

Michigan Aeronautics Commission
Pilot Shortage Task Group
July 2, 2018
Q & A

How has the pilot shortage impacted your organization or company?

Stephanie Ward, Mead & Hunt – As for our organization, we have found it difficult to hire staff who have specific airport engineering and planning experience since this is a very limited area of study for most institutions.

On a more detailed level, our research with ACRP 01-34 we have uncovered a considerable amount of disconnect between aviation education related items that don't support a continuous option for students to be engaged in aviation. I can share some of our findings if you would like as part of the meeting.

Matt Dahline, Crosswinds Aviation – The shortage has had a positive impact on our business. The shortage has caused airlines to increase pay and produce a much brighter future for high school students looking at becoming a pilot as a career. Although the cost of entry is quite high, it's now a career option that despite the cost of entry makes sense for young people.

Rob Bunday, Western Michigan University College of Aviation – Within the WMU operation, flight instructor staffing is a blend of full and part-time employees. Our full-time flight instructors are provided a competitive salary and benefit package and we have not experienced any turnover amongst this employee group in several years. Furthermore, I do not anticipate any turnover in the near term as most individuals seem well settled into the WMU environment. Including management pilots, WMU has ten full time employees who are directly associated with flight training activities and an eleventh individual who spends about half of his time dedicated to flight training. Complementing the full-time faculty/staff, are approximately 60 part-time flight instructors. This number fluctuates depending on how many individuals we can hire at any given time and what the turnover rate is amongst them. Looking at data which was compiled earlier this year, between January 2016 and March 2018 the college lost 62 part-time Certified Flight Instructors (CFI's) to other employers; most [but certainly not all] moves were vertical in nature to higher level operators such as the regional airlines. During the same time, the college hired 65 CFI's; we would hire more if they were available to hire. This rate of turnover is obviously high, but it is by no means the highest we have experienced. At one point, we had a near 100% turnover rate during a one-year period.

While employee turnover is a costly problem in any organization, it is particularly complicated in the flight training arena where it is not a simple matter of just inserting a new instructor into the seat next to a student. Due to the personalized nature of instruction, it is not uncommon for students to experience setbacks in progress when an instructor change takes place. There are exceptions obviously, but instructor changes are costly from not only a financial standpoint for

the student, but for the operator who is providing training and standardization to the new employee. Furthermore, the lack of depth available in the instructional ranks has made it more difficult to find experienced and qualified individuals for teaching multi-engine instruction, conducting stage and progress checks and teaching the next generation of flight instructors. To teach a CFI, per the Federal Aviation Regulations, the recommending instructor must have two years of experience as a CFI themselves. Finding individuals remaining in instructional jobs with two years of experience is challenging to say the least. WMU is not alone with these difficulties. Based on information provided by the University of North Dakota (UND), they are about 20% short of the instructors needed to run their flight operation and are also experiencing difficulty in retaining instructors who have experience.

Overlaid against the instructor shortage is a renewed interest by students interested in becoming pilots. Data compiled by UND notes that several of the major collegiate institutions offering flight training are experiencing significant increases in student applications. More specifically the numbers are reflected as follows:

- University of North Dakota: 35% rise
- Auburn University: 30% rise
- Western Michigan University: 25% rise
- Embry Riddle Aeronautical University: 20% rise
- Middle Tennessee State University: 19% rise

As can be seen, the critical shortage of qualified instructors combined with the increased application numbers for flight students is creating a challenging environment in which to operate. The crux of the difficulty lies with the lack of instructional staff to teach those students who want to learn to fly.

Understanding that neither a single solution nor a single operator will resolve the problem, WMU is taking steps to slow instructor attrition somewhat and hopefully address the gap between lack of CFI's and interested students. Here are a few of the present initiatives:

- Scholarships for CFI training in exchange for a defined employment commitment to the college. For well qualified and motivated individuals, WMU will fund up to nearly \$10,000.00 (\$9,944.00 actually) in CFI training, provided the recipient agrees to work for the college following the successful completion of the CFI course.
- Hire additional full-time instructional staff. WMU has two positions posted for full-time CFI's which, as of this writing, unfortunately remain unfilled. These are well paid and include a full university benefits package.
- Provide training assistance to prospective multi-engine instructors (MEI's) in exchange for an employment commitment.
- Raising the academic requirements for students who want to fly. Understanding there are limited instructional resources available, the college recently raised the minimum

grade point average required so as to apply the limited instructional resources to higher performing individuals as opposed to those at the lower echelon.

In addition to the above, although this remains undefined, we continue to seek out individuals who are either at the end of their career or who desire to work in aviation but prefer a lifestyle which offers an emphasis on family and presence at home versus traveling. WMU is not alone with these initiatives; other operators nationwide are also offering to pay for training or providing signing bonuses to CFI's.

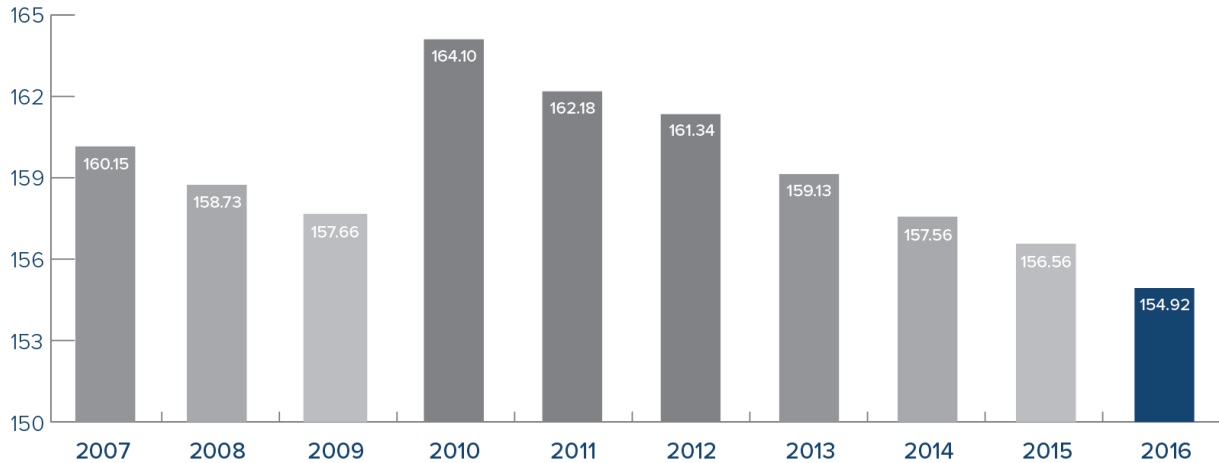
Looking beyond the business of aviation education, the shortage of qualified personnel is as significant if not greater amongst the regional airlines, smaller air cargo and charter operators. Although certainly not qualifying as exhaustive research on the topic, I recently spoke with contacts at Ameriflight and Martinaire, both of whom maintain a Lansing base, and confirmed they continue to be short staffed as well. Pete Schiess, who is based in Burbank, CA and supervises pilot recruitment for Ameriflight offered the following statistics and information:

- They are hiring 10-15 pilots each month (more if they can find them) just to stay status quo on staffing.
- Although they have a core group of pilots with 10+ years with the company, turnover amongst the rest of the pilot group is approximately 80% annually.
- 9-15 months is the average stay for a pilot.
- Approximately 50% of pilots flow to regional airlines, 25% to corporate/part 135 operators and 25% flow to jet operators such as Allegiant or Omni Air.
- Ameriflight does have a flow program with some jet operators and the 25% going to those is generally through the flow program.
- Ameriflight has recently announced a flow program to UPS which they hope will help with recruitment and retention.
- Ameriflight has an accelerated Captain program which offers employment opportunities for pilots as low as 800 total time.
- In addition to the above, they recently announced a tuition reimbursement program for pilots through an agreement with Epic Flight Academy. <http://epicflightacademy.com/epic-ameriflight-pathway-program/>

Pat Jemison, Director of Maintenance for Martinaire in Lansing, confirms a similar situation exists in their operation, noting that 60 weeks of longevity for a pilot is generally considered "good". Given his maintenance background, he also expressed concern about the upcoming shortage of qualified and experienced mechanics and the impact that will have on the industry. Although I do not have defined data, most regional airlines are experiencing significant difficulties recruiting and retaining pilots as well, and similar rates of turnover apply.

Faye Black, Regional Airline Association – The pilot shortage has led to a broad scale contraction in the regional airline industry.

Passengers Enplaned (Millions)



A large percentage of airline pilots face mandatory retirement at age 65 (14 C.F.R. §121.383) in the next 10 years. One [study](#) forecasts 36% of the workforce will retire by 2026; [another](#) estimates 42%. [Studies](#) also forecast industry fleet growth in response to growing air service demand, fleet size will likely [double](#) in 20 years, requiring more pilots. At the same time, the pilot pipeline has been shrinking. Between 1990-2017 [FAA](#) has issued 52% fewer total pilot certificates with all certificate types declining. By 2020, the aviation system is forecasted to be short 3000 pilots. By 2026, we are forecasted to be short 14,000 pilots. With approximately 10 pilots needed to crew every regional aircraft, these shortfalls equate to 300 and 1400 aircraft grounded. For perspective, the entire regional airline industry operates just around 2000 aircraft today.

The majority (64%) of US commercial airports have too few passengers to support air service by major airlines and are served exclusively by regional airlines. Because regional airlines are the entry point of the career path, we've been first and hardest hit, and the communities relying on regional airlines exclusively have been faced with disproportionate early impacts. While pilot retirements have not yet peaked, they are outpacing the supply of new pilots by a large factor. As a result, the regional airline industry has contracted. This contraction has taken during a period of economic expansion, where communities would typically enjoy increased air service. Instead, communities are losing service. Between 2013 and 2017, 20 airports have lost all their air service, 26 airports have lost at least 75% of their air service, 65 airports have lost at least 50% of their air service, 107 airports have lost at least 33% of their air service, 174 airports have lost at least 20% of their service, and 256 airports have lost at least 10% of their air service. This is sharply worsening the disparity between urban and rural transportation options, and contributing to the troubling trend of urbanization of US GDP.

These losses stand to worsen as the shortage deepens, and the impacts will spread to larger communities and larger airlines. Regional airlines also serve larger markets, where the use of smaller aircraft can allow more frequency between markets and increase competition in a market – this means regional airlines help bring lower fares and better travel options to businesses and families in bigger cities, too. Without intervention, communities of all sizes will lose significant measures of connectivity – in terms of destination options and frequency. Many more communities will lose air service altogether or see greatly diminished options.

Are there immediate state-level policies you believe should be enacted to address critical concerns in the short term?

Stephanie Ward, Mead & Hunt – Since I’m interested in the broader context, not just the pilot shortage, I think there should be funds dedicated, if feasible, to provide education opportunities across the state. Restoring the teachers’ aviation education workshop might be an example, a scholarship program, a dedicated education coordinator, connections for flight training and camps might be options.

Matt Dahline, Crosswinds Aviation – From my perspective the two biggest challenges that we face are: (1) Access to financing for pilot training. One of the only viable mechanisms for access to the financing needed to achieve ratings up to CFI are through student aid at collegiate aviation programs. This severely hinders student pilots at smaller flight schools to get the financing required to get up to the CFI rating. I’m not sure what policies the state can have an effect on to change this but it’s something to explore.

(2) There are not enough professional flight training operations to fill the need, even if there were enough interested students and financing wasn’t an issue.

James Fults, Michigan Talent Investment Agency – On the state level, I think a look at all required licensure and whether it can be changed or streamlined.

Rob Bunday, Western Michigan University College of Aviation – I don't know exactly how the state and federal levels communicate, but one item that is critical to our operation retaining instructors is keeping the current federal regulations in place, which require at least 1500 hours (1000 hours for a graduate of our flight program) for the issuance of a Restricted Airline Transport Pilot certificate (R-ATP). If these minima are reduced to allow the issuance of the R-ATP with less than the hours noted above, it will further deplete the current staff of instructors as they will be hired by the part 121 carriers with less experience and therefore leave flight training organizations with fewer employees available to train the next generation of pilots. Accordingly, if there is an opportunity for the state to support not changing the existing federal regulations, that will help in the long run.

Faye Black, Regional Airline Association – Yes. Local policymakers, including mayors and city/county officials, governors and others, should communicate formally with the Michigan delegation in Washington. We need direct involvement from Michigan’s Congressional delegation, community development leaders, state and local elected officials and airports. Michigan’s

economy demands a strong commercial aviation system. Lawmakers must be urged to address the shortage as well as the related issue of skills degradation among newly qualified pilot candidates, by urging Federal Aviation Administration expansion of pilot training pathways – this does not require a change in the law.

In 2013, FAA implemented the new First Officer Qualifications (FOQ) Rule, which was spurred by Congress through the Airline Safety and FAA Extension Act of 2010 (P.L. 111-216 §217), requiring all part 121 pilots to hold an Air Transport Certificate, with a prerequisite of 1,500 hours, or a Restricted ATP (R-ATP), with portions of the prerequisite hours offset by structured training credit. The Rule increased the time and cost associated with pilot training. R-ATP pathways are underutilized, with only three approved at present despite their proven safety advantages and benefit to pilot supply. Airline-sponsored R-ATP pathways can incorporate enhanced training, improving training while expanding the pilot pipeline and relieving pressure on other pathways. To date, FAA has approved only three types of structured training pathways, despite their [proven](#) safety advantages. Additional civilian-based pathways would broaden the pilot supply and alleviate pressure on all sectors but would also offer more pilots the opportunity to gain the best training opportunities. It not enough simply to draw more pilots into the pathway, but we must ensure more pilots have the right training opportunities to ensure they can be successful.

Looking more towards the future, are there long-term opportunities to provide a stable pilot ecosystem for Michigan specifically?

Stephanie Ward, Mead & Hunt – As it relates specifically to pilots, I think there is a need to connect former pilots with training opportunities to educate the next generation. The costs associated with a traditional 4-year degree and then the required flight time prior to entering a regional carrier, makes it difficult to afford. We have heard time and time again that it is often cost prohibitive to get to the point to support the regional and mainline carriers.

Matt Dahline, Crosswinds Aviation – I can only speak from our experience at Crosswinds Aviation. We are working on starting a flight school in Flint but are having difficulty with funding hangar improvements required for a flight school with associated high school and college programs. I think it's important longer term for the state to be thinking about facilities at key airports throughout the state where flight schools could be attracted to open.

James Fults, Michigan Talent Investment Agency – I think a long-term strategy would be to adopt a career exploration program while students are in middle school and high school, similar to MiCareerQuest – <https://www.micareerquest.org/> or become part of and or have a similar program to the “Forces to Flyers” program to drive returning veterans into the state for pilot training – <https://www.transportation.gov/briefing-room/forces-flyers>.

Rob Bunday, Western Michigan University College of Aviation – I think this is a multi-faceted issue. First, the business climate in this state must remain such that it attracts and retains business which can afford corporate airplanes. Beyond corporate aviation, I think it is critical for the state to support the various charter (cargo and passenger) operations and continue to solicit a presence

from the regional and major airlines. The above obviously has many positive economic aspects, but from a flying perspective, if there are flying jobs available in Michigan, pilots will follow. Also, looking at the front end of the aviation business, if there are jobs available for pilots, it is my belief that there needs to be enough flight training providers available to support some of these positions. Over the course of the past couple of decades, the flight training business has proven to be challenging, and there appears to be far fewer providers of flight training now than there were 20 years ago; I don't have statistical evidence to support that statement, but I think it's accurate. The bottom line here is that to support aviation, the state must continue to support business and perhaps offer targeted incentives for aviation related businesses so as to provide a path from flight training to stable employment through to retirement. How this can be accomplished is perhaps a question to be answered by a larger audience.

Faye Black, Regional Airline Association – Yes. Tuition for flight training and education is incredibly expensive and most students lack access to private capital needed to access the career path. As stated before, FAA should approve structured training pathways offered by certificated air carriers for credit toward a R-ATP certificate in cases where they *enhance safety*. In the meantime, public private partnerships, particularly those centered on financial avenues to support pilot training like loan forgiveness programs, state grants, or tax incentives for employer-based loan forgiveness or tuition assistance programs, will help incrementally. These policies should be mirrored on a national level as well.

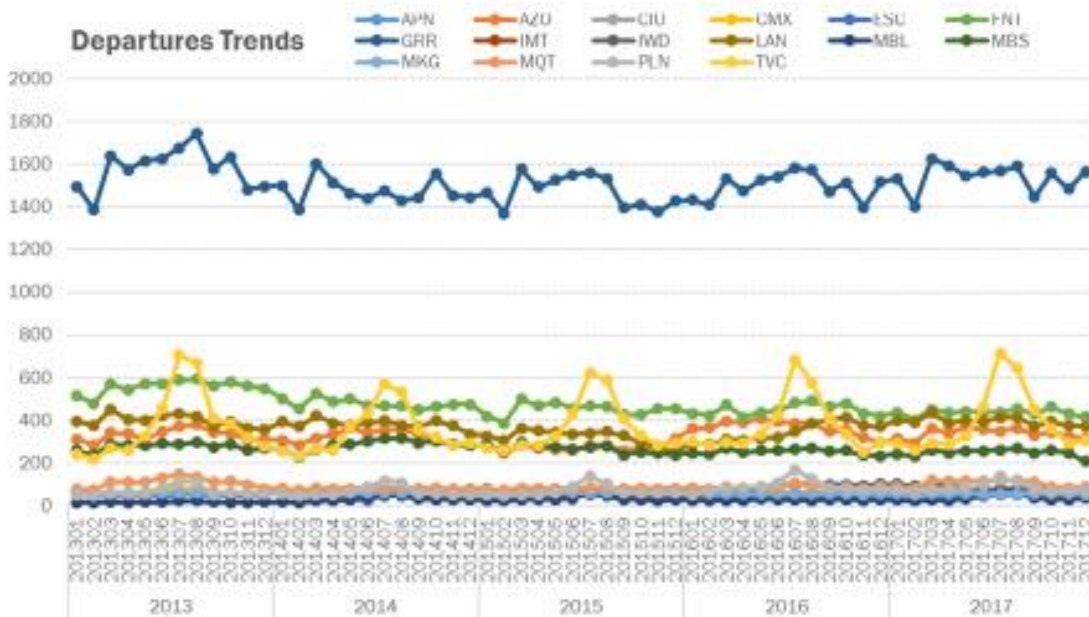
(See chart on next page.)

Michigan

Summary of scheduled passenger air service



- ➔ **17 airports with scheduled service between 2013 and 2017**
- ➔ **6 airports with service reductions of at least 5% (departures)**
 - CMX (Houghton County Memorial, Hancock) -8% departures / -8% seats
 - DTW (Detroit Metropolitan Wayne County) -8% departures / +4% seats
 - FNT (Bishop International, Flint) -22% departures / -5% seats
 - MBS (Saginaw) -10% departures / -1% seats
 - MKG (Muskegon County) -7% departures / -7% seats
 - MQT (Marquette) -5% departures / -12% seats
- ➔ **Overall: departures down -7% and seats up +6%**
- ➔ **Regional airlines provide 57% of Michigan passenger air service**
- ➔ **13 RAA member airlines provide scheduled service to Michigan**
 - SkyWest, Endeavor, ExpressJet, GoJet, Republic, Envoy, Mesa, Air Wisconsin, Compass, PSA, Trans States, CommutAir, Piedmont
- ➔ **State Economic Impact of Small Community Air Service in 2015: \$3.6 billion & 35,000 jobs** (InterVISTAS Consulting LLC)



Source: RAA Analysis of Oliver Wyman PlaneStats OAG schedule data November 2017