Aviation Economic Impact Study

How many times have you heard airports are for the rich boys and their toys? Conversely, how many times have you been asked what the economic impact an airport is to your town, or the overall economic impact aviation has to the state that is actually backed up by factual information?

Previously a rough FAA snapshot of aviation’s impact on Nebraska’s economy was estimated at $8.5 billion. In 2014, the FAA estimated 41,000 Nebraskans were employed due to civil aviation, which was 3.2% of all jobs. Therefore, the NDOT commissioned GBA from Lenexa, Kansas, to do an economic study for better decision making on how best to support aviation and grow Nebraska. The study will cost in the $380-$400,000 range with the FAA funding 90% of the costs.

This time the task given to GBE is to make an Economic Benefits Calculator enabling an updated economic impact analysis in-between studies so the information will not be just a snap-shot in time, but a living document updated as needed by the Division of Aeronautics.

Some of the economic impacts you would think about are quite obvious, such as aerial applicators supporting $23 billion in crop and grain sales. But have you considered doctors flying to rural communities to conduct clinics for specialized medical attention?

Todd Duncan, Chairman of Duncan Aviation told the kick-off group that 95% of their business is from out of state, and of that number, 15% are from foreign countries. This combined with over 1300 employees just in the Lincoln area, and an impressive 300+ employees company wide who have been employed by Duncan for over 25 years.

A survey has been sent to every Nebraska Airport Authority, or Airport Manager, for the 80 public use airports here in Nebraska asking for vital data to be used in this Study. It is very important this survey is filled out and returned, so please take the time to go to an airport meeting, verify the Authority or Manager has received the request, and it is being filled out.
**Engine Test Cell**

Duncan Aviation has a new engine test cell for their engine shop. What’s the importance of a test cell? There are major inspections of various parts of the turbine engine, sometimes called MPI or HSI. But to go into the core of the engine where the incoming air is highly compressed in multi-stages, it’s called a CZI or Core Zone Inspection. In order to test how well the engine performs after the inspection, a test cell is required. The test cell will monitor every segment of the engine. Time to start, temperatures at start, if there are any vibrations, how much thrust it puts out, the speeds of the low pressure turbine and high pressure turbine assemblies.

When we got into the Test Cell itself, the man behind the control panel was Chris Ulrich who explained everything he was doing and what the engine was suppose to be doing. Chris will start the engine from his computer station, let it run for a while and then shut it down, looking for any possible leaks. As performance is being confirmed, higher power settings are used and overall performance is verified. As a note, on the Falcon 900 engine that was being tested when I was there, the turbine wheel was spinning 29,000 rpm, and the engine was putting out 3900 lbs of thrust. Assistant Engine shop manager, Lanny Renshaw gave me, David Morris and Ronnie Mitchell a complete tour of the test cell and then the rest of the engine shop. Its organization of parts and test equipment combined with how spotless it was is a true indicator of professionalism and pride of ownership. Is the test cell loud? With the test engine running at full power, conversations can easily be held outside the building, so its noise suppression is excellent.

**Change!**

Let me be one of the first to wish you a very Merry Christmas! As we approach this joyful time of year we should all count our many blessings and be thankful we live in the greatest country in the world.

When I first started work for the then Dept. of Aeronautics on August 21, 2002, I had no idea I would still be part of this great organization. But now it is time for a change and I will be retiring on January 2, 2019. There will be an Open House at our office for those wishing to say farewell on December 18 from 2-4 pm. As an added bonus, there will be beverages and snacks. My last day at work will be December 21 and then vacation followed by changes in my life and my wife’s. I have wisely decided I wouldn’t rearrange her kitchen cabinets nor critique her house cleaning!

Our division has also begun an Aviation Economic Impact Study to determine the economic impact of aviation on the economy of Nebraska and communities that have an airport and or related aviation business. I believe the results will be astounding to learn as we have had great progress in aviation since the last study was completed in 2003.

**PIREPS Writer Gone West!**

Long time PIREPS contributor, Tom Gribble, went West on October 1, 2018. Tom wrote articles for this newsletter for over 10 years recounting his many aviation experiences for our enjoyment and education.

Probably the most enjoyable article for me was when he dead stuck his Aeronica Champ into the Wildcat hills just south of Scottsbluff. If you go to our website at: aero.nebraska.gov you can read the many articles Tom wrote.

Tom was a Marine, then an air traffic controller in South Dakota, Minnesota, and Wyoming. He learned to fly in 1976 and in 1978 got his “dream job” in Anchorage, Alaska, as an FAA flight inspection pilot checking navigation aids all over Alaska and as far east as Greenland.

After retiring, Tom and his wife Pat traveled the United States and Canada before moving to Gering. Tom leaves behind Pat, his loving wife of 65 years, four children, ten grandchildren and twelve great grandchildren. Tom and his story telling will be greatly missed.
Wind and Shear

Bill Taylor

Wind direction and speed are very important factors to any pilot. The speed and direction dictate many things, including the takeoff and landing. Most aircraft have a max tailwind limitation of 10 knots. Anything over that, a pilot usually has to land or takeoff into the direction of the wind. So it is important for us as meteorologists to get that wind speed and direction correct when forecasting for a terminal. As forecasters, we look at several different parameters when making a wind forecast. When stronger winds are expected (greater than 10 knots), we look above ground level a few thousand feet to see how strong those winds are. We then look for some mechanism that will bring these stronger winds down to the surface. This could be many things, such as a cold frontal passage, or simply the mixing of the boundary layer due to the heating of the earth's surface during the day. Numerical model statistics, known as model guidance, is something else that we use. This is where a point location, such as the North Platte Airport, will be broken down hour by hour with an expected wind speed and direction for each hour. Wind speed and direction are also two main factors when it comes to forecasting wind shear. Wind shear is a change in wind speed, direction, or both with height over a distance. Many factors can lead to wind shear, including frontal passages, thunderstorms, etc. Another common and frequent source for wind shear across the central portions of the country is the nocturnal low-level jet, a fast moving ribbon of air blowing from south to north. The low-level jet starts just a few hundred feet off the ground and extends upward a few thousand feet. Simply put, it is caused by the more rapid cooling of high elevation air across the drier Western High Plains compared to much slower cooling of the more humid lower elevations to the east. The low-level jet is a significant reason for wind shear, because as the ground cools at night winds can become nearly calm due to a temperature inversion. Meanwhile, just a few hundred feet above the ground at the top of the temperature inversion, the winds could be blowing 35 mph or even higher if there is a strong low-level jet present. The low-level jet is usually the main reason for adding low level wind shear (LLWS) to a terminal forecast. The low-level jet does not occur every night, but does occur frequently especially in the summer. The larger the temperature difference between the western high plains and points east will determine its strength. Using model wind speed data from 2000 to 6000 feet above the ground will give us the information we need to determine how strong the jet will be if it’s occurring. Do you have a weather question, or would you like a NWS meteorologist to speak at your next pilot meeting or event? Please send an email to jeff.kelley@noaa.gov

More Documentation

Lee Svoboda

In my last article I did hammer on you instructors for sending applicants to an examiner that were not eligible for a practical test. Well it has gotten better in the last two months, especially for the applicant, however, documentation for the aircraft to be used still needs more attention. The applicant is still presenting an aircraft that needs:

- Flight manual supplements
- GPS manuals
- Placards
- 100 hour inspection in the aircraft maintenance logbook
- AD compliance documented in the aircraft maintenance logbook
- Continued Airworthiness Inspections (ICA) documentation in maintenance logbook

Just because the dispatch container has a sheet of paper in it that says all is current, well that is not official documentation. It must be in the aircraft maintenance logbook signed by a properly certificated maintenance individual. Instructors, the maintenance logbooks must be examined by both you and your applicant. The CAN is not official.

In the last year or so there has been a change in how we teach and evaluate slow flight and stalls. So far in most of my observations the applicants have been getting it right. But for gee whiz information, I would like to point out that in the Commercial Airman Certification Standard (ACS) under the task of stalls, the applicant can be asked to demonstrate a full stall. I know you are teaching your commercial students to recover at first indication. That is fine, but maybe you should make sure that they can properly demonstrate a full stall as they could be asked to demonstrate a full stall by the examiner during the practical test.

The cold weather is here and I am finding that applicants are beginning to have difficulty getting the engine started. Our instructing in Nebraska must cover how to treat an engine in cold weather, i.e. hangar or preheat as required. Also, engine starting is a task in the ACS. If the applicant cannot get the engine started or over primes it and a fire occurs, there is a high probability that the applicant will not pass the practical test. It is fun to fly in the winter, but appropriate cold weather measures must be practiced.

Well it is that time of the year again where I depart the GOOD LIFE and migrate to AZ. My airplane is finally fixed so I will be flying south this year. This winter it may be different for me because the FAA has taken down the fences and I will be able to administer practical tests in AZ. My wife is not real optimistic about this change because she views it as a deterrent to our $300 lunches at Tucson and Sedona. We will see how it works out.
Pilot Shortage Again?

In late September of 2018, a Falcon 50 ran off the runway at Greenville, SC. It wasn’t because the weather was bad, or the runway was too short, it was because neither one of the pilots were qualified in the airplane. Was it because the owner couldn’t find qualified pilots, or didn’t want to pay the going salary? Regardless, one fact was very evident - the PIC totally ignored the FAR’s and paid the ultimate price of arrogance. Is this the new norm for the pilot shortage?

In 2001 I wrote a column for the NBAA Digest called “It’s Time to Change the Salary Survey”. The first paragraph started out with this: “Over the past decade, most of the best young pilots, and now some of the most experienced pilots have left corporate aviation for the airlines. The reason for this departure is simple: larger paychecks and better long term benefits”. I went on to mention NBAA President Jack Olcott clearly addressed this issue when he wrote in the 2000 NBAA Digest: “Starting Wages for maintenance personnel are so low that many graduates find employment either with the scheduled airlines or with non-aviation companies. We may well be unable to attract new talent to fill an increasing need for personnel as business aviation continues to grow.” I proposed a new methodology should be used to disclose compensation in all the salary surveys (NBAA, B/CA, ProPilot etc) to reflect what the hiring competition is offering and not just to comparing one corporate position to another. In other words, if the airlines are paying more, we need to include those numbers because they are the hiring competition, just as the corporation down the street is, who needs a pilot and willing to pay more. In response to my article, Jeff Lee, the Director of Flight Operations at IBM (for 30 years), responded as follows: “David Moll is right in saying that we must take action to reduce this attrition problem and preserve the ability of our companies to conduct business using these tremendous aviation tools.” Mr. Lee went on by adding a section called “Work/Life Balance” where predictable time off is an issue that every employer needs to address (because so many flight department fly for company business on weekdays and then on CEO’s personal travel or company entertainment on weekends). So here we are 17 years later and it’s déjà vu all over again.

Here are some basic realities: Corporate and charter must figure out a good balance between salaries and the Work/Life issue so it’s attractive competition verses the airlines: Single Pilot jets will be more popular than ever: Contract pilots will stay busier than ever: Older pilots will become wanted again: Part 141 flight schools will need to figure out how to get students closer to 40 hours to earn their pilots license than 60-70 hours: A&P classes beginning in high school must start so graduates can hit the ground running and earning a paycheck ASAP: Lastly, we need to keep politicians away from making regressive decisions like allowing airlines to control ATC or implementing user fees because Washington D.C. must balance its budget by reducing expenses, not increasing income.

Beatrice 14-32

When is a runway closure good news? When it is soon going to be all new! I lately headed for the airport right after breakfast for an “Ice Cream Run” to Beatrice. (Manager Diane Smith is careful to keep the fridge supplied with ice cream cones — just for me!) New: Not only is Runway 14-32 closed, but the Big Yellow Xs that tell you so are electronic: they flash at you. Get your attention. I circled around and took pictures. By year end, 14-32 will be all concrete, 75 feet wide. Diane Smith tells me the runways were laid down before the war, then done in concrete during it, and later milled and overlaid with asphalt. Eventually the concrete began cracking under the asphalt, and this led to sections of asphalt buckling, and creating the equivalent of speed bumps! Russ Gasper, our Department of Aeronautics representative for the 14-32 project, kindly equipped me with the Engineering Design Report, so I’ve got the whole story. The cause of the cracking is “ASR action.” The term “ASR Action” took me to the Federal Highway Administration’s ASR Identification Handbook. ASR is for “alkali-silica reaction.” It turns out that some silicates are reactive, and mate up with alkalis in the concrete mixture. The result, surprisingly, is a gel that slurps up water and expands! Or, as the FHA’s handbook puts it there is “a chemical reaction between the alkali hydroxides in the pore solution of concrete and certain forms of reactive silica minerals occurring in some aggregates. The reaction product, an alkali-silica gel, is hygroscopic, and will absorb water and swell if the concrete is in a moist environment. The swelling of the gel can, under certain circumstances, lead to expansion and cracking of the concrete.” The expansion requires milling.

The concrete is being supplied by a home-town source, Beatrice Concrete.

Thinking ahead, they laid concrete for the intersection of 18-36 with 14-32 back when the 18-36 project was done, so that work on 14-32 would not interfere with the use of the main runway, and it doesn’t. Only interruption is that the taxiway to the south end is closed: for now, if you take off to the north, you either do an intersection take-off or back-taxi on runway 36

Financing is a 90-10 arrangement. FAA 90%. The City’s 10% is from a bond issue that the Citizens of Beatrice passed. Beatrice also was awarded $60,000 from the state Department of Aeronautics. Construction has been slowed by the incessant rain, and it is uncertain how many rain days the contractor will be permitted. It was originally to be done by the end of November.
Colton’s Crew

(Editors note) Colton Whisler is the grandson of Greg and Terri Whisler (SWT) and the son of Derek and Stephanie Whisler. Colton has RMS which is an inoperable cancer of the brain, ear canal and cheek glands. A fundraiser was held at the Seward Airport on November 3rd to help with expenses while Colton is at the St. Jude Children’s Hospital in Memphis. The success was unbelievable and is what the aviation community is all about. Over $30,000 was raised.

The forecast called for rain, but no! The sky, the pilots, the people, and the Nebraska Army Guard all turned out in force to support the Colton’s Crew fundraiser organized by Diane and Larry Geiger. Here is how the day went: After serving breakfast, I grabbed gloves, camera, jacket, folding chair, umbrella and drove to Seward for the Colton’s Crew benefit. (The PIREPS press plane is not IFR equipped!) It was chill, and the overcast was complete, stratocumulus at about 6,000 AGL, and some scuds lower on down.

I took credit for the VFR weather (The forecast called not just for rain, but also IMC by 1 p.m.), because I brought an umbrella.

First thing, I wrote a check for $50 and was soon riding in Harry Barr’s JetRanger. Tom Trumble and Mark Gaffney were giving flights in their respective 172s, and of course Larry Geiger was giving flights in his Robinson. Roy Burgess was giving flights in his 1953 Piper TriPacer, and Jessy Panzer in her Cessna 120. Larry Bartlett was giving flights in a 1943 classic, a Howard DGA! And it wasn’t all pilots, planes, and helicopters: Donald Cox, engineering professor who teaches a course in electric cars, offered rides in his Tesla Roadster, that $100,000 sports car than can go zero to 60 in three and a fraction seconds. Drive it for a dollar a minute. No one could resist.

By the official start time, 11 am, Planes and copters were already flying, and Harry Barr’s big hangar was packed!

Colton’s Crew - Continued

All the pilots were kept busy, but the long lines were for the helicopter flights, and Doug Roth was kept busy guiding passengers out to the helipad. What did they enjoy? In my flight, Harry Barr took us north up the east side of the city, then circled Seward twice before heading back toward SWT. The Jet Ranger has a sliding window in the back, which I slid open several times to photograph the old County Court-house, and the city of Seward overall.

The pilots of eastern Nebraska and the citizens of Seward, and the National Guard all showed up in strength. Derek is in the Guard, with several deployments in his record; his Guard unit rescheduled their drills to allow participation in the event. You could see several strapping young men with military bearing: Guard? Yes.

Many fascinating items were donated for auction. I can’t name them all, but a sample will give the idea: for me, the standout item was an M1 Garand rifle of WWII vintage donated by Butch Rohren. It sold for $1,300.

When things quieted down, and the winning bidders were packing up their treasures, and the planes and helicopters were shut down, I asked Jessy Panzer if, instead of a flight in the 120, we could do touch and goes, and call it tail-wheel instruction. Yes!

So I wrote another check to Colton’s Crew and got some very well tutored tail wheel time.

Ellis (“as in Ellis Island”) Wiltsey was there from 10/11 TV, interviewing Diane Geiger, who, with husband Larry, got the big event put together. Thanks are owing especially to the Geigers, as well as the pilots, and the volunteer staff who took the reservations, and served the food. The food? I liked the chili, and was not surprised that the chili was the first dish to run out. A final thanks to the volunteers who brought food. I don’t know them all, but again, a for-instance may give the idea: Linda Dovell brought homemade pies.
Crotchety and Cranky

In my advancing years I find myself too easily angry about aviation deaths that just did not have to happen. Yes, accidents DO happen, engines DO fail, but these two are off the charts.

Marion Illinois, in late March, a nice day, two died and the tail of a Bizjet was sheared off by a Cessna 150 in a runway collision. Maybe the Cessna was practicing crosswind landings? For sure the jet was landing on the longest runway. Maybe the jet was on the wrong frequency? Maybe ATC cleared the jet for the approach and to switch to advisory frequency and failed to do so? Maybe the Cessna was preoccupied with the student and the instructor "inside" the cockpit? Whatever, on the ground, in broad daylight, BOOM, the Cessna struck the jet. OK, I admit, I am still amazed about the G1000 whiz-bang stuff in my Bonanza. And, admit I likely do not look about as much as I should. But never on the ground! So, please, so I do not have to write about YOU, look out, really look, and listen. Pay attention. Runway incursions are a big focus of the FAA, and this one proves them right..

This one defies all logic. Six dead, SIX, when a Comanche with 6 adults crashed departing Scottsdale last week. The temperature that evening was a toasty 91F. My model 36 Bonanza has 6 seats. I can fill the tanks and take-off with 600 pounds and be right at gross weight. I can put only 190 pounds in the rear seats. So, now you tell me, how can any pilot think he can put 6 adults in a single engine plane and be within weight and balance? Where was that pilot's brain that night? Have you ever taken off with an aft CG, or even right on the border of aft? I have and it is spooky the "slop" in the controls, and the small corrections only or else!

Two so-called "accidents". Not really. Sure, no one thought they were going to die those days. They did. And, NO I do NOT know all the facts. The NTSB will do their best, but when all are dead.... When we were kids we were taught to: Stop, look and listen before crossing the streets. Good counsel today for all of us when it comes to aviation, too. I am your A-#1 aviation enthusiast and think I have a clue about safety and planning. Others, the general public, does not and thus we are all subjected to the fear that little planes are not safe. They are, WE are the trouble! Most planes crash due to the loose nut up front. How about right now, we, you and I, recommit to not being the next headline!? Works for me, and Thank You.

Gear Down and Locked?

Editors Note - the Citation pilot may not have utilized Unicom to transmit his arrival intentions to the Marion airport, the same procedure we were all taught training for our PVT license.

Video of drone/airplane collision

What Happens When a Drone Hits an Airplane Wing?

With hundreds of thousands of personal UAVs currently in public hands, a serious drone strike on an aircraft is no longer a question of if, but when, according to several experts. While tests on bird strikes have been conducted for decades, what kind of damage a drone would cause was still virtually unknown...until now.

Researchers at the University of Dayton Research Institute are no strangers to airframe impact testing, and they recently partnered with Sinclair College National UAS Training and Certification Center to determine what could happen to a general aviation aircraft if it hit a recreational drone in mid air.

(Editor) Open the following video link below - or type into your search engine - “dayton research institute drone strike” While we all know significant damage can happen, the really interesting result I see is the drone actually enters the wing after the collision. Depending on where it enters the wing, will there be a fuel tank there?


She Flew Bombers

I got this idea from my daughter when I told her I was going to add a new column specifically for women in aviation. She told me about this book she really liked called “She Flew Bombers”. The book is about a fictional aviatrix joining the WASPs, but the author blended her into the real life challenges women pilots went through from learning to fly, to learning how to ferry fighters and bombers to Europe. Some of these challenges included sabotage to airplanes WASP pilots were killed in because somebody thought women aren't suppose to fly, all the way to delivering airplanes to Russian women pilots named “Night Witches” because of their aerial raids at night. I called Jeane Sloan and had a great conversation. When she sent me a book, she signed it “Keep em flying FiFinella”. What does this mean? Walt Disney had created FiFinella as a fictional gremlin, and agreed to let the WASP pilots use this image as their official mascot. This is a great book for young women to read learning the challenges of the past.

info@jeaneslone.com www.jeaneslone.com

She Flew Bombers

From the Factories to the Bases During World War II

Jeaneslone.com
Dreams

Janet Beazley

When I was a little girl, I was always fascinated by airplanes, but more specifically at that time about being a stewardess. Getting to go to so many places in the world and as a profession? What a job that would be! Each year, I had a small book that I put my report card in, an individual picture, a class picture and any other things I wanted to keep. Every year, I had to answer some questions on the pocket; name of teacher, best friend, favorite subject, etc. and lastly; what do I want to be when I grow up? Every year it was a stewardess, every year, up until junior high. I believe it was 4th grade when my parents got me a small gas powered airplane that had a long string attached to it. I really never quite mastered flying it but I sure had fun trying!

My point in the first paragraph is this – go after your dreams! You can do it. There has to be young girls who are also fascinated with airplanes yet today. As I continued through school and learned more each year, I started to realize that after talking to others, maybe being a stewardess was not the best avenue for me. Back more each year, I started to realize that after talking to others, there are so many other different careers to choose from in the aviation industry. It’s up to each one of us to find ways to encourage the younger generations to seek out their dreams and if aviation is the way they would like to go, look for ways to help them and encourage them. One example is Airbus. They have used tools such as smart phone applications to provide encouragement and support to their workers. These could be tailored to reach women specifically. There are different organizations that promote Women In Aviation. Source: Women in Aviation: Where are we today? By Sarah Kelleway, March 8, 2018

AVIATION ART CONTEST 2019 is “My Dream to Fly”

We want to let everyone know there is still time to get involved in the upcoming Aviation Art Contest 2019. This year’s theme, “My Dream To Fly”, is an opportunity for those between the ages of 6-17 to pick up your favorite art supplies and share your dream to fly.

Remember, each achievement in flight started with a dream. Along the way, the next generation of aviation enthusiasts, while building their dreams, can be part of a program that has shown “The Sky Is Not The Limit”! All entries have to be postmarked by January 18, 2019. For further information and or an entry brochure, contact David Morris at the NDOT – Division of Aeronautics by emailing David at david.morris@nebraska.gov or by calling 402-471-2371.
Events Calendar

- **York Airport (KJYR)**, EAA Chapter 1055 Fly-in breakfast (free-will donation) on the 1st Saturday of the month, 8:00-10:00.
- **Crete Airport (KCEK)**, EAA Chapter 569 Fly-in breakfast on the 3rd Saturday of every month, 8:00-10:00.
- **Norfolk Airport (KOFK)**, Fly-in Breakfast Special, the 4th Sunday of every month, 10:00-3:00 PIC’s at the controls get 50% off the meal price. Barnstormers Family Bar and Grill located on the airport. 402-316-4099.

**Nebraska Aviation Symposium**

Kearney Holiday Inn

January 23: Project Planning 1:30-3:30 pm, Registration from 3:00 pm to 7:00 pm. Pilot Safety Meeting from 7:00 pm to 9:00 pm.

January 24: Conference starts at 7:00 am. Banquet and Hall of Fame Awards starts at 6:00 pm.

**IA Renewal Seminar**

January 25: Registration and breakfast at 7:00 am. Seminars at 8:00 am thru 5:00 pm. Banquet at 6:30 pm.

January 26: coffee and rolls at 7:00 am, seminars from 8:00 am thru 12:00 noon.

Early registration deadline is January 4, 2019. Registration forms can be found at www.nebraskaaviationcouncil.org.

**2018 Airport of the Year**

Airport of the Year applications can be found at www.aero.nebraska.gov, under the Nebraska Airports section. Deadline 1/15/19 submit to David Moll at david.moll@nebraska.gov. Or use our mailing address: NDOT P.O. Box 82088, Lincoln, NE 68501.

NTSB Chairman Calls Notams ‘Garbage’

NTSB chairman Robert Sumwalt called the Notam system in the U.S. “messsed up” this week during a hearing on the July 7, 2017 incident at San Francisco International Airport (SFO) in which an Air Canada Airbus A320 nearly landed on a crowded taxiway. The crew mistook the taxiway as their cleared runway—28R—because Runway 28L was closed. The pilots failed to catch that note on page eight of the 27-page list of the SFO Notams.

After acknowledging the “crew didn’t comprehend the Notams,” Sumwalt then read a verbose and complicated entry that limited a portion of a taxiway to aircraft with a wingspan of 214 feet or less. “Why is this even on there?” he asked. “That’s what Notams are: they’re a bunch of garbage that no one pays any attention to,” adding that they’re often written in a language that only computer programmers would understand. Sumwalt also relayed a recent experience he had flying the jumpseat into North Carolina’s Charlotte/Douglas International Airport, saying, “There were pages and pages and pages of Notams, including one for birds in the vicinity of the airport...when are there not birds in the vicinity of an airport?” Not surprisingly, one of the NTSB’s six safety recommendations stemming from this incident is a “more effective presentation of flight operations information to optimize pilot review and retention of relevant information.”