienced while enrolled in this program was foreign and taxing. I had to work harder and study more than I had ever experienced, but I absolutely loved it. Every day was something new and exciting – from talking on radios and learning how to be an air traffic controller, to understanding the many aspects of airport business, to the day I flew a plane for the very first time, I was hooked. The opportunities I had at UND are ones that have helped me grow my knowledge and experience in this field. Those opportunities included, multiple job shadowing trips to North Dakota airports, as well as, an in-depth tour of the

Denver International and Centennial airports in Colorado. Those experiences were great and unforgettable, but two of the most rewarding opportunities I received during my time at UND, were working on the State Economic Impact Study and the internship I achieved.

During my senior year, I was among four students recommended by my professor to work with Jviation conducting research for the North Dakota Economic Impact Study put on by the North Dakota Aeronautics Commission. Working on this study showed me a much different side of aviation. My duties included contacting airport managers throughout the state to collect data regarding their specific airports; identify, contact, and document other airport users and lastly, document benefits from aircraft/aerospace manufacturing and unmanned aerial vehicles. Not many students get the chance to work on projects as large as a State Economic Impact Study while still in school. We were given this opportunity by the exceptional professors at UND, who genuinely care about your future and want to help you achieve your highest potential.

My experiences at UND played a pivotal role in helping me secure an internship at the Bismarck Airport. Being able to come home and work at the airport that I grew up with was the perfect ending to an amazing college career. I would never have had this opportunity without the exemplary instruction and focused support I received from my professors. My time at this airport has given me the venue to apply what I learned at UND to real life situations. My internship at the Bismarck Airport provided many opportunities for me to be active in a number of different roles at the airport, including administrative duties, operations and maintenance. Some of the tasks I have completed, include preparing and updating airport manuals, assisting with the preparation of applications for federal and state financial aid, putting together contracts, attending conferences, and helping put together projects, including a new training program for employees. Working side by side with the Bismarck Airport directors has been a valuable opportunity to develop and sharpen my skills in all aspects of airport management. I have learned many great things during my internship at Bismarck and have had the invaluable chance to build lasting relationships that will help me as I continue in my career. I am excited to continue in the field of aviation, and I can't wait to see what the future holds.

Eternal FLIGHT



Leon F. Dubourt, 82, of Walhalla, passed away peacefully, with his family, Saturday, January 23, 2016 in Grand Forks. Dubourt was very involved in the support and maintenance of the Walhalla Airport Authority and was in partnership with Robert Thornberg and the development of Sweet Pro products.



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Industry Letter Calls For Uniform UAS Regulation

The Aircraft Owners and Pilots Association (AOPA) along with nine other aviation groups, signed a letter opposing a proposed amendment to the U.S. Senate's FAA Reauthorization Act that would do away with federal preemption in the integration of unmanned aerial systems (UAS) into the National Airspace System.

AOPA Senior Vice President of Government Affairs Jim Coon said, "AOPA's primary concern is the safety of pilots and passengers of manned aircraft and the best way to ensure the safe integration of UAS's into the airspace is to have clear and uniform rules across the country."

Section 2152 of the FAA Reauthorization Act calls for federal preemption in UAS regulation but an amendment proposed by Senator Dianne Feinstein would eliminate that preemption and allow states and local governments to propose their own rules and regulations.

According to the letter, "Proposals by state and local governments in these areas have the potential to create a complicated patchwork of laws that may erode, rather than enhance, air safety." The letter goes on to say that nonuniform regulation could have, "a profound effect on the operations of the manned aviation community."

AOPA Announces Flying Club 150 Giveaway

The Aircraft Owners and Pilots Association (AOPA) will award a Reimagined Cessna 150 to a startup flying club. The announcement was made by AOPA President Mark Baker at a Pilot Town Hall on April 6 at the Sun 'n Fun International Flyin and Expo in Lakeland, Florida. To enter AOPA's Flying Club 150 Giveaway qualifying clubs must complete an online application, which will be judged by a panel of experts. The deadline for applications is September 1, 2016 at 11:59 pm and the winning club will be notified on or about October 1, 2016.

"Flying clubs and Reimagined aircraft are great options to bring down costs and get pilots flying more," said AOPA President Mark Baker. "By bringing them together we hope to get more pilots learning about flying clubs' benefits, and help get a new flying club off the ground."

AOPA's Flying Club initiative helped create 10 new flying clubs in 2015 and offers benefits including free scheduling software, a premium listing in the AOPA Flying Club Finder, exclusive insurance rates, and access to networking events.



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AOPA Air Safety Institute Releases Video Aimed at Collision Avoidance

The Aircraft Owners and Pilots Association (AOPA) Air Safety Institute (ASI) has released a new video aimed at informing pilots about how to avoid midair collisions.

This link helps pilots to know when and where most midair collisions occur as well as steps to reduce the risk. www.aopa.org/news-and-media/aopa-live

"While there are only an average of about five to ten midair collisions a year, the risk is not zero, and the AOPA Air Safety Institute is committed to working with pilots to bring that number down," said ASI Senior Vice President George Perry. "This video does a great job pointing out the times and places where extra vigilance can prevent midair collisions."

The video, made possible by the Canadian Owners and Pilots Association (COPA) Flight Safety Foundation and Donner Canadian Foundation, looks at some of the commonalities among midair collisions, and offers some strategies for minimizing your chance of being involved in one.

Aviation Groups Oppose Bill Limiting Flight Training For Veterans

Joe Kildea, AOPA Director of Media Relations

AOPA and six other general aviation groups sent a joint letter to House leaders opposing legislation that would make it harder for veterans to pursue aviation careers.

The Veterans Employment, Education, and Healthcare Improvement Act (H.R. 3016) would cap flight training tuition and fee benefits at \$20,235, a move the Feb 9 letter warns will "cause immediate and alarming changes to collegiate flight-training degree benefits for our nation's military veterans."

"There are great jobs in aviation and our nation's veterans have earned a right to pursue those opportunities," Jim Coon, AOPA senior vice president of government affairs. "By capping flight training benefits, this legislation would effectively put flying careers out of reach for many vets."

Without a sizeable, out-of-pocket investment, "a veteran would be unable to attain an aeronautical college degree with a commercial pilot license," the groups wrote.

In addition to AOPA, the letter opposing H.R. 3016 was signed by the Experimental Aircraft Association (EAA), General Aviation Manufacturers Association (GAMA), Helicopter Association International (HAI), National Air Transportation Association (NATA), National Association of State Aviation Officials (NASAO), and National Business Aviation Association (NBAA).

Last year, AOPA and other aviation groups spoke out numerous times to protect flight training benefits for veterans.

GA groups fight to protect flight training funding for veterans.

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More Investment Needed in Aviation Infrastructure

By Dan Thompson, Fargo

Here in North Dakota, simply traveling from town to town is very time consuming. Distances are long, and while those long stretches of highway provide plenty of business for my paving company, it also means managing different job sites, which is time consuming. On top of that, we have a short work season and work throughout the region on jobs in North Dakota, Wyoming, Montana, South Dakota and Minnesota, which adds even greater distance.

Fortunately, my company has its own aircraft, a Cessna 206, that makes getting to multiple places quickly a lot easier. At least once a week, sometimes more, I fly to our job sites to meet with engineers, inspect progress, bring critical parts that would otherwise hold up work, or bid on new projects.

Recently, after being hit by lightning, our asphalt plant in Redshirt, South Dakota, near the Black Hills was out of commission. I flew to the plant through the night, with our mechanic and his specialized tools and parts in order to minimize plant downtime in the morning. The unmatched versatility of general aviation allowed us to get the plant operational without losing the next work day.

I am not alone. General aviation in North Dakota represents \$856 million in total economic output, and airports in the state support more than 12,000 jobs. It also makes a considerable difference in the lives and communities of North Dakota. I volunteer with Angel Flight, which provides flights to patients in need of specialized medical care in other regions of the country at no cost. I also volunteer with LightHawk, which lends aerial support to conservation efforts. During the 2014 saltwater pipeline spill near Bear Den Bay, I took a doctoral student from the University of North Dakota to document the extent of damage, particularly to the Mandan, Hidatsa and Arikara Tribes (MHA Nation).

But on the other side of the country, "inside the beltway," some interests are now pressuring Congress to privatize the air traffic-control system. They've proposed removing congressional oversight of our aviation system and giving control to a private board. While this all sounds good and well, the biggest commercial interests—the same ones that have already cut service to towns by 20 percent—would be running our air traffic-control system. You can imagine where this will leave small businesses, airports, and rural communities—last.

We should be investing in our communities and small businesses, and we should all be investing more in our national aviation infrastructure. Let's ensure that our aviation system continues to serve communities of all sizes, not big commercial interests.

Thompson is the President of Border States Paving and a member of the Alliance for Aviation Across America.

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Aviation Career Exploration



Above, Kyle Latendresse experiences a cockpit in a plane at the Dakota Territory Air Museum during the museum's aviation camp for third- and fourth-graders. This is the third year of camps, which featured a mix of education sessions and hands-on experiments as well as the opportunity to listen to re-enactors portraying Orville and Wilbur Wright and Amelia Earhart.



Keith Johnson helps a group of children at Dakota Territory Air Museum aviation camp with an experiment demonstrating the principles of thrust. They balloon was released to travel along a wire, where its propulsion was determined by the air inside.

Michelle Saari with Dakota Territory Air Museum's board talks to children about the parts of an airplane during the museum's aviation camp in Minot.



Photos by Jill Schramm

AAND Update

By Matthew Remyne

Another great Upper Midwest Aviation Symposium is in the books. The 2016 symposium was special for me, as this was the first year I was President of the North Dakota Airport Association and had the opportunity to see firsthand how everything came together. I can honestly say I was unaware of how much time and effort volunteers provide to run this fantastic event. On behalf of AAND, I want to thank the North Dakota Aviation Council and all of the volunteers for a job well done. Also to be commended is the great symposium speakers hosted by AAND.

Congratulations to the Jamestown Regional Airport for being selected as the Commercial Service Airport of the Year and to the Killdeer Airport on being selected as the General Aviation Airport of the Year. These two well-deserving airports had several great accomplishments in 2015. Killdeer's highlights included, opening an airport that had been closed to the public for many years, installing a new fuel farm and creating community

awareness. Jamestown's highlights include gaining regional jet service to Denver, working with the local high school and university to promote aviation education, the purchase of a new airport fire truck, and several public relations campaigns. Again, congratulations, and thank you for promoting aviation in your communities.

Soon enough, the warmer weather will be upon us, and with that, more activity on our airfields. With the changing of the seasons, everyone should be cautious of the increase in wildlife activity. Remember to report wildlife strikes. As we near the end of spring into summer, construction projects will be starting at airports across the state. Be sure to check the NOTAMs for taxiway and runway closure that can occur during construction, and be vigilant when operating at an airport with construction. I hope everyone has a fantastic spring.

AAND

ATC Privatization

NDEAA

By Darrel Pittman

ATC "privatization" is currently a hot topic. The privatization of the United States Air Traffic Control system (HR 4441) is an issue that should be discussed by everyone involved. This bill would move air traffic control services from the FAA to a corporation overseen by a board. How will the general public be affected by this? Will it be beneficial for everyone concerned?

We have been told that the airlines will be in charge of the system. One concern I have, is that if the airlines are running the system, they may give more attention to their needs than to general or military aviation. I'm sure there is a whole lot of money and many advantages to be had by controlling this industry, or it would not be proposed.

From 1997 to 2006, I worked at the Minot, control tower, serving as manager from 1998 until my retirement from the company. Minot is a contract tower run by a private company, Midwest Air Traffic Control (MATC). My experiences with MATC and the people at this facility were some of the best of my air traffic control career. However, this was a private company, and they were under the direct control of the FAA.

The National Air Traffic Controllers Association (NATCA) intends to support this privatization. I don't necessarily agree with them on this issue. According to reports, Delta Airlines is the only airline opposing the change. They claim it would cause air fares to rise; good point. The Experimental Aircraft Association (EAA)

is strongly opposed and feels that the bill would leave general aviation without much representation. The Aircraft Owners and Pilots Association (AOPA) is waiting to learn if the bill will protect the interest of general aviation. The National Air Transportation Association (NATA) does not support the bill.

Another concern I have is how smoothly the airlines will interface with the enroute centers after the air traffic leaves the control tower and approach controls. The larger approach controls and towers also need to be considered, i.e. Atlanta, Chicago and Minneapolis. I believe those larger facilities will find it technically difficult to deal with in a privatized system.

If we look at the record of privatization of public services, for example, the United States Postal Service, we can see that the public is not always best served by turning a necessary service over to a private company.

All of these issues should be studied and discussed extensively by all of the aviation groups involved, as well as the general public. The North Dakota Aviation Council (NDAC) should be the group to take the lead. As always I'll be there to assist.

I'd like to take this opportunity to thank all of you for the wonderful response at Upper Midwest Aviation Symposium (UMAS) to my book *Cleared for Takeoff*. I really appreciate that support.

Cleared for Takeoff, Darrel

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Aviation as a Career

NDBAA

By Bradley Fields

It was one of those fall mornings you dream about in North Dakota...endless blue sky with light winds and the ever changing colors of the trees dwindling in the background. My father turned off highway 10 down Airport Road towards the terminal of the Jamestown municipal airport. Always interested in aviation, he could not resist the airport open house and the opportunity to see an airplane I had flown for years.

At the open house, my father sipped his coffee and engaged in a conversation with one of the pilots. My father couldn't help but ask if somehow he knew me. The pilot's statement captivated me, "Yes I flew with him," and then it struck me. What does that phrase mean? What does it mean when someone says, "I flew with them?"

To me it means the opportunity to share sunrises, sunsets, incredible views all sorts of weather, moments of apprehension, moments of laughter, moments of fun, moments of boredom, and so many other things I cannot describe in one article. It means sitting in the cockpit and engaging in a conversation deeper than that of an average office water cooler conversation.

My career has taken me to places and people that I never could have imagined. I have had the opportunity to fly with people from all 50 states and several foreign countries. The one thing that unites us all is the common language and love of aviation. It always astounds me when I first meet someone and tell them I am a pilot, how curious people are and how unique people think we are. It reminds me that we are all ambassadors of aviation, and it's up to all of us to transmit our love of aviation to others.

The worsening pilot shortage will soon reach catastrophic proportions, particularly at regional airlines. One of the fixes is for all of us to be positive ambassadors of aviation, to take time to answer questions from the average person, to tell our story of aviation and how we became interested in it. In order to possibly provide that "spark" for someone who might be interested in an aviation career. Yes, I have had good days and bad days in aviation, but it has been a fun and exciting journey that I would not change for anything.



5th Annual Aviation Poker Run was Saturday May 7th Sponsored by Mandan Aero Center



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NDAAA Update

By Andy Tibert

Public relations for the ag aviation industry continues across the state with advertising targeting farmers, encouraging the use of aerial application, and the general population, to decrease the perception that aerial application is harmful to food. Additionally, Facebook is now being used as a tool to reach the general population and communicate with agricultural operators and pilots. Please LIKE the NDAAA page on Facebook at North Dakota Agricultural Aviation Association.

Sharing the airspace with small UAS remains a concern for aerial applicators, and efforts continue to establish communication with those operating UAS commercially and as hobbyists. Due to the inability of an ag operator to see a small UAS, the pilots are relying on the UAS operators to land their UAS upon sighting an ag aircraft.

The Tri-State Conference was held February 23-25, in Sioux Falls, where pilots from North Dakota, South Dakota, and Minnesota learned the latest products and techniques available to the Aerial Application business. One of the featured events at this conference is the Program Professional Aerial Applicators

Support System (PAASS) program, where applicators participate in several educational modules that promote safety and enhance critical aeronautical decision-making skills. Another benefit of this program is to improve public relations and environmental stewardship.

It is looking like an early spring this year, and it won't be long before the Ag Aircraft are busy in the skies of North Dakota!

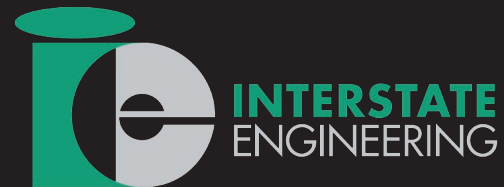
2016-17 NDAAA Board

Ryan Alme, President; Jeremy Seng, Vice-President and Keith Chase, Southwest Director Appointments were Chris Zimmer, NW Director and Andy Tibert, ND Aviation Council Representative. Continuing to serve as previously elected are Jayse Wharam, Northeast Director; Tim McPherson, Southeast Director; Glen Wharam, NAAA Director and Elly Rau, NAAA Support Committee. A special thank you to retiring President David Gust for his years of leadership.



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ADS-B, UAS, and Ag Aviation

By Michael Stolz, NDAAA Member

The GA community has been buzzing for a while about the 2020 ADS-B rule. At this point, its implementation into agricultural aviation will be behind most of the rest of the aviation industry, due to the fact that most of us spray clear of Class C and B airspace and under 10,000 ft. There could, however, be some benefits to an expeditious adaption to this technology in ag aviation, especially in relation to UAS collision avoidance. The intention of this article is to simply share some of the ideas related to this topic that have been banging around in my head over the last few months.

A couple of representatives from Appareo, a technology company from Fargo that deals in agriculture and aviation, gave a presentation at the Tri-State Ag Aviation Conference this winter regarding ADS-B and TIS-B technology and its potential to relate to ag aviation. To briefly recap the basics of this technology, as I understand it from the presentation, there are two types of ADS-B equipment that can be installed into an aircraft, ADS-B in and ADS-B out. When 'in' technology is installed, the aircraft can receive position and altitude information from other aircraft equipped with 'out' technology. An 'in' receiver can be as basic as a small unit set on the dash of the cockpit, which syncs to fore flight via blue tooth. TIS-B takes this technology the next step further. It allows an aircraft equipped with ADS-B 'in' and 'out' to receive ground station information regarding the position of aircraft equipped with a Mode-C or a Mode-S transponder.

Utilization of this technology for agricultural flying can go two ways: equip an ag plane with ADS-B 'out' technology, which would allow UAS operators to be aware of the potential for low flying aircraft in the vicinity, or equip an ag plane with ADS-B 'in/out' in order to receive position information from UAS. Here are the setbacks to this and where the discussion gets heated. Implementing ADS-B into a UAS is tricky, due to weight restrictions; ag pilots do not want another screen to pay attention to while performing their job; and, on the other hand, ag pilots do not want to trust a UAS operator to see and avoid them. Plus, legislation regarding UAS is far too slow to be effective to respond to technological advancements.

So far, I realize I have not said anything that a thousand other articles floating around the Internet have not beaten to death already. My intention is not to provide information, but to encourage those involved in aerial application to really consider a few things. We all know UAS is not going away, and there absolutely has to be a compromise on both sides of the fence in order for us to share the airspace safely. Hopefully, legislation will catch up and implement something that makes sense. Until then, what are our options? What can we do THIS season to avoid a collision? Even if every UAS owner in your area was willing to come up with a plan to share the airspace, what would you

suggest? There is no right answer here. A temporary solution, if UAS owners were willing to cooperate, could be to install ADS-B 'out' capability in our airplane, and negotiate with UAS operators to monitor the area with a secondary screen, such as a tablet, equipped with ADS-B 'in.' If a proximity alarm was programmed into the software, then the UAS operator could operate as usual, until the alarm went off, alerting the operator to a potential collision hazard. I realize this would take a great deal of trust on our end, as well as a great effort to educate the UAS operators. Regardless of the solution you think is best for your area, it would be great to have some kind of ongoing communication with agricultural specific UAS operators within our operations area. Awareness can be made at a local level for each applicator.

Some say that it is not the commercial UAS operator they are worried about, but rather the kid that just got the toy for his birthday, completely unaware that there could be a potential for disaster. Although they have never been so cheap and easily accessible, unmanned aircraft have existed a very long time and have been flown relatively safely by hobbyists and children. And, although the volume of this activity has increased with the drone age, unfortunately there is still very little we can do for now other than to do our best to see and avoid this type of UAS activity.

To me, this whole issue boils down to the fact that it is very difficult to guarantee 100% collision avoidance in any sector of aviation, especially when we begin to consider large aircraft that are capable of flying without a human on board. The steps that we, as in industry, do to avoid even one catastrophic collision are steps well taken. The steps that we, as individual pilots and operators, do to avoid even one catastrophic collision are also steps well taken. I wish for all a safe and productive season.

Michael Stolz holds an ASEL/AMEL commercial pilot certificate and instrument rating and has flown professionally for 5 years. He currently is fulfilling his dream of working as an aerial applicator in central ND. He is a member of the NDAAA.

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Preparing Your Aircraft After Winter Storage

By Mike DeVries, NDPAMA

The flying season is almost upon us, what should you do, more than a through walk around, to ensure that the first flight after storage will be a safe one?

Make sure that the battery is in good condition and fully charged. It is not only the first start after a period of inactivity that may put a heavy demand upon the battery, but it would also be beneficial to have enough battery power to help with some additional engine cranking. Bring your battery to your maintenance shop and have your mechanic perform a capacity check of the battery, after which he will top charge it. A capacity check of the battery with a slow charging rate has a more effective chance of recovering a discharged battery.

Check the fuel for water. Condensation will form on the inside walls of a fuel tank and the fuel surface if the fuel temperature is below that of the dew point. This can cause water to become suspended in the fuel, as well as, water to form in the bottom of the tank.

Perform a full walk around. This should include checking the condition of the brakes. It is possible that the brakes could be seized, so care should be taken to make sure that the brakes are free.

Check the tires for proper inflation and signs of weather checking.

During the walk around, remove the control locks, pitot and static covers, and any engine plugs that you may have installed into the engine inlets, exhaust, etc. Once the plugs are removed, have a thorough check for any stowaways that you might have. Birds, animals, and insects all find dormant aircraft a good place to make their home, so take a good look in the engine compartment, and in all accessible areas of the airframe, especially pitot and static vents. A good flashlight is very helpful.

If there is any evidence of insect debris in the pitot and static vents, do not be tempted to just remove the visible blockage, think what may be happening inside. Some insects use these vents as homes and use the pipe runs as small breeding areas. So, what you found as a blockage at the vent opening may only be an indication that there is another obstruction of insect larvae further down the line.

If you find evidence of insect infestation at the vent opening, it is best to have a mechanic, or your avionics shop, check the whole line for obstructions. This is often not too complicated, and it is better to find nothing on the ground than to be left in the air without pressure instruments.

With the cowling removed, a thorough engine compartment inspection is also necessary. If the engine has been stored for several months, it should have been inhibited with storage oil and desiccant plugs installed in place of one set of spark plugs to keep moisture out of the combustion chamber. If preservative oil was used, drain the preservative oil, replace the filter, if necessary, and refill with an operating oil. With the desiccant plugs removed CLEAR THE PROP AREA, and with external power connected the, engine can be turned over with the starter motor, THE FUEL

SHOULD BE TURNED OFF, THE MIXTURE LEVER IN THE IDLE CUT OFF POSITION, AND MAGNETOS IN THE "OFF" POSITION. Without engine compression offering any resistance, the engine will turn over quite rapidly. This should allow the oil pump to rotate supply oil to the oil gallery, thus limiting the time that the engine will run without full lubrication after engine start.

Now the engine is prepared for the season, why not consider the other areas of the aircraft that might need lubrication? Ask your mechanic to lube the aircraft joints, such as flap and control operating linkages and other rollers or bearings that may have dried out due to inactivity or water intrusion.

With applications that have grease fittings, fresh grease should be applied, so that it flushes out the old product and fresh grease is seen emerging from the part being lubricated. The joint cycled to help the grease to penetrate.

A thorough check of all wires is also a good idea; mice have a taste for electrical wire coating and will chew through the coating, if not all the way through the wire, which could lead to short circuit or complete failure of the system. Test all electrical systems prior to leaving the ground.

Finally make sure that full and thorough preflight and run ups are completed. If the aircraft has been in extended storage and not run for some months, gums and lacquers could have formed in the fuel system, which could restrict fuel flow - especially if Mogas has been used. So, ensure that full power is available when doing the magneto checks and check the throttle stop idle speed.

One final thing to pay attention to is variable pitch propellers. These are normally operated by engine oil pressure being fed to the propeller hub, and inactivity could allow the oil that was in the hub last fall to drain out. Make sure that the propeller has full oil supply by cycling the pitch control several times during the ground run.

Schedule some time at your favorite maintenance shop and have them ensure that your first flight of the season will be as enjoyable as all the rest.

Surprises are best left for birthday parties!!!!



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CALENDAR *of* EVENTS

Check out the online calendar
for details on these events:
www.NDAC.aero

June 2016

Milnor Fly-In — June 4

Devils Lake Airport Fly in — June 04

Manitoba Air Show — June 4-5
Winnipeg, MB

2016 Alexandria Airport Weekend
June 10 to June 11
Chandler Field - Alexandria, MN

Fargo Air Museum's Camp — June 11
Fargo Air Museum - Welding

Planes and Pancakes — June 12
Y19 - Mandan

JT Rice North Dakota Pilots for Christ
June 19
34th Annual Fly-In, Golf Ball Drop and
Celebration

Williston Airport Fly In Breakfast
June 25

Enderlin Municipal Airport
Breakfast Fly-In — June 26

July 2016

Mercer County Regional
Airport Fly In — July 02

Fargo Air Museum's Camp — July 09

West Fargo Fly-in — July 09

Gwinner Airport Fly-In
Breakfast — July 16

Hillsboro Fly-In — July 20

EAA Air Venture — July 25 to July 31
Osh Kosh, WI

Bowman Fly In — July 30

August 2016

Northern Neighbors Day — Aug 13
MAFB - Open House and Fly-In

Fargo Air Museum's Camp — Aug 13
Fargo Air Museum - Photography

Kulm Windfest — Aug 20
D03 - Kulm

EAA Chapter 1008
Movie Night — Aug 27
Y19 Mandan

Milnor Fly-In
Barbeque Supper — Aug 28

September 2016

International Peace Gardens
Fly-In — Sept 5

Barnes County Municipal
Airport Fly-In — Sept 10

Fargo Air Museum's Camp — Sept 10

Bismarck Fly-In — Sept 11

October 2016

Fargo Air Museum's Camp — Oct 08
Fargo Air Museum - October
Sky/ Rocket Propulsion

EAA Chapter 1008 Chili
Feed & Contest — Oct 15
Y19 Mandan

November 2016

Fargo Air Museum's Camp — Nov 12
Model Design and Building

*Please send your upcoming
dates to ndaero@nd.gov*

