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FAA Selects Unmanned Aircraft Systems Research and Test Sites

The Federal Aviation Administration (FAA) announced the selection of the six public entities that will develop unmanned aircraft systems (UAS) research and test sites around the country. These congressionally-mandated test sites will conduct critical research into the certification and operational requirements necessary to safely integrate UAS into the national airspace over the next several years.

Today, UAS perform border and port surveillance, help with scientific research and environmental monitoring, support public safety by law enforcement agencies, help state universities conduct research, and support various other missions for government entities.

In selecting the six test site operators, the FAA considered geography, climate, location of ground infrastructure, research needs, airspace use, safety, aviation experience and risk. In totality, these six test applications achieve cross-country geographic and climatic diversity and help the FAA meet its UAS research needs.

A brief description of the six test site operators and the research they will conduct into future UAS use are below:

- **University of Alaska.** The University of Alaska proposal contained a diverse set of test site range locations in seven climatic zones as well as geographic diversity with test site range locations in Hawaii and Oregon. The research plan includes the development of a set of standards for unmanned aircraft categories, state monitoring and navigation. Alaska also plans to work on safety standards for UAS operations.

- **State of Nevada.** Nevada's project objectives concentrate on UAS standards and operations as well as operator standards and certification requirements. The applicant's research will also include a concentrated look at how air traffic control procedures will evolve with the introduction of UAS into the civil environment and how these aircraft will be integrated with NextGen. Nevada's selection contributes to geographic and climatic diversity.

- **New York's Griffiss International Airport.** Griffiss International plans to work on developing test and evaluation as well as verification and validation processes under FAA safety oversight. The applicant also plans to focus its research on sense and avoid capabilities for UAS and its sites will aide in researching the complexities of integrating UAS into the congested, northeast airspace.

- **North Dakota Department of Commerce.** North Dakota plans to develop UAS airworthiness essential data and validate high reliability link technology. This applicant will also conduct human factors research. North Dakota's application was the only one to offer a test range in the Temperate (continental) climate zone and included a variety of different airspace which will benefit multiple users.

- **Texas A&M University – Corpus Christi.** Texas A&M plans to develop system safety requirements for UAS vehicles and operations with a goal of protocols and procedures for airworthiness testing. The selection of Texas A&M contributes to geographic and climactic diversity.

- **Virginia Polytechnic Institute and State University (Virginia Tech).** Virginia Tech plans to conduct UAS failure mode testing and identify and evaluate operational and technical risks areas. This proposal includes test site range locations in both Virginia and New Jersey.

(continued on page 5)

Please display the UMAS poster on pages 14-15. ***Hope to see you in March!***

AROUND the PATTERN

Kris Magstadt, Editor

Happy New Year! With this time of year comes my urge to clean out "stuff." As I was going through all the aviation and Cessna memorabilia from my dad, I ran across a few items I knew nothing about. One example, was a bent metal propeller. Why did my dad give me that? And then, there was the airplane tire that I had asked for to decorate with … what was I thinking? There are so many pieces that I cherish, but for some reason I felt the need to make my dad happy and take everything he thought I should have. I am fortunate to have several amazing signs, some of dad's awards, furniture from the terminal and much more. We have decorated our family room with Cessna everything … no room left. And pictures of airplanes …. UFFDA! Some are airplanes that I know nothing about … mostly from the Bowman airport. So, I've decided to pass some of this memorabilia along to places where they will appreciate them, like Buckstop Junction and the Watts hangar and the Bowman Historical Society.

Cessna had posters every year with each airplane model for advertising. One year, my dad actually received a 210 that had been used for marketing material … N2311F. I hang that with pride, and my dad's autograph and business card, in my home. The 210 was a family favorite. As I was looking through some photos, I found one with 2311F on its belly and prop bent. Guess what!! The prop looked exactly like the one I have in my basement! Now I can frame that picture and put the prop with it somewhere in our "museum to dad." Not sure how it happened or who was flying, but it now makes sense.

So, if you have items lying around your house that you know nothing about, don't just throw them away, try to find the story behind them, because they may mean more than you think. Also, if there are items that are historical and you don't want them, share them with the museums and historical societies in where they originated. Keep that history alive!

Lastly, I would like to personally thank Larry Taborsky for all of his support and friendship during his time at the Aeronautics Commission. I truly enjoyed working with Larry and will miss his creativity and sense of humor. Thank you, Larry, and wishing you clear skies as you fly to your next adventure.

Wishing you a 2014 full of happiness and memories.

"Isn't it astonishing that all these secrets have been preserved for so many years just so we could discover them!"
— Orville Wright

Rod Brekken, Chairman
North Dakota Aviation Council

CHAIRMAN'S COMMENTS

Sure Glad Bernoulli Asked Why!

Some days when you pick up the paper and start reading, you wonder, how did something like this happen? It shows accidents, floods, fires, human suffering and tragedies that make a horrendous impact on lives, families, relationships and economies. Some of the news is good though, thankfully! Weddings, births, sports, light-hearted articles and the funny papers are the good things we read. Sometime "the good" doesn't outweigh "the bad" though, so we are left with a feeling of asking the question, "why?" Hopefully some of the following questions help off-set the bad news items.

- *Why do people order double cheeseburgers, large fries and a diet coke?*
- *Why do banks leave the vault doors open and then chain the pens to the counters?*
- *Why does the sun lighten your hair, but darkens your skin?*
- *Why don't we ever see the headline "Psychic Wins Lottery?"*
- *Why lemon juice is made with artificial flavoring and dishwashing liquid is made with real lemons?*
- *Why isn't there mouse-flavored cat food?*
- *Why didn't Noah swat those two mosquitoes?*
- *Why don't sheep shrink when it rains?*
- *Why are they called apartments when they are all stuck together?*

As you all remember, "why" was a favorite question we heard from all of our kids as they grew up. Hopefully we all answered those important questions with the best answers we could come up with, and hopefully those answers carry on to the next generation. We wouldn't want to mislead any future grandchildren as to the meaning of life, or why we consider the Bernoulli Principle the most important factor in our aviation lives. Thank goodness he was around to ask "why?" and solve that question. Okay, enough of the "why," other than to say why not plan on attending the Upper Midwest Aviation Symposium, March 2-4, 2014, in Grand Forks at the Alerus Center? It's the 30th anniversary of the Upper Midwest Aviation Symposium. We plan to celebrate the last 30 years, educate those who come to learn new things, facilitate the event so that everyone has a great time with family and friends, and dedicate this special event to those who have come before us and had the ability to foresee that this "coming together event" would provide for a place and time for aviation to bloom and prosper. Be sure to make your hotel reservations by January 30, so that you can get the special rate. ***See you in Grand Forks!***

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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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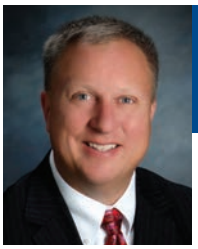
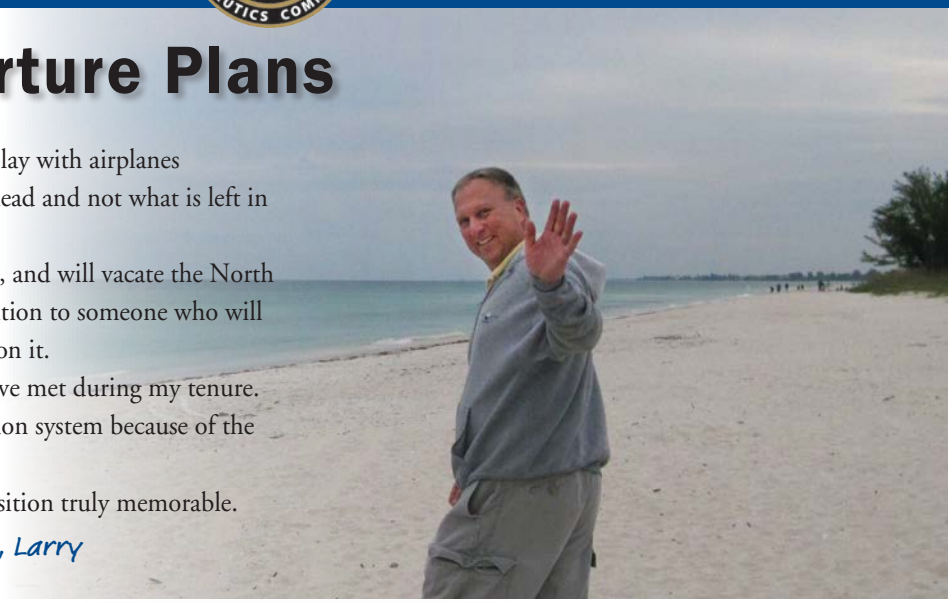


Larry Taborsky, Director
North Dakota Aeronautics Commission

DIRECTOR'S CHAIR

Departure Plans



Life is short, and those of you who work or play with airplanes understand that the magic of life is what lies ahead and not what is left in your slipstream.

Circumstances dictate that I take a sabbatical, and will vacate the North Dakota Aeronautics Commission Director position to someone who will take what has been accomplished and build upon it.

I value the friends and professionals that I have met during my tenure. North Dakota has developed an excellent aviation system because of the sum of all of your efforts.

Thank you all for making my time at this position truly memorable.

Sincerely, Larry

Airport of the Year Nominations Requested

The North Dakota Aeronautics Commission and the Airport Association of North Dakota are soliciting nominations for the annual airport of the year awards for:

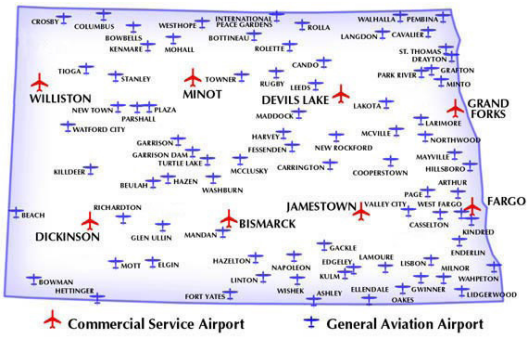
- 2013 Commercial Service Airport of the Year
- 2013 General Aviation Airport of the Year

To nominate an airport, complete the nomination form, found on the North Dakota Aeronautics Commission Website at www.nd.gov/ndaero/airport/airport-of-the-year.html, or contact Kyle Wanner at kcwanner@nd.gov. Public recognition, along with the formal award, will be presented to representatives of the winning airport during the Upper Midwest Aviation Symposium (UMAS) banquet on the evening of March 4, 2014.

Nomination forms are due to the North Dakota Aeronautics Office by February 7, 2014, and the winner will be selected and notified prior to UMAS. Criteria for selection include:

- Aviation Advocacy and Community Outreach
- Airport Management and Commitment to Aviation Advancement
- Special Events and Recognition
- Airport Construction and Beautification Projects

Don't Forget!



Continued from cover...

FAA Selects UAS Research and Test Sites

Across the six applicants, the FAA is confident that the agency's research goals of System Safety & Data Gathering, Aircraft Certification, Command & Control Link Issues, Control Station Layout & Certification, Ground & Airborne Sense & Avoid, and Environmental Impacts will be met.

"These test sites will give us valuable information about how best to ensure the safe introduction of this advanced technology into our nation's skies," said Transportation Secretary Anthony Foxx.

The FAA's role in the UAS program is to help the test site operators set up a safe testing environment and to provide oversight that ensures the sites operate under strict safety standards.

"Safety continues to be our first priority as we move forward with integrating unmanned aircraft systems into U.S. airspace," said FAA Administrator Michael Huerta. "We have successfully brought new technology into the nation's aviation system for more than 50 years, and I have no doubt we will do the same with unmanned aircraft."

The FAA has established requirements for each test site that will help protect privacy. The requirements were developed with public input and the final requirements were published on November 14, 2013 in the Federal Register. This followed the February Federal Register notice that asked for public comments on the draft privacy requirements for the six test site operators. Among other requirements, test site operators will be required to comply with federal, state, and other laws protecting an individual's right to privacy; have publicly available privacy policies and a written plan for data use and retention; and conduct an annual review of privacy practices that allows for public comment.

On November 7, the FAA released its first annual Roadmap (http://www.faa.gov/about/initiatives/uas/media/UAS_Roadmap_2013.pdf) outlining efforts needed to safely integrate UAS into the nation's airspace system. The Roadmap addresses current and future policies, regulations, technologies and procedures that will be required as demand moves the country from today's limited accommodation of UAS operations to the extensive future integration of UAS into the NextGen aviation system.

As required in the 2012 FAA Reauthorization, the Joint Planning and Development Office has developed a comprehensive plan to safely accelerate the integration of civil UAS into the national airspace system. That plan details a multi-agency approach to safe and timely UAS integration and coordination with the NextGen shift to satellite-based technologies and new procedures.

For more information go to http://www.faa.gov/about/initiatives/uas/.

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Bob Simmers
bobs@bismarckaero.com

TRIM TAB

What Have You Done For Aviation Lately?

I just got back from a day long road trip with an old aviation friend. It was a great time to get caught up on each other's lives and the road that each had traveled the past 20 years. It was great to talk about how our families have changed, our children grew, the roads that they have taken, the ups and down that we have encountered, the obstacles navigated and victories won, how our work evolved and how we spend our free time and the hobbies that we have. Then, we talked about aviation and where it is headed, what drew us to aviation, he as a hobby flyer and I as a commercial aviator.

We are both excited about the challenges presented by the evolution of the UAS industry and are eager to see it mature, he from a user standpoint, and I from an industry perspective. We are both amazed at the rate that technology continues to progress. What will "Sense and Avoid" bring to the aviation world.

We discussed our concerns over the continuing and growing need for technicians and pilots in our industry. How do we bring new people in to fill the void that will be created by the increase in air travel, freight demands, agricultural advancements, commercial aviation and the support of all of the above? The discussion then turned to: "What got you excited about aviation?"

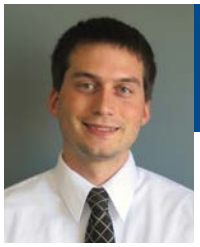
For him it was at a young age, growing up on a farm, when his dad saw the interest and sent him down the road to a neighbor with an airplane. This was his exposure to aviation and would be the spark that ignited the fire. For me, I grew up on a farm where flying was part of the daily routine. It was like riding a bicycle. I actually took it for granted. Now, it is only coincidence that we both grew up on a farm, but it is not coincidence that we both had a mentor; he, the neighbor with an airplane, and I had one in my family. The common thread here that we both had a mentor.

Most of us involved in aviation had someone who invited us "across the fence" and put aside the myth that you have to have money to get into aviation. There are some that will ask the question, "How do you make a small fortune in aviation?" The answer being to start with a big one. Well, like anything else, where there is a will there is a way. As is customary in the US, hard work gives you the best chance to follow your dreams. Aviation is no different.

We are now seeing more awareness programs entering schools and other organizations where young people can be exposed to the many roads to be traveled in aviation. The North Dakota Aeronautics Commission has set aside a sizeable budget available for aviation education. Aviation Education North Dakota and Aviation Works for North Dakota are shining examples of recently developed aviation education programs.

So, what have you done lately to inspire someone into aviation? Have you given a ride to a potential young aviator? Are you part of EAA and the Young Eagles Program? Good aviators don't just happen overnight, it takes time. Are you a mentor? It's not to late to spread the enthusiasm.

Till Next Time, HAPPY LANDINGS



Kyle Wanner, *Aviation Planner*
North Dakota Aeronautics Commission

Developing a Public Relations Plan For Your Airport

Public opinion is a powerful force, as it can elect presidents, change laws, and even close airports. Some airport operators and aviation enthusiasts believe that keeping an airport in a low public profile may help to avoid difficulties. In all actuality, a low profile may hurt the airport in the end. The mere fact that the airport exists means that people in the surrounding community will have opinions about it. The best time to start a positive public relations program is before the airport is in danger of losing local support, and there is no better time to start than the present.

Many airport related local public relations problems arise from a lack of understanding by the community of the airport's value. Most opponents believe that an airport is just for hobbyists, and therefore, frivolous and expendable. It is up to local airport leaders to carefully educate these people on the value of the airport and aviation to the local community. An effective local public relations program should include community involvement, political action, and media relations. Ideally, it should be launched before negative public opinion builds into action, and it should continue even when no crisis threatens. In my personal experience as an airport planner, the airports I have seen with good public relations and community support have been the most successful at developing and facilitating growth on an airport.

Before you can change public attitudes, you must compare the goals of the airport as being complementary to the community goals. If the community wants growth, point out how an airport has the ability to attract business. If the community wants safety, point to the role airports play in law enforcement or in movement of emergency supplies after a natural disaster, such as a tornado or a flood. Here are some elements you can gather that may prove helpful in educating your community regarding the benefits of your local airport.

- Airport Economic Impact
- Medical Emergencies
- Law Enforcement/Border Security
- Disaster Relief and Search and Rescue
- Flight Training and Education
- Military or National Guard
- Overnight Express Parcel Delivery
- Utility/Pipeline Control and Inspection
- Agricultural Support
- Business and Corporate Flights
- Aircraft Storage
- Air Taxi/Charter Services
- Aerial Surveying and Observation
- Tourism and Access to Special Events

Multiple national organizations exist (AOPA, NBAA, and AAAE) to help provide airport leaders with the materials needed to successfully implement a public relations plan. The North Dakota Aviation Council also has an "Aviation Works" program that provides free handouts and presentations to any individuals that would benefit from the utilization of the information. Lastly, the North Dakota Aeronautics Commission has a staff that can provide materials and suggestions in helping to support a local public relations plan at your airport. Information on the benefits of airports and studies that analyze the economic impact of all airports within North Dakota can be found on the North Dakota Aeronautics website or requested from the staff.

Let's continue to work together to build a positive message behind the benefits of our airports. A message that will continue to encourage community support and growth of aviation within the state of North Dakota.

Don't forget to nominate your favorite airport of the year to Kyle Wanner (kcwanner@nd.gov) or (701) 328-9650.

Joshua Simmers, Aviation Projects Manager
North Dakota Aeronautics Commission

Happy Contrails to a an Individual of Impact

The North Dakota Aeronautics Commission said "Happy Contrails" to their director, Larry Taborsky. He's been a driving force to raise North Dakota's voice of aviation before local entities, state agencies, and numerous federal agencies. He has been a tireless voice advocating for the benefit of all users in aviation – among common and competing voices at local, state, regional, and national levels. His pursuit of understanding all users' needs has made him a valuable asset in places and roles in which state government has often been absent. His humble manner, optimism, and work ethic while reinventing the capabilities of a state aviation agency will have a lasting impact on aviation in North Dakota; although his quiet manner has left him almost anonymous in these endeavors.

Larry Taborsky with Minot Real World Challenge team including High School students Caleb Silvers, Dylan Morris and Trevor Hoggan in Washington D.C.

Larry was hired in 2009 as the director of the North Dakota Aeronautics Commission. As North Dakota's economy has been booming beyond projectable figures, the state's aviation infrastructure has been utilized beyond its capabilities. Terminals have standing room only, aprons are out of parking, and pavement has been utilized beyond rated weights. Larry has taken seriously the Commission's responsibility to advise the governor in matters of aviation and activate doers. Larry provided critical airport infrastructure information to the governor's office, after which they budgeted an unprecedented $60 million for airports. Under his leadership, the Commission also contracted with a third-party non-partial university research institute to define the actual need for infrastructure to provide reliable, non-biased information.

Larry has worked tirelessly to communicate North Dakota's present and unique need to our local ADO, regional FAA contacts, state aviation officials, and even congressional offices and FAA leadership in Washington D.C. Additionally, he has been an ambassador to the local aviation business community, non-government aviation entities, and sought to provide awareness of the benefits of aviation in a time of unprecedented growth and correlating need. He was an active member of National Association of State Aviation Officials, and chair of their Air Service Committee, while locally advocating for and promoting air service to Jamestown and Devils Lake.

In the advent of Unmanned Aircraft Systems (UAS), Larry has provided communication for competing aviation interests, while settling for nothing less than an integrated concept. He has been a balanced voice for airspace users, while participating in the Upper Great Plains Unmanned Aerial Systems Coalition, then was appointed by the governor and congressional delegation to serve on the North Dakota Airspace Integration Team, which met with Administrator Huerta in Washington D.C. to discuss North Dakota as a potential test site for Unmanned Systems integration without reducing access to current users. Since the North Dakota Airspace Integration Team has completed their mission by submitting an application to the FAA, Larry has stepped up to an advisory role on the Northern Plains Unmanned Systems Authority, guiding UAS activity in North Dakota. Larry did not let a concern for development or economic benefit overshadow the needs of other air space users to work an integrated solution that exceeds what

any one party could have conceived. He assertively addressed infringement on General Aviation, while promoting the benefit of UAS evolving technology for General Aviation.

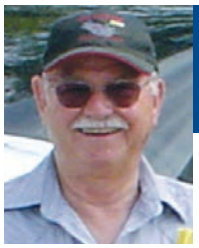
Since 2009, North Dakota has faced two significant military requests for special use airspace in North Dakota. Larry has taken his role seriously as representing an entire state of residents who benefit from aviation, while recognizing the military as a user of our air space. This ambassadorship has given him a respected voice in raising the concerns that a Powder River MOA expansion would invade commercial and medical traffic accessing southwest North Dakota. As the North Dakota Air National Guard has requested the area known as the Devils Lake Restricted Area Complex, Larry has used his position to ensure that its activation is only done in accordance with its utilization and that communication errors between the using entity and the general public are corrected through soliciting the FAA, flight service, contractors, United States Air Force, aviation associations, and general aviation to a conversation to find missing links and solutions. While no one has been in "the position" to correct these types of problems, Larry has taken it upon himself and the ability of the state aviation office to improve aviation for all users.

Larry Taborsky welcoming attendees to the North Dakota Aeronautics Commission listening session at the 2012 UMAS.

Larry has been a presence to advocate for responsible management and healthy working relations for the benefit of aviation and the community at large. He has smartly been a non-biased observer to promote aviation growth in airports that are overcoming obstacles. He has increased the Commission's ambassadorship in additional simple ways, such as building relationships through supporting local airports by attending as many fly-ins and other airport events as possible.

Since coming on board, Larry has been the sole state representative at the Unites States Air Force annual regional airspace meeting, asking them to think about transparency, responsible use, and states' needs and voice in airspace decisions. He has worked alongside the local Customs and Border Protection to understand their role and needs and requests for Temporary Flight Restrictions – doing his best to hold them to their word, while communicating their use, needs, and ease of passage to the general aviation community.

Under Larry's leadership, the North Dakota Aeronautics Commission staff has flourished in increasing aviation education in the state, increasing interaction with airports, and promoting aviation's positive image in the state. Not content with the status quo, an inactive role for state government, or federal decisions without state consideration, Larry has taken an assertive stance as a director, with results. His quiet manner and attempt to gain a full understanding from all airspace users has given him the insight to act responsibly and gain respect. Perhaps what has impressed his staff the most, is that while making a big impact on aviation, he has asked and enabled us to become more, while keeping his passion for aviation alive in small ways – like taking a child for a flight. *Happy contrails Larry!*



Lt Col Darrel Pittman, CAP

What's up in North Dakota Aviation?

North Dakota Aviation Hall Of Fame

I have been chosen to be on theNorth Dakota Aviation Hall of Fame board, an honor I've had more than once. Those of us on that board have a huge responsibility, placed on us by the North Dakota Aviation Council (NDAC). By that I mean, we are charged with selecting the most deserving aviator(s) to be placed in our North Dakota Aviation Hall of Fame. The rules are not very difficult for nomination. They are:

- Major achievements in North Dakota aviation.
- Significant contributions to the development of others in North Dakota aviation.
- Special services 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).

Due to our unique selection process, we have been copied by other states aviation groups. To view our Hall of Fame, go to www.ndac.aero click on the Hall of Fame tab and take a look at the North Dakota aviators we have installed. It's an impressive list of names. I'm proud to say I've known and had input into many of them.

The deadline for this year's selection is now past (November 30, 2013), but if you have a North Dakota aviator in mind to nominate, you can do so anytime between now and November 30, 2014.

Air Traffic Control

I have received a few comments on my last article about the beginning of the ATC program. Thank you. I plan to have more of that in the future. As many of you know, I've had a long and varied experience in that field (I can see Fred grinning now). I'm trying to build on my experience in telling the story, which goes back to the days before radar, when we did it by looking at flight strips and determining the traffic situation.

When I was in Minot as the manager of that control tower, I was offered the opportunity to go to Afghanistan for a year. That job offer was to instruct in controlling non radar en-route air traffic control to the hired controllers over there. It was a good and lucrative offer and I was enticed. But, Marlette put a stop to that. She said a 70-year-old man has no business in a war zone. I guess I could not disagree. So, obviously I did not go, but it was an honor I cherished. Not many of us left that remember those days.

Upper Midwest Aviation Symposium

In this issue you will be given info on the next UMAS in GFK. The Council (NDAC) has been working hard to bring you more outstanding programs, so make your reservations now and avoid the last minute rush. See ya there!

Cleared for takeoff, Darrel

Aviation Career Day Hosted with Burleigh County 4H – Big Success!

Big thanks to the Burleigh County 4H for letting us host an aviation career day for them! These students were exposed to a variety of different aviation related subjects like the ND Game & Fish, TSA, Bismarck Airport Fire Department, Flight Simulation and the Civil Air Patrol. Students got to spend time with a flight instructor who covered everything from aerodynamics to aircraft anatomy.






LOG IT!
What is Required, What is Allowed

Jay M. Flowers / FAASTeam Program Manager / Fargo, ND

Over the years, I have had literally hundereds of FAA Flight Checks, Flight Reviews, Phase Checks, Comp Checks, Aircraft and systems check outs, and the like, and it wasn't until I started working for the FAA that I really appreciated the amount and content of the entries found in most pilot logbooks. In most cases, I find that pilots log the flight time, but very seldom do they truly qualify the training or flight lessons they've entered into that permanent record known as the "Logbook."

According to the regulation, 14 CFR Part 61.51, Pilot Logbooks, in part states:

> *(a) Training time and aeronautical experience. Each person must document and record the following time in a manner acceptable to the Administrator:*
>
> *(1) Training and aeronautical experience used to meet the requirements for a certificate, rating, or flight review of this part.*
>
> *(2) The aeronautical experience required for meeting the recent flight experience requirements of this part.*

Additionally, the airman must, in a manner acceptable to the Administrator, include:

> *(iii) Location where the aircraft departed and arrived, or for lessons in a flight simulator or flight training device, the location where the lesson occurred.*
>
> *(iv) Type and identification of aircraft, flight simulator, flight training device, or aviation training device, as appropriate.*
>
> *(v) The name of a safety pilot, if required by §91.109 of this chapter.*

Ground training, just as flight training, must be logged to qualify various portions of the rule.

> *(iv) Flight and **ground training** received from an authorized instructor.*

Remember, if you did not write it down, it did not happen! All too often, I have reviewed an airman's records and found that the ground training was not logged. 14 CFR 61.56, Flight Review, states in part that:

(a) Except as provided in paragraphs (b) and (f) of this section, a flight review consists of a minimum of 1 hour of flight training and 1 hour of ground training. The review must include:…

Generally, Flight Instructors will endorse a Logbook with the simple "per 61.56…" endorsement. Unfortunately, this does not necessarily qualify the items covered during the flight or ground training, nor does the endorsement include a time qualifier (1.0 Hour Ground), which identifies the time necessary to complete the task. Usually the one hour of flight is flown, entered, and endorsed by the CFI, but for some reason ground training is not. You paid for it, see to it that it is qualified in writing and not just in an endorsement under Part 61.56.

Cross country time. With every takeoff, there must be a landing! According to most mechanic types, they haven't left one up there yet, so I think it's safe to say that there will be a ground level stopping point somewhere in your flying formula. Keep in mind that anytime you fly from one point, say BIS (Bismarck) to Y19 (Mandan), even though the total distance is less than 50nm, you may log that as a cross country flight. With that said, the only cross country flights that qualify for an additional rating must be of a leg at least 50nm long, or as outlined for that certificate or rating.

Second in command (SIC) time. Second in command generally is a designation given by the Manufacturer at the time of certification. With certain exceptions, the only legal source for determining if a second in command is required for operations on an aircraft can be found in the Type Certificate Data Sheets (TCDS) issued to the aircraft at the time of birth. Subsequent additions to the aircraft, such as STCs may allow for concessions with regard to SICs. Commercial Operations, such as 14 CFR Part 135 Operators, utilize SICs that must have Seat Specific training and flight checks to qualify for that position. Part 91 Operators may be required by Insurance to have a second pilot, but that does not allow you, the airman, to log the time as SIC. Basically, if you have not trained under an approved program and taken a flight check specific to the "Seat Specific Duties" of an SIC, you cannot log the time as SIC.

I believe most of us understand the necessity of logging hours geared towards a Rating or additional Certificate, however recency of experience is just as important.

(g) Logging instrument time. (1) A person may log instrument time only for that flight time when the person operates the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.

Remember to qualify the time by having your "qualified observer" endorse your logbook with his or her certificate number and signature.

Can you read it? When requested, you must present, within a reasonable amount of time, your logbook to the Administrator or requesting Law Enforcement Officer, and the entries must be legible. Illegible entries may be disregarded as valid entries until such time the airman can provide evidence of the action. In either case, the rule in part states:

(h) Logging training time.

(1) A person may log training time when that person receives training from an authorized instructor in an aircraft, flight simulator, or flight training device.

(2) The training time must be logged in a logbook and must:

*(i) Be endorsed in a **legible manner** by the authorized instructor; and*

Keep in mind that the FAA is not the only governing body of safety individuals that may ask to see your logbook or certificates. State and local governments have passed laws allowing them access to your aviation related records and documents. Simply, the rule in part states:

(1) Persons must present their pilot certificate, medical certificate, logbook, or any other record required by this part for inspection upon a reasonable request by—

(i) The Administrator;

(ii) An authorized representative from the National Transportation Safety Board; or

(iii) Any Federal, State, or local law enforcement officer.

Last but not least, flight times on Airman's Application Forms (8710.1) and Airman's Medical Applications have been used time and again to regain time lost to a family pet, a disastrous move, or fire. The only recourse you may have when your logbook gets inadvertently destroyed is to contact Oklahoma City and have them send a copy of your last application. You can rebuild that logbook slowly over time with the reported data, but if flying immediately is your intention, you must prove currency before you put on the PIC hat.

Train Often, Fly Safe, and enjoy the view.

2014

UPPER MIDWEST AVIATION SYMPOSIUM

MARCH 2 - 4, GRAND FORKS, ND


AVIATION
WORKS
FOR NORTH DAKOTA
www.ndac.aero

Hall of Fame Banquet Speaker

Tuesday, March 4, Alerus Center, Grand Forks, ND – 7:00 pm (social at 6:00 pm)


Doreen Welsh

When US Airways Flight 1549 crash-landed into New York's Hudson River in 2010, Doreen Welsh thought that her life was over. Doreen had been working as a flight attendant for 38 years and says that she`s had some interesting incidents in her career, but none like the experience that was to become known as the "Miracle on the Hudson."

There were 150 passengers, the pilot, Chesley "Sully" Sullenberger, co-pilot, Jeff Skiles, and three flight attendants, including 58-year-old Welsh, on board when the plane went down in the Hudson.

About a minute after take-off those on board felt as if the plane hit something. That something happened to be birds—big birds—which took out both of the airliner's two engines.

Doreen, working the back section of the airplane, thought they were just going to circle around and land, having made quick returns to the airport a number of times in the past. Instead, as she fastened her safety belt, she heard the three words for which she had trained for 38 years, but words she thought she would never hear in her entire career, "BRACE FOR IMPACT!" Doreen had *90 seconds until impact*! Ninety seconds in which she knew instinctively would be her last in this world. The world was in slow motion as the pilot had to land the plane on the frigid Hudson River.

Landing tail section first, the aft end of the airplane struck the water particularly hard. "It felt like we hit something. People up front said it was like a hard landing but it felt like a crash to me. It was very violent in the rear of the airplane."

That's when the masks dropped and things flew from the aft galley, some hitting Doreen. The scene was surreal. After coming to a stop in the water, passengers rushed back toward Doreen to get to the aft doors. These exits were unusable as they were below the Hudson water. Doreen had to stop one woman who was frantically trying to open a door. With icy water rising quickly from a hole torn in the tail, Doreen had the difficult job of turning the confused passengers around and directing them to the wing exits. She told passengers to climb over their seats and keep the aisle free for those who can't climb. "Get to the windows! Get to the windows!" she commanded, as water continued to pour into the aft section of the airplane. Although she didn't realize it at the time due to an adrenaline rush, the left leg of this 38-year veteran of the skies had been penetrated by a 12 inch piece of angle iron. Up to her chin in frigid water at this point, Doreen pushed a few lagging passengers over the back seats and made her way forward to the emergency wing exits, where she was astonished to find passengers standing on the wings. "I didn't know the entire airplane wasn't filling up with water like my part of the plane was," she said. "I thought I might actually live through this."

It wasn't until her aft passengers were safely off the plane that

she realized her leg was injured and that blood was coming from her mouth – "I bit my tongue on impact," she said.

Pulling herself to the front of the plane, bruised, battered, pants ripped, leg bleeding, mouth bleeding, completely drenched and with a post-crash hairdo, she found the other two flight attendants dry and perfectly groomed. "Everything was calm up front," said Doreen. "It was as if there had been two entirely different accidents."

Ninety Seconds To Impact!

If you had only 90 seconds to focus the survival skills of those around you, what would you do? This is the question Doreen asks, it's the question she answers, it's the story she tells—it's the story that has audiences in tears one minute and laughing out loud the next.

Doreen takes participants on the emotional journey of that fateful day which became known as *The Miracle on the Hudson*. Doreen likes to say that had one person perished during that crash it would have been known as the US Airways Flight 1549 *crash*. Because of the heroic deeds of five crewmembers–who had never met until that day–*it was a miracle*!

In additional to being a captivating program, Doreen provides powerful points applicable to any audience, regardless of their occupation or background. Her program inspires audiences to develop their survival skills and manage their personal resources through proper training, skill development and risk management. She'll help your audience see the necessity of maintaining their situational awareness, the importance of engaging in team participation and the necessity of continued training and refresher programs.

As Doreen likes to say, "What would you do if you only had "90 Seconds to (make an) Impact?"

Reprinted with permission from www.AviationSpeakers.com.

Wreaths Across America

The 7th Annual Wreaths Across America, sponsored by the Civil Air Patrol (CAP), was able to cover ALL grave sites (over 5,000) at the North Dakota Veteran's Cemetery with the beautiful Christmas wreaths. Congratulations to CAP for meeting their goal of being able to provide wreaths for all of our veterans buried there.

Photo by Julie Neidlinger

Rotor Wash

Contributing author,
Wesley Van Dell

Flying in a Winter Wonderland

Winter flying in North Dakota is a major challenge that we all have to deal with. From ground crews to pilots, our jobs get tougher as the temperatures drop. For helicopter pilots in particular, there are some unique challenges that we need to be prepared for when the snow starts to fall. At the University of North Dakota, we have flown helicopters year round for more than 30 years and collected some tips to minimize your risk the next time you walk out to the ramp.

Cockpit Clothing:

Sure, you can preflight in the hangar. Maybe you can pack an extra coat and boots in the baggage compartment. The aircraft has a heater so do you need to wear your winter gear in the cockpit? North Dakota is a very wide open, sparsely populated state. In the event of an emergency landing in a helicopter, there is a high likelihood that you may be isolated for hours or more. Additionally, in the event of a hard landing, you may not be able to access that coat in the baggage compartment. Having your warmest clothing already on makes dealing with an emergency landing in the frigid cold more manageable. If you haven't already, you may also consider installing a winter survival kit in the cockpit. Hand warmers, matches, and thermal blankets can be priceless in a sub-zero survival situation and are well worth the space they take up in the cockpit.

Optical Options:

Winter flying is challenging on the eyes. In one flight we can go from bright and sunny to low visibility in a heartbeat. Sunglasses are essential when the sun is reflecting off the bright snow pack, but what about low visibility or flat light? One piece of equipment to help with flat light conditions is tinted glasses (typically yellow or orange). These glasses help increase contrast, which can be especially helpful while hovering in flat light. Amber tint can also improve depth perception in any light conditions. Many helmets have available tinted visor inserts, as well as standard dark lenses. This is an easy way to be ready for any light conditions. Tinted glasses are also fairly inexpensive and can be easily carried in a jacket pocket just in case.

Performance and Planning:

Flying into an unknown winter environment in a helicopter can be daunting. Whiteout and rapidly deteriorating weather conditions is always a possibility. There are many articles and videos on how to deal with whiteout, but from my experience the best thing that you can do is prepare for a go-around. This means we need to be aware of our available performance. Pilots tend to think less about available performance in the winter time because of lower density altitudes (DA). Regardless of DA, performance always has a limit, and the worst time to reach that limit is settling into whiteout conditions. This also makes a proper high reconnaissance essential. If you have performance you will also need to have an escape route that is free of obstacles. Preflight planning and high reconnaissance mitigate that risk and give the pilot confidence that they can get out of a tight situation if the unexpected happens.

These tips all have one thing in common: preparation. The better prepared you are, the less risk there is associated with any flight. In the winter wonderland of North Dakota this is especially important, and may even help you to stay warm out there!

Using Data to Stay Ahead of Changes at the Airport Level

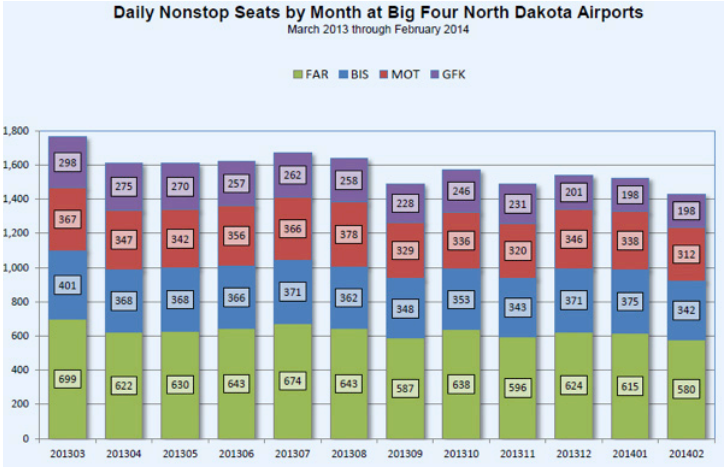
Jack Penning, Director of Market Analysis, Sixel Consulting Group

At the state level, it can be difficult, if not seemingly impossible, to stay up-to-date on all the changes in scheduled air service at each commercially-served airport. There are changes in the airline industry on a daily basis – and each small change can have a ripple effect at even the smallest of airports.

But never before in the history of scheduled air service has there been such a plethora of data available to help put changes into perspective, and to help state aviation professionals determine what the future will hold for their constituent airports. That's both good and bad. The good is that there is data available to help make sense of even the most perplexing airline changes. The bad is that there is so much data available it can be difficult to sift through the volumes of information released virtually daily.

There are two main reputable sources of data. The first is airline schedule data, which can provide a look both backward, and forward, at airline capacity by market. This data is freely available on airline websites, but can be time consuming to pull unless you use a data provider. The second source comes from the federal Department of Transportation, which requires all carriers to report the passenger, fare, and revenue data on both a monthly and quarterly basis. This data can be pulled in small segments from the Department of Transportation's website – but most who use the data seek the help of a data provider to extrapolate it into a useable form.

First, it's important to understand how capacity is changing. In this example from a Sixel Consulting Group report for the State of North Dakota, you can see that overall capacity at the state's "big four" airports for February of 2014 will be almost 400 daily seats below capacity from winter of 2013 (see figure 1). Airlines have



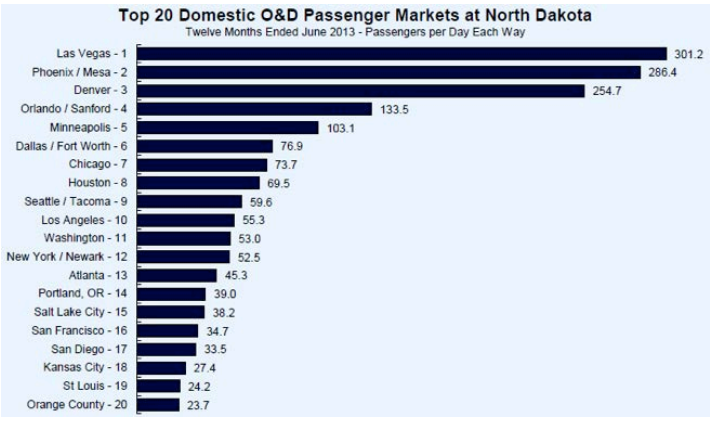
added a lot of capacity to deal with the oil boom throughout the state, but that capacity appears to be leveling out, which can help a state understand what kind of facilities are needed at its airports over the medium term.

It's also important for state aviation officials to understand how demand for air service is changing. Again, using the North Dakota report, the state is seeing large passenger growth from Denver, Las Vegas, Orlando, and Houston (see figure 2). The Denver growth is spurred by new low cost service, launched by Frontier to Fargo, Bismarck, and Minot. The most remarkable growth market is Houston, which has no current non-stop service to any airport in North Dakota. This chart illustrates how Houston might become a new target for additional service as it continues to grow.

Top 20 Passenger Growth Markets at North Dakota
Twelve Months Ended June 2012 to Twelve Months Ended June 2013
Approximates 100% Sample - Directional Journeyed Passengers - Top 100 Markets

Rank	Market Area	Total Paxs YE 2Q 13	Paxs Growth	PDEW Growth	Growth Rate
1	Denver, CO	185,930	62,950	86.2	51.2%
2	Las Vegas, NV	219,880	22,140	30.3	11.2%
3	Orlando / Sanford, FL	97,430	13,330	18.3	15.9%
4	Houston, TX	50,720	11,620	15.9	29.7%
5	Dallas / Fort Worth, TX	56,170	11,620	15.9	26.1%
6	Phoenix / Mesa, AZ	209,070	8,660	11.9	4.3%
7	Minneapolis, MN	75,260	7,880	10.8	11.7%
8	Orange County, CA	17,290	7,280	10.0	72.7%
9	Seattle / Tacoma, WA	43,480	6,270	8.6	16.9%
10	Atlanta, GA	33,080	5,070	6.9	18.1%
11	San Francisco, CA	25,300	4,750	6.5	23.1%
12	Salt Lake City, UT	27,920	4,330	5.9	18.4%
13	San Diego, CA	24,420	3,970	5.4	19.4%
14	Fort Lauderdale, FL	13,690	3,590	4.9	35.5%
15	Washington, DC-VA	38,680	3,560	4.9	10.1%
16	Oklahoma City, OK	16,990	3,270	4.5	23.8%
17	Portland, OR	28,330	3,260	4.5	13.0%
18	Austin, TX	13,590	2,830	3.9	26.3%
19	Kansas City, MO	20,010	2,560	3.5	14.7%
20	New York / Newark, NY-NJ	38,350	2,490	3.4	6.9%
Total of Above		**1,235,590**	**191,430**	**262.2**	**18.3%**

With a clear understanding of where the state's influence is growing, the data on North Dakota's top markets can be put into better perspective (see figure 3). At least one North Dakota airport has non-stop service to each of the state's top seven passenger markets. Houston, with its hefty growth rate, ranks as the eighth-largest passenger market to and from North Dakota, with an average of almost 70 passengers per day each way – enough to fill a daily non-stop regional jet. With this knowledge, the state can better advocate for the next new service – with a clear idea as to the demand and how service might perform.



Of course, additional detail is available, including a breakdown of passengers to each market by city within North Dakota. But the ultimate goal of this type of report is clear – to use the data available to best deploy and leverage limited state assets. By carefully analyzing schedule data and Department of Transportation data, a snapshot of aviation performance – and future performance – can be ascertained.

And while it might be time consuming to pull the data together (if you don't call upon an expert to do the hard part for you), the insight will almost always pay off.

Jack Penning is Director of Market Analysis for Sixel Consulting Group, one of the nation's leading air service development firms, representing more than 100 client airports and state aviation authorities as they pursue additional airline flights. You can contact him at jack@sixelconsulting.com, or on the web at www.sixelconsulting.com.

Ag Aviation: Open Cockpit, Scarf and Goggles *(and bugs in your teeth)*

By Jarrod Lindemann – Valley City

People often ask us how long we have been flying or interested in aviation. Good question, but you better be ready to spend some time talking! There is just something about flying and the freedom you feel to be up above the world, gracefully moving among the clouds, being able to control the aircraft and feel it speaking back to you through sound, sight, and movement. Growing up, my brother and I thought, "there just can't be anything better than what our Dad and Uncle do," so that's exactly what we have done… picked up right where they left off. My brother Paul and I are fourth generation pilots, actively working in North Dakota agricultural and general aviation. We are co-owners of North Valley Aircraft, which is a full service FBO located on the Barnes County Airport. We specialize in aerial ag application and are very pro-active in technology and future application methods. One of our many goals is always trying to find a better way of crop application by saving the farmers' time, money and increasing the growth and crop yield. We also run a maintenance shop, offer flight instruction and sales, and specialize in rebuilding older aircraft, as well as flying aerobatic aircraft. From a very young age Paul and I have always felt a need to add uniqueness to everything, along with more power and overall performance. Our personalities, flying styles, craftsmanship, and shop reflect accordingly! As long as I can remember, we have engulfed ourselves in and around aviation. Our dad, the late Dan Lindemann, taught us many aspects about flying, mechanics, aviation, and life in general… and we continue to learn from our day to day endeavors.

Working in this industry, we meet new people and fellow pilots along the way. I have had the opportunity to hear some very interesting stories from quite intriguing people. None of these conversations can compare to the age-old "hangar tales" of aerial applicators. When most people think of an "ag pilot," or "crop duster," they envision some guy flying an open cockpit biplane, wearing a scarf and goggles, bugs in his teeth, without a radio, and being carefree. He's tearing up and down the countryside, all the while flying only feet above the crop's canopy, pitching aggressively, turning sharply, and then diving back down over some obstacle or rough terrain. At first you're shocked, maybe even angry, as they fly up and down the fields turning on a dime. But at the same time you think to yourself, "hey that looks exciting!" as you admire their skill and cowboy type of flight… but there's more to it than people realize. A tuned set of practiced skills and a high level of concentration to speed and detail are involved.

The first known aerial application of "ag materials" was flown by John Chaytor in 1906 as he spread seed over a swamped valley floor in Wairoa, New Zealand using a hot air balloon with mobile tethers. The first commercial operation began in 1924 by Huff-Daland Crop Dusting, which was co-founded by McCook Field test pilot Lt. Harold R. Harris. In the 1930s, use of pesticides for crop dusting slowly spread in the United States and to a lesser extent in other countries. The name "crop dusting" originated here, as actual dust was spread across the crops. Today, we apply mostly liquids in our crop protection products and in very small doses.

Organizations like our local North Dakota Aerial Applicators Association (NDAAA) and the National Agricultural Aviation Association (NAAA) are working successfully to change this stereotype of the "reckless cowboy" ag pilot. The mission of these organizations has always been to promote safety and explore areas of new development for aerial application and the significance that it plays on a global scale. By promoting safety, research, new technologies and new application techniques, these organizations have changed what it means to be an ag pilot. Education, training and safety are the highest priorities. The NAAA's roughly 1,800 members in the U.S. lobby for this flying industry, protecting present and future advances by discussing and/or defining certain governmental regulation that may hinder their field of expertise and knowledge.

From the start, pilots who are currently entering this industry are trained in all aspects of application, safe pesticide use, entomology, and customer relations, while minimizing the risk to the environment. The NAAA states that without pesticide use, the world's food supply would be reduced by 40 to 50 percent, resulting in an increase in food prices estimated at more than 50 percent. The use of fertilizers, fungicides, insecticides and herbicides has increased our crops yields, allowing more food products on the market. Also, it has opened the door for advancements in alternative energies. High-yield ag benefits the environment by producing maximum crop yields from fewer acres. Aerial application has played a critical part in this production from land already in use. For example, corn fungicide and fertilizer applications during the "tasselling" or pollinating stage of corn growth will produce more corn for the use of bio-fuels, food growth, and livestock feed.

According to the NAAA, it's estimated that with the increase in the world's population, food and bio-fuel production will need to double by the year 2050 to meet these demands. Due to the large economic growth and middle class surges in India and China, accounting for almost 40 percent of the world's population, the demand for beef has grown tremendously. As the demand for meat rises, the demand for feed grain rises. It takes eight pounds of grain to make one pound of beef, so the demand for an increased production is at an all-time high. To further help with these high demands, today's ag aircraft utilize sophisticated precision application equipment such as Global Positioning Systems (GPS), Geographical Information Systems (GIS), flow controls, real time meteorological systems, prescription mapping and precision calibrated spray equipment. This precise delivery system allows for less pesticide product being applied to higher acreage and greater fuel efficiency, and can ensure a more targeted delivery by further minimizing off-target drift. The days of slopping a 50-gallon drum of chemical over the hopper of a dirty old, rickety airplane are over, as the aircraft today are sophisticated spraying machines, capable of reducing the overall environmental impact. There may be a few of these "old-time pilots" still around, but almost everybody has been doing their part to optimize efficiency in our industry, while shrinking the overall footprint.

With our world's ever changing technology demands and the increased need for towers, our industry is feeling the pressures first hand. According to the NAAA, since 2003, 9.5 percent of aerial ag fatalities were the result of collisions with towers, and 12.2 percent were the result of collision with wires – which were almost always fatal. Between the years 2000-2011 there were 12 tower accidents, eight of which that were fatal. Tragically, a fellow aviator and friend of mine lost his life from colliding with a guy-line on a tower just a few years ago. The NAAA is consistently urging the FAA to provide improved practices on marking obstacles, including expanding tower marking guidance to include ALL guy-wire and free standing towers more than 50 feet in height. We must all be aware of any changes going on in our territories. During this past summer, I was applying to a field where there was an abundance of towers and noticed one tower being taken down and another one being moved and put up across the road. The obstacles that we think we know well can change within a day.

On another note, I have attended a few airshows and fly-ins this past season where some pilots were demonstrating their ag-planes and aerial application techniques. Initially, I thought it was a great idea for our industry; however I ended up changing my mind after the demonstration. Who is in charge of these pilots? Only our regulations are, and that's if they're being followed. The planes proceeded to make a few passes with water demonstrating the application procedures, but with every turn the next pilot had to pitch up more aggressively and turn sharper than the previous one, to showcase his own abilities. Our FAA regulations clearly state what we can and cannot do. Practice flights are necessary, but demonstrations have to be safe and you have to know your limits. What message are we sending to the public? Let's fly smarter and safer!

SMOKE ON! –JARROD LINDEMANN

Williston Jet Center Up and Running in the Middle of the Oil Patch

By Rod Brekken

If you haven't been to Williston in the past five years, you've missed a huge transition in the city. The city's population has doubled in estimation by its mayor! While Williston's economy has historically been agricultural, it is increasingly being driven by the oil industry. Now you may ask, "How did all those people get there?" Well, by in large, they came by motor vehicle, but in addition they are coming in by commercial airline, corporate jet, private jet, turbo prop aircraft and private plane. To take care of all this increased air traffic, Fargo Jet Center, teamed with Ross Aviation from Denver, CO, and Overland Aviation based at Williston to open Williston Jet Center (WJC). The new FBO operation started on October 4, 2013.

Since opening, WJC has made several improvements to the facility, staffing and amenities offered. "Our team in Williston has more than doubled in size by increasing the number of professional line service technicians and customer service representatives," says Darren Hall, Vice President of Marketing at Fargo Jet Center. To fill the immediate need for experienced help, line service technicians and other support staff from Fargo Jet Center and Ross Aviation have been and continue to support the Williston operation. All line service and customer service team members are trained and certified by the National Air Transportation Association's Safety 1st program. Just a few of the services offered at Williston Jet Center include, concierge services for catering, hotel arrangements and rental cars. Additional Jet fuel storage and fuel trucks have been added to the ground service fleet.

Aircraft sales, maintenance, charter, aircraft management services and a flight school in Williston are provided by Fargo Jet Center. Williston based FJC maintenance staff will serve both general aviation operators and the airlines. A Cessna 172 will soon be available for flight instruction and rental. Exclusive Aviation, Fargo Jet Center's St. Paul based aircraft sales division, specialize in aircraft sales, acquisitions and brokerage services.

Many more improvements are slated for 2014, including a remodel and possible expansion of the current FBO facility. A new hangar is also under consideration as an option to better serve the growing needs at the Williston airport.

Funds Available for Aviation Education

Did you know the North Dakota Aeronautics Commission has funds available for aviation education in the state?

The North Dakota Aeronautics Commission (NDAC) has approved educational grants for a number of purposes, ranging from $120 to $20,000. We are actively seeking new ways and ideas to bring aviation to students and adults all over the State of North Dakota. The grant application process is easy. Simply fill out the educational grant application form available at the NDAC website with your ideas promoting state aeronautical education programs.

Some ideas that have already been accepted are:

- Transportation costs to access aviation educational venues, such as museums
- Curriculum or classroom related aviation exposure
- Educational Material
- Educational Presenters
- Aviation Career Day Costs
- And many more!

The Aeronautics Commission is always open to new ideas that will bring aviation to people all over the State of North Dakota. Together, we can make your aviation education ideas a success.

For any questions regarding funding, or to walk through the grant application process, please contact Sean Davis at the NDAC office at (701) 328-9653 or email sadavis@nd.gov.

FREE FIRST LESSON

The EAA Young Eagles program is offering a free first flight lesson to interested youth.
www.youngeagles.org

Aircraft Registration Renewals

By now you should have received your aircraft registration renewal in your mailbox! Please keep your aircraft registration current. If you haven't received a registration form, please contact Sheila Doll at the ND Aeronautics Commission at 701-328-9650.

NDPAMA

NORTH DAKOTA PROFESSIONAL AVIATION MECHANICS ASSOCIATION

MECHANIC OF THE YEAR APPLICATION

Instructions: Use a separate form for each entry. All entries must be either typewritten or neatly hand lettered.

Name: **FAA Certificate No.:**

Address: **FCC License No.:**

Telephone No.:

Employer:

Employer's Address:

Year first designated a Maintenance Technician:_____ Years Experience:_____

ENTRY DETAILS: Give a brief factual description. Drawings, photographs or other presentations may be included to assist the judging committee. All entries become property of the Selection Committee and will not be returned.

(If additional space is required, attach additional sheets.)

ENTRY SUBMITTED BY: (If other than entrant) (Optional)
Name: **Address:**

Employed by: (Name and Address) **Position Held:**

Date: **Signature of person submitting entry:**

FOR SELECTION COMMITTEE USE ONLY

Mail to: Kenneth Foltz 2342 22nd St. NE, Mekinock, ND 58258; or hand deliver to a NDPAMA Council Member before 3:00 pm on Monday, March 3, 2014.
QUALIFICATIONS: Each person submitted on the entry form must hold an FAA Airframe and/or Powerplant rating, or Repairman Certificate, and must be employed in the field of aviation maintenance in the state of North Dakota. Entries must be based upon a viable contribution to aviation safety.
JUDGING: The NDPAMA President will form a committee of at least 3 current NDPAMA members to judge the entries.
AWARD: An award of $300 will be presented to the selected mechanic of the year.

GARMIN

G600 / G500

Garmin's SVT™ 3-D synthetic vision renders terrain-alerting data into a realistic virtual landscape, showing obstacles, traffic, airports and more. A scaled version of SVT is standard on the

Retrofit glass is now within your grasp.

If you love the idea of flying a glass cockpit – but hate to think of parting with your current aircraft – this is clearly the retrofit option you've been waiting for: The Garmin G600. Or its lower-cost lookalike, the G500.

Leveraging our industry-leading G1000™ integrated cockpit technology, these twin-screen Garmin units combine primary flight (PFD) and multifunction (MFD) display capabilities in one easy-to-install, 10-inch wide bezel – providing a perfect-fit replacement for the standard gyro cluster in your panel. The PFD's attitude display is over 50% larger than those of traditional 3-inch flight instruments. And for easier scanning, both the PFD and MFD are paired directly in the pilot's field of view.

Best of all, a scaled version of Garmin's SVT™ Synthetic Vision Technology now comes standard on the G600 – or as an option on the G500. With SVT, pilots are offered a realistic 3-D virtual reality display of terrain, obstacles, runways and traffic information, all shown in context on the PFD. It's like having a clear-day "out-the-window" view in any weather or flight situation. And it promises to bring a whole new level of situational awareness to your Garmin retrofit glass cockpit.

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701-373-8840

GARMIN *AUTHORIZED DEALER*

HOW THE UNITS COMPARE:	G500	G600
• Approved for Class 1 Aircraft (typically piston singles under 6,000 lbs.)	Yes	Yes
• Approved for Class 2 Aircraft (typically piston twins and turbine aircraft under 6000 lbs.)	Yes	Yes
• Approved for Class 4 Aircraft (typically piston or turbine aircraft between 6000 lbs. and 12,500 lbs.)	No	Yes
• Software design assurance level	Level C	Level B
• Garmin SVT™ Synthetic Vision Technology	Optional	Standard
• GAD 43 replaces select A/P gyro attitude with AHRS reference and provides bootstrap heading, yaw information, and baro corrections	Optional	Standard
• GWX 68 Radar interface (radar LRU sold separately)	Optional	Standard
• Internal TAWS-B terrain alerting	No	Optional

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Bismarck, North Dakota 58502-5020

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Permit No. 419

CALENDAR of EVENTS 2014

July 20, 2014
PLANES ON THE PLAINS 2014
EAA Chapter 317 has elected to sponsor a fly-in and pancake breakfast, under the banner.

September 13th
Lisbon ND Fly-In Breakfast
8 a.m. - Noon
Contact: Larry Ketterling (701) 680-2115

Online calendar:
www.ndac.aero/events.htm

Please send your 2014 and other upcoming dates to ndaero@nd.gov!

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