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"FAA Reauthorization: Examining the Current and Future Challenges Facing the Aerospace Workforce"
House Committee on Transportation and Infrastructure, Subcommittee on Aviation

My name is Faye Malarkey Black. I am the President and CEO of the Regional Airline Association (RAA). Regional airlines play a critical role in the U.S. air transportation system, particularly for smaller communities. The safety of our passengers, crewmembers, and the public is and will always be our top priority. RAA appreciates the opportunity to testify before the Committee today and share our perspective on the current workforce challenges facing the airline industry and its impact on air service across the country.

I want to thank the Committee for its leadership during the pandemic. The Payroll Support Program provided a lifeline to airline industry employees. Likewise, the minimum air service guarantees put in place kept as many small communities as possible connected to the air transportation system during that challenging time. Unfortunately, the pandemic was particularly hard on the regional airline industry; several airlines shuttered or went through bankruptcy, and the industry emerged smaller than before.

The Regional Airline Industry

RAA represents 18 regional airlines[1], which operate 41% of the U.S. scheduled passenger departures and directly employ more than 62,000 individuals. Regional airlines specialize in operating smaller aircraft that are rightsized for smaller markets. In 2021, regional airlines carried approximately 123 million passengers; a substantial increase from the 73 million carried in 2020, during the height of COVID, but still more than 40 million fewer passengers than carried in 2019. Regional airlines provide more than half of the air service in 30 states and more than 75% of the air service in 15 states[2]. Notably, regional airlines offer the only source of scheduled, commercial air service at 67% of U.S. airports. In fact, major airlines operate at about 33% of U.S. commercially served airports, while regional airlines operate at 98%.

Without regional airlines, huge segments of the U.S. population would not have access to scheduled, passenger air service without hours-long highway drives. For this reason, regional airlines play a crucial role in upholding multi-modal transportation safety. According to the National Highway Traffic Safety Administration and the Federal Highway Administration, Americans continue to drive more than during the height of the pandemic, and preliminary Federal Highway Administration data shows a 1.6% increase in vehicle miles traveled, or about 39 billion miles, with traffic fatalities claiming the lives of 31,785 people in the first nine months of 2022 alone.[3] Compared to 2021, traffic fatalities increased 12% on

[1] RAA Members are: Air Wisconsin, CommuteAir, Cape Air, Empire Airlines, Endeavor Air, Envoy, GoJet Airlines, Horizon Air, Jazz, Mesa Airlines, New England Airlines, Piedmont, PSA Airlines, Ravn Alaska, Republic Airways, Silver Airways, SkyWest Airlines

[2] Regional airlines provide 75% or more of the air service in Alabama (81%), Alaska (88%), Arkansas (81%), Iowa (78%), Kansas (82%), Maine (79%), Mississippi (82%), North Dakota (88%), South Dakota (85%), Vermont (92%), West Virginia (91%). Regional airlines provide half or more of the air service in Idaho (73%), Indiana (59%), Kentucky (60%), Michigan (57%), Montana (73%), Nebraska (60%), New Hampshire (69%), New Mexico (63%), North Carolina (55%), Ohio (52%), Oklahoma (55%), Oregon (54%), Pennsylvania (59%), Rhode Island (67%), South Carolina (57%), Utah (58%), Wisconsin (67%), and Wyoming (64%).

[3] https://www.nhtsa.gov/press-releases/nhtsa-estimates-traffic-deaths-2022-third-quarter

rural interstates.[4] In 2021, the last year for which there is full data, traffic fatalities reached an estimated 42,915 deaths, a ten-year high.[5]

Because major airlines cannot serve smaller airports with their larger aircraft, most partner with regional airlines to provide air service to small communities. The goal of this arrangement is to bring air service connectivity and a seamless, safe, and reliable travel experience to passengers in every corner of the country. While regional airlines contribute significantly to civil aviation's overall $1.8 trillion economic footprint, air service at small communities (defined as small and non-hub airports) drove $152 billion in direct economic activity in 2019, supporting over one million jobs and $43 billion in local taxes and wages.[6]

Addressing Workforce Challenges Today and into the Future

The regional airline industry, like most of the airline industry, has experienced workforce challenges. Most acute among these challenges is a severe and ongoing pilot shortage. Regional airlines have adopted many self-help measures to address the shortage, but these measures are not enough alone. That is why we are focused on partnering with Congress, the Administration, and interested stakeholder groups to safely address the impacts the pilot shortage is having on our industry, passengers, and the communities we serve. Working together, it is critical that we increase equitable career access, reduce the cost barriers associated with pilot training, and update and modernize the training provided. These actions will expand the pilot development pipeline to include a more diverse population, while improving aviation safety and creating an environment where air service can be restored and grow.

The Regional Airline Industry Is Suffering from a Devastating Pilot Shortage

Despite soaring passenger demand, a worsening pilot shortage has hindered the regional airline industry's recovery from the pandemic and is decimating small community air service. This shortage has been growing for decades, driven by the inability to create a sustainable pipeline of new pilots. One of the main challenges has been the FAA's inaction in advancing and evolving pilot training standards as envisioned under the *Airline Safety and FAA Extension Act of 2010* (*2010 Airline Safety Act*.)[7] Most pilots only have access to an hours-based pilot qualification standard, which incorporates little actual training after completing flight school. To maintain safety, every regional airline has significantly expanded its training footprint, but more candidates fail out today than they did before the qualification standards favored flight time over quality training. This prevents air carriers from maximizing the pilot development pipeline.

The impacts of the pilot shortage are real. Currently, more than 500 regional aircraft are parked,[8] and those aircraft remaining in service are underutilized. The impact has been felt by 308 airports, or almost 72 percent of all U.S. airports. These airports have, on average, lost one quarter of their flights, with smaller airports experiencing a disproportionate impact.[9] This is happening despite industry self-help measures, including dramatic compensation increases and enhancing partnerships and pathways with training providers and larger carriers.

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[4] Id.
[5] https://www.nhtsa.gov/press-releases/early-estimate-2021-traffic-fatalities
[6] https://www.raa.org/wp-content/uploads/2020/11/RAA_Annual-Report-2019_v33_bw.pdf
[7] P.L. 111-216 (August 1, 2010).
[8] *https://www.flightglobal.com/fleets/nearly-500-regional-jets-parked-in-usa-cirium-fleets-data/152859.article*
[9] *OAG published schedules April 2019 vs. April 2023*

For decades, the airline industry depended on the U.S. military to provide a robust supply of well-trained pilots; however, due to a variety of factors, including the military's decision to disinvest in manned aircraft, that pipeline substantially diminished. Our collective long-term success in addressing workforce challenges will depend on our ability to hire civilian men and women from underrepresented backgrounds and demographics. Unfortunately, despite targeted efforts, airlines have not been able to successfully expand the recruitment of pilots outside the industry's core demographic, which is overwhelmingly comprised of white males. The main obstacles to accomplishing this goal are barriers to entry related to access and wealth; bottom line, this is an expensive career path.

Currently, the pilot shortage is further complicated by an acute captain shortage. Twelve large carriers alone hired 13,128[10] pilots in 2022, sourcing nearly all these pilots from regional airlines. This hiring spree specifically targeted captains and captain-eligible first officers. Exacerbating the captain shortage is the forecasted growth in pilot retirements. Over the next fifteen years, approximately 50 percent of the workforce will be forced to retire. When a pilot—typically a captain—retires from a larger airline, this sets off a trickle-down effect of upgrades, ultimately resulting in a pilot—typically a captain or captain-eligible first officer—being hired from a regional airline. Because every flight needs a captain, and because there are more captains recruited by larger airlines than there are regional airline captains, or first officers eligible to upgrade and replace them, even first officer hiring is slowed, despite a growing shortage of all pilots. Thousands of willing, healthy, and skilled pilots, who would like to continue working, are being forced out of the profession at age 65, to the detriment of air service across the country.

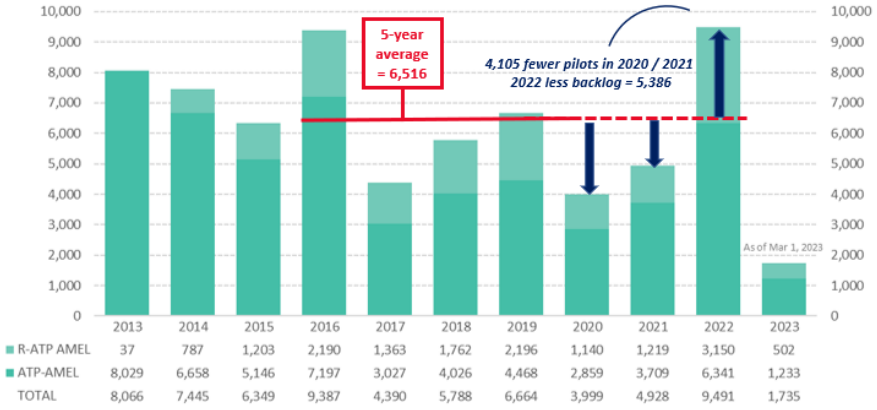
There aren't Enough Qualified and Interested Pilots Available for Hire

Despite increased FAA pilot certifications in 2022, there are not enough qualified and interested pilots for hire. Though 9,491 new pilots qualified in 2022—the highest number on record—it fell far short of the 13,128 hired by just one subset of the airline industry last year. It is vitally important that pilot production in 2022 be put in the proper context. COVID substantially disrupted the pilot development pipeline with roughly 4,105 expected pilot qualifications interrupted between 2020 and 2021.[11] Though 9,491 new pilots qualified in 2022, this ten-year high drops below the five-year average once adjusted for the pandemic backlog.

Additionally, many external factors influence the assignment of trends in pilot supply data. Just as COVID disruptions led to a ten-year high in pilot qualifications in 2022 when pilots caught up, a closing regulatory window accelerated qualifications in 2016—the second highest year on record—before a steep drop in 2017. Wide swings in qualifications, including increases or decreases of near or above 100% from one year to the next, illustrate both the need to control for data anomalies when drawing conclusions, and the fragility of pilot supply year over year.

[10] https://fapa.aero/hiringhistoryarchive.asp?year=2022
[11] Analysis of data files distributed monthly by Registry Services and Information Management Branch, AFB-730, Federal Aviation Administration

New Pilots Can't Keep Pace with Exits + Growth



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
R-ATP AMEL	37	787	1,203	2,190	1,363	1,762	2,196	1,140	1,219	3,150	502
ATP-AMEL	8,029	6,658	5,146	7,197	3,027	4,026	4,468	2,859	3,709	6,341	1,233
TOTAL	8,066	7,445	6,349	9,387	4,390	5,788	6,664	3,999	4,928	9,491	1,735

**Part 121 Airline Pilots are required to hold an Air Transport Pilot Certificate with Multi-engine Land Aircraft category class rating (ATP AMEL or R-ATP-AMEL).*

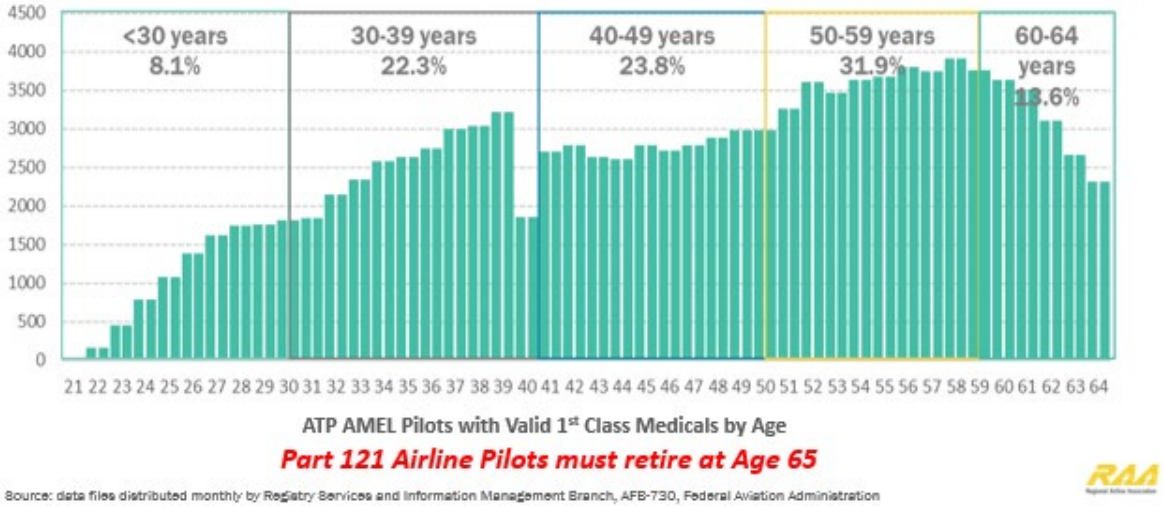
Source: data files distributed monthly by Registry Services and Information Management Branch, AFB-730, Federal Aviation Administration

In terms of the current pilot supply, we have no expectation that large carriers will slow the pace of hiring over the course of this year, thus limiting the opportunity for regional airlines to replenish their pilot ranks. On its last earnings' call, United Airline CEO, Scott Kirby stated, "We along with Delta, American, and Southwest alone are planning to hire about 8,000 pilots this year compared to historical supply in the 6,000 to 7,000 range. Pilots are and will remain a significant constraint on capacity."[12] Mr. Kirby also noted that other large air carriers are expected to hire around 2,000 pilots, indicating an overall demand of at least 10,000 pilots, which will be sourced primarily from regional airlines.

This demand is being fueled in part by of the coming tsunami of pilot retirements. Over the next 15 years, nearly 50 percent of the commercial airline workforce will be forced to retire because they will reach the age of 65. There are 70 percent more pilots aged 43 to 64 than aged 21-42. Reflective of the high cost of flight education and training, the "under 30 years of age" cohort of pilots is the smallest at around 8 percent of total pilots. This year, 2,225 pilots must retire. Required retirements will peak in 2029 at 3,750, when pilots aged 58 today turn 65. Thereafter, retirements remain high, staying above 2023's rate for the foreseeable future.

[12] UAL 4Q/FY22 Earnings Call, January 18, 2023. See: https://ir.united.com/static-files/5b5b2c9c-aa92-44da-ad37-753035bedd8d.

Qualified Pilot Population is Disproportionately Older

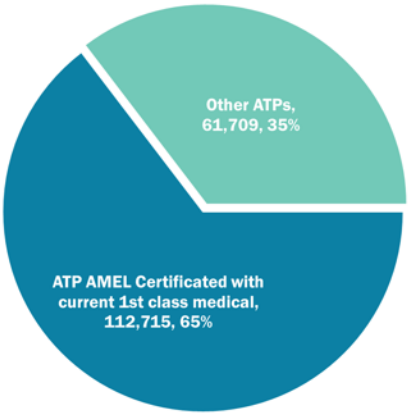


ATP AMEL Pilots with Valid 1st Class Medicals by Age

Part 121 Airline Pilots must retire at Age 65

Source: data files distributed monthly by Registry Services and Information Management Branch, AFB-730, Federal Aviation Administration

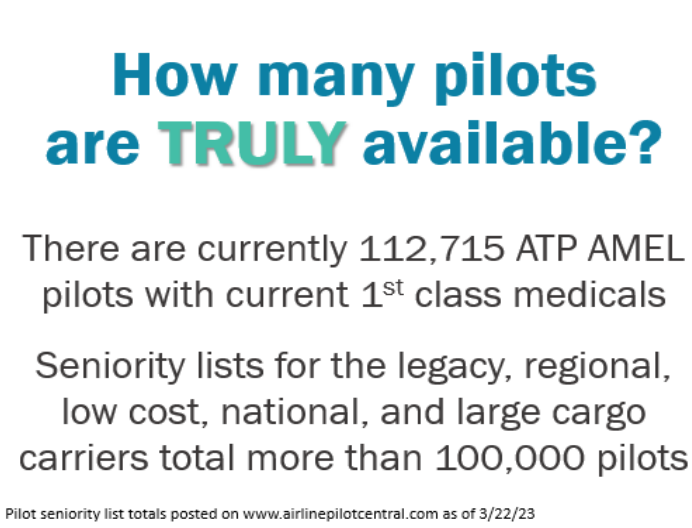
Equally important is the aggregate number of pilots that may be available to hire. More than one-third of the 174,424 ATP certificate holders in the FAA's Civil Airmen Database are ineligible for hire because either they are foreign pilots, or don't hold a first class medical, or have other disqualifying factors.



- **At minimum, 35% of total ATP certificates are ineligible for hire**
- **Currently unquantifiable for analysis:**
  - Piloting ability
  - Check-ride failures
  - Recency and type of experience
  - Instrument proficiency
  - Criminal record

Source: data files distributed monthly by Registry Services and Information Management Branch, AFB-730, Federal Aviation Administration

Of the remaining 112,715 pilots, we can determine how many are available to hire from the seniority lists for legacy, regional, low cost, national, and large cargo carriers, which totals more than 100,000 pilots. This leaves slightly over 12,000 pilots who aren't on seniority lists. Business aviation and charter operators also employ ATP pilots, making it reasonable to conclude that nearly every eligible pilot is already working.



RAA Member Airlines	18,282
American	15,176
Delta	14,561
United	13,023
Southwest	9,122
FedEx	5,037
JetBlue	4,650
UPS	3,446
Alaska	3,400
Spirit	3,318
NetJets	2,779
Frontier	1,910
Allegiant	1,141
Hawaiian	847
Sun Country	462
Avelo	147
Breeze	300
Atlas	2,500
Total Pilots	100,101

When determining pilot supply, it is critical to include business aviation's need for ATP pilots in any forecast of pilot demand. For example, Boeing's annual forecast is regularly cited as an accurate forecast for pilot demand. Lately, it has been used to validate that the United States is producing enough pilots to meet demand since it projects a need of 6,400 pilots a year through 2041 for North America, which is below the average ATP production over the last 5 years. However, Boeing's forecast does not include demand for pilots from business aviation, regional airlines who operate aircraft with less than 30 seats, and helicopters. Boeing stopped including demand for these segments of the industry in 2021. However, it should be noted that in its 2020 forecast, when those groups were last included, Boeing projected an annual need of slightly over 10,000 pilots per year for North America through 2039.

High Barriers to a Pilot Career Compounds the Shortage

Unfortunately, as it relates to pilots, no amount of generated interest and no amount of investment in salaries can address the sky-high cost of flight education and training. Sadly, those costs keep many from pursuing the career path. Airlines are stepping into the void, but they can't advance a holistic solution that ensures financial access for everyone who is prepared to put in the work to become a pilot.

Flight education and training at an FAA-certificated pilot school costs around $80,000. This cost can then dramatically increase to over $200,000 when combined with the added expenses associated with a bachelor's degree. The result is that only the most fortunate or affluent pursue the career path, which is one of the chief reasons the pilot population has very limited diversity. According to the Census Bureau's Labor Force Statistics Demographic Data for Pilots & Flight Engineers,[13] the pilot profession is not diverse—95.7% of the profession identifies as White; 9.2 percent Female; 2.6 percent Black; 1.6 percent Asian; and 9.7 percent Hispanic. Even where economic background is not statistically associated with an underrepresented population, financial barriers that deter or prevent some candidates from pursuing training further constricts an already unacceptably narrow pool of potential candidates.

The high cost also makes it very difficult to grow the airline pilot populations under 30 years of age, which is by far the smallest cohort of working pilots at about 8 percent. The average age of a new hire regional airline pilot is in the mid-30s, which is also the median age for childbearing. Most pilots come to

[13] Labor Force Statistics from the Current Population Survey, Bureau of Labor Statistics. *See* https://www.bls.gov/cps/cpsaat11.htm

the profession as a second career and most have a college degree.[14] These pilots were long called to the career path but were only able to surmount the financial obstacles later in life after they had built up their own savings and credit histories.

The Pilot Shortage is Resulting in an Air Service Collapse

The pilot shortage has driven a wholesale collapse in small community air service. More than 500 regional aircraft are parked, and aircraft remaining in service are being operated between 20-40% less than their usual operation. Today, 308 airports in the contiguous United States, or 72 percent, have less air service now than they did prior to the pandemic. Comparing July 2019 departures to announced July 2023 schedules, network carriers have exited 73 markets, with almost all exits representing a loss of regional lift (See Appendix A).

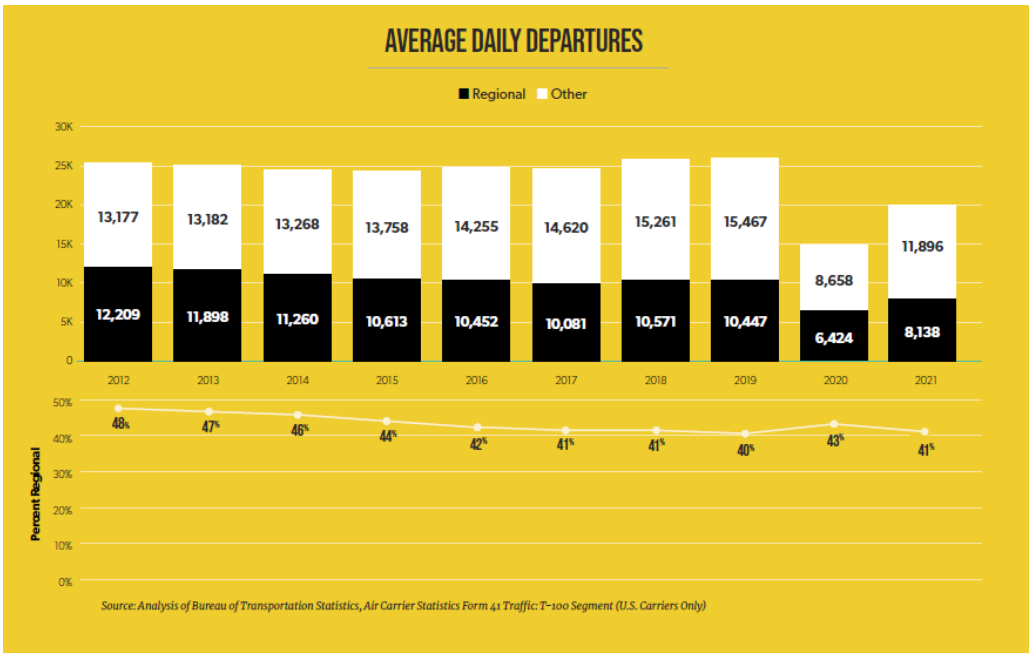
Comparing April 2019 flight schedules with April 2023, we see that the smallest airports in rural communities have lost the most service. Eleven airports have lost all their air service and 136 airports have lost more than 25% of their service. For the 53 nonprimary airports that lost flights, the average loss was 38 percent; 164 non-hub airports also lost flights and the average loss was 32 percent.

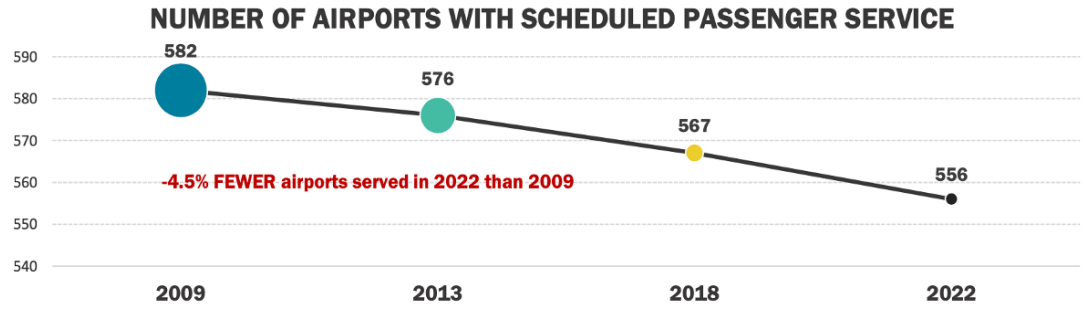
Larger airports, both large and medium hub are also seeing a loss of flights as they experience a reduction in air service and connectivity to and from small communities. Twenty-one large hub airports have lost on average 14 percent of their flights, and 21 medium hub airports have lost on average 16 percent of their flights. From a state-by-state air service perspective, 42 of 50 states have less air service today than they did pre-pandemic. Fourteen of these states have lost 20 percent or more of their service. (See Appendix B.

The regional airline pilot workforce was further diminished coming out of the pandemic. Network and major carriers, in full partnership with their pilot unions, brokered early exit packages that resulted in approximately 6,000 pilots separating from their employer. Although regional airlines granted virtually no early retirement packages to pilots, with the sudden return of demand, larger airlines replenished their pilots from the regional airline ranks. Simultaneously, all airlines have sought to increase pilot rolls to accommodate growth and ensure reliability amidst an increased in nonproductive pilot time under COVID and other factors.

Although these factors amplified the pilot shortage, the number of regional airline flight departures had already been declining for almost a decade due to the pilot shortage. During this time, numerous carriers ceased operating or filed bankruptcy due to a lack of pilots. In contrast, during this same period, larger carriers experienced an increase in flight departures, reflecting a more sufficient pilot workforce. Unfortunately, the contraction in the regional airline industry also led to the substantial loss of air service to smaller communities. Remarkably, these losses took place during periods of sustained economic expansion, when communities ordinarily see more, not less, air service.

[14] Pilot Source Study 2018: https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1198&context=jate





Source: OAG Schedule Analyser, July Schedules, US Operations

The pilot shortage has resulted in a collapse in air service, and smaller communities are particularly impacted because they rely exclusively on regional airlines for air service. It is vital that Congress address the pilot shortage to ensure communities of all sizes have access to the National air transportation system.

Other Workforce Shortages Impacting the Regional Airline Industry

While the pilot shortage has made headlines, the regional and broader airline industry also face a deep shortage of aircraft mechanics. According to Oliver Wyman, the North American gap between the supply for mechanics and other aircraft maintenance workers and demand for them this year will be between 8% and 12%.[15] By 2027, the supply deficit could grow to between 24% to 27%, which represents a gap of between 43,000 and 48,000 workers. This shortfall could result in a maintenance backlog that leads to fewer flights, and more delays and cancellations.

[15] *https://www.oliverwyman.com/our-expertise/insights/2023/jan/not-enough-aviation-mechanics.html*

This shortage is driven in large part by an aging baby boomer workforce that is preparing to retire, and an insufficient number of new or younger mechanics entering the profession. Thousands of mechanics retired early during COVID exacerbating the shortage. Today, most mechanics are over 40 years old, and less than ten percent of the workforce is between 18-30 years old[16].

While this shortage will impact everyone in the industry, certain sectors will feel it worse than others. As is the case with pilots, regional airlines serve as the entry point for mechanics and will be one of the segments most highly impacted by the shortage. Once mechanics gain skill and experience, many move on to work for major airlines, which are larger and can offer higher pay and greater advancement opportunities. As a result, the workforce at major airlines trends older, and they will face the wave of coming retirements sooner, forcing them to hire more talent from regional airlines and others. Additionally, regional aircraft are disproportionately older. Approximately 60 percent of the fleet is no longer being manufactured and older aircraft require more maintenance and upkeep. Importantly, returning parked aircraft to service involves complex and painstaking work to ensure they can resume flying safely. All systems must be inspected to ensure the aircraft is airworthy. When we address the pilot shortage, as many as 500 parked aircraft can start flying again to reconnect the country. Regional airlines will require an ample, well-qualified pool of maintenance technicians to return this fleet to service.

Another workforce shortage that is constraining the regional airline industry is the shortage of air traffic controllers. The controller workforce must be adequately staffed to minimize delays and disruptions to passengers. This summer, the FAA is asking all major airlines to reduce service by 10 percent at LaGuardia, Kennedy, and Reagan National Airport because of a controller shortage at the New York Terminal Radar Approach Control (NY TRACON) facility. As of 2022, regional airlines were responsible for 52 percent of the departures at Reagan, 46 percent of the departures at LaGuardia, and 18 percent of the departures at Kennedy. To compensate for these cuts, major airlines will decrease the number of regional aircraft flights to transport the same or more passengers on mainline narrowbody aircraft. This is the same response that major carriers have taken with the pilot shortage, and like the pilot shortage, the impact of the controller shortage at the NY TRACON will fall disproportionately on passengers from small communities. These passengers will endure reduced convenience, and more frustration and hardship when disruptions and delays occur amidst fewer flight options to set things right.

Actions Being Taken by Regional Airlines to Address Workforce Shortages

Regional airlines are investing in solutions to attract more people, especially pilots and maintenance technicians, to the regional airline industry. Part of this strategy includes higher pay. The average pay for newly hired regional airline first officers now exceeds $100,000 per year.[17] Regional airline pilot salaries are now approximately equivalent to first year, first officer salaries at network carriers.[18] Airlines have also made continuous investments in programs designed to spark career interest among candidates who have been historically underrepresented in the career.

As one important means of reaching diverse populations, regional airlines partner with organizations who regularly engage and support underrepresented candidates who are seeking aviation careers, such as the Organization for Black Aviation Professionals, National Gay Pilots Association, Women in Aviation, Sisters of the Skies, Latinos Pilot Association, Professional Asians Pilots Association, and others. This

[16] US Bureau of Labor Stastics, Transport Canada, Federal Aviation Administration, Oliver Wyman analysis
[17] https://atpflightschool.com/become-a-pilot/airline-career/regional-airline-pilot-pay.html
[18] https://www.oliverwyman.com/our-expertise/insights/2022/nov/next-gen-pilots.html

engagement includes supporting scholarship programs and attending events with these organizations to educate students on the careers and opportunities available to them.

Airline outreach is not limited to college-age students; carriers conduct outreach to students in elementary, middle, and high school in diverse school districts to help inspire an interest in aviation career paths. They also participate in aviation summer camps where students tour facilities and aircraft and speak with pilots and senior airline leaders about their jobs. All RAA members are engaging with their communities and offering opportunities that expose students to aviation.

Service members who are transitioning out of the military as well as veterans are also highly sought-after employees because they often have transferable skills and training that fits well within the airline industry. They also have unique life experiences and backgrounds they bring to their work. Carriers regularly conduct outreach on military bases that are near hub locations, attend job fairs and events, and work with staffing agencies and conferences that are specifically intended for recruiting individuals with a military background.

Additionally, many regional carriers have partnered with larger airlines to create pathway programs where pilots work at a regional airline before they move to a larger carrier. Pathway programs also partner with schools with diverse student populations, including minority serving higher education institutions like Historically Black Colleges and Hispanic Serving Institutions, as part of their recruitment and outreach efforts. These programs are designed to identify and prepare candidates for careers as pilots. Once admitted to the program, these candidates are mentored by individuals with similar backgrounds and life experiences.

Many airline employees also have long held aspirations to become pilots, however, like other individuals, the high cost of training has deterred them from realizing this dream. Some regional carriers, like Cape Air, have created internal programs to provide financial assistance to cover a portion of its employees' flight training expenses so that they can fulfill their dream of becoming a pilot. Republic Airways has opened its own flight training school called LIFT (Leadership in Flight Training) Academy that utilizes state of the art equipment and training practices to train the next generation of pilots. Students who successfully complete the LIFT career pathway program will have a guaranteed pathway to a career as a pilot at the air carrier. LIFT Academy costs $97,000 and Republic offers a $15,000 subsidy making training $82,000. After graduation, Republic offers an additional $15,000 in tuition reimbursement, making the cost $67,000. Supporting the LIFT academy is an aviation maintenance apprenticeship program in partnership with the U.S. Department of Labor. Apprentices earn as they learn over a 36-month period, and upon completion will be ready to begin a career as an aviation maintenance technician. These are but two examples. Multiple regional airlines have started training pathway programs in concert with their major airline partners.

Recommendations for Addressing Workforce Shortages

If air service is to be preserved and eventually restored, urgent action is needed from lawmakers to advance near-term and long-term solutions to supplement the actions being taken by airlines and other aviation stakeholders to create a sustainable and well-trained workforce. Advancing near-term solutions for the pilot shortage is particularly important given that most of the workforce is rapidly approaching mandatory retirement age. It takes at least three years for a pilot to complete flight training and build

the required flight hours to qualify for an air transport pilot certificate (ATP) and hiring eligibility.[19] Those following four-year degree programs with restricted-ATP (R-ATP) authorization, typically take at least five years to become eligible for hire.[20]

For all workforce challenges, there is an urgent need for an enhanced partnership between the government, labor, and industry stakeholders to raise awareness about the transformational jobs available in aviation and to ensure that those pursuing these career paths have access to educational opportunities to develop the skills necessary for success.

Solutions for the Pilot Shortage

Near-Term Solution: Raise the Retirement Age for Pilots

Raising the pilot retirement age is the *only* solution before this Committee that will immediately provide the airline industry access to more pilots and help mitigate the air service losses that communities are experiencing today. For example, if the retirement age was increased to 67, aligning it with the current social security retirement age, an additional 5,000 pilots would have the option to continue working over the next two years. This is approximately the same number of ATPs produced in 2021. If the retirement age was increased to 68, which is the current retirement age for pilots in Japan, an additional 8,000 pilots could continue working over the next three years. It is for this reason that RAA supports the *Let Experienced Pilots Fly Act of 2023* (H.R. 1761), which has been introduced by Congressman Troy Nehls (R-TX). We thank Congressman Nehls and Members of this Committee who have cosponsored this critical piece of legislation.

For the regional airline industry, increasing the retirement age is a particularly impactful solution because it will also help address the captain shortage. The overwhelming number of pilots who are approaching retirement age work at larger air carriers and when they retire, it sets off a domino effect of upgrades resulting in the departure of regional airline captains or captain ready first officers. Increasing the retirement age will slow attrition and provide regional carriers with the opportunity to stabilize their workforce. This in turn can help to preserve and eventually grow service to the communities that rely on us for air service.

As this Committee knows, Congress increased the retirement age from 60 to 65 in 2007. Aviation safety wasn't weakened then, and it won't be if the retirement age is increased again as long as existing regulatory safeguards that mitigate risk are continued. Today's older pilots must undergo mandatory medical examinations every six months. Additionally, all pilots have their skills regularly evaluated in flight simulators to ensure proficiency. Existing regulations also require two pilots in the cockpit. Because most Part 135 operators are not subject to a retirement age, pilots over the age of 65 are currently providing scheduled, passenger service safely as part of the EAS Program.

Long-Term Solution: Advance Aviation Safety by Expanding Structure Training Pathways and Incorporating Modern Technology in Pilot Training

[19] "In part 121 operations, each pilot in command (PIC) and each second in command (SIC) are required to have an ATP Certificate. Part 135 operations requiring the PIC to hold an ATP Certificate with an airplane category multiengine class rating are (1) commuter operations using multiengine airplanes with nine or fewer passenger seats (Scheduled 135), (2) on-demand operations using multiengine airplanes with 10 or more passenger seats, or (3) turbojets. Part 91K operations require all PICs of multiengine turbine-powered fixed-wing airplanes to hold an ATP Certificate." *See*: FAA Advisory Circular 61-138 (July 2, 2013).

[20] FAA regulations allow certain pilots with fewer than 1,500 hours of flight time to obtain a restricted privileges ATP certificate, which permits a pilot to serve as a co-pilot until he or she obtains the necessary 1,500 flight hours. *See*: https://www.faa.gov/pilots/training/atp.

RAA is not seeking, in any way, to reduce the pilot training requirements put in place in the *2010 Airline Safety Act*. In that Act, Congress wisely gave the FAA the authority to allow for constant improvements to and modernization of pilot training programs. RAA is seeking the Committee's support to ensure the FAA fully utilizes its existing authority in a way that continuously enhances safety.

In the last ten years, there have been vast advancements in academic training programs, including flight simulation technology. Flight simulators allow instructors to build a robust curriculum and use high-fidelity simulation technology to train on emergencies, adverse weather conditions, and crew resource management techniques in a multi-crew environment. This allows mastery of skills that are crucial for commercial flying but are too dangerous to attempt or impossible to replicate in small, single-engine aircraft. Simulators also keep performance data to allow better evaluation of a pilot's performance and scenarios can be repeated until the skills have been mastered.

Unfortunately, today's R-ATP pathways have not advanced alongside these technological and programmatic developments and the safety benefits they offer. Structured training pathways offer *more* training, not less, and should be encouraged when they advance safety. The FAA must additionally ensure that hours spent using modern training methods and technologies that allow for such challenging and reality-based experiences are credited and weighted for pilots working to meet the 1,500-flight hour requirement. This will enhance safety, incentivize continuous improvements in pilot training programs, and allow new pilots to receive the best, most modern, and targeted training available.

In 2013, the FAA implemented its new First Officer Qualifications (FOQ) rule with the prerequisite 1,500-flight hours as one ATP training pathway. The FAA also established three other training pathways (R-ATPs), allowing some structured academic training to be credited toward flight hours. These R-ATPs allow military pilots to receive credit for 750-flight hours; graduates with a BA in aviation to receive credit for 500-flight hours; and graduates with an AA in aviation to receive credit for 250-flight hours.

In the last ten years, the FAA has not updated the FOQ rule to incorporate advancements in pilot training and flight simulator technology. Yet, when it was published, FAA acknowledged the rule did not exhaust the possibilities for R-ATP pathways. The FAA said the decision was based on the "*best currently available scientific data and information*," and in the rule explicitly noted the need for regulatory review:

> "*In the future, however, FAA is likely to gather and analyze additional data in this area; for example, through safety outcomes resulting from this rule, and additional information collections associated with other rulemakings….Because of the likely availability of such data in the future, the FAA may obtain additional empirical evidence relevant to the precise relationship between flight hours and types of training. For example, Phase III of the Pilot Source Study, explained elsewhere in this preamble, suggests areas for further research*."[21]

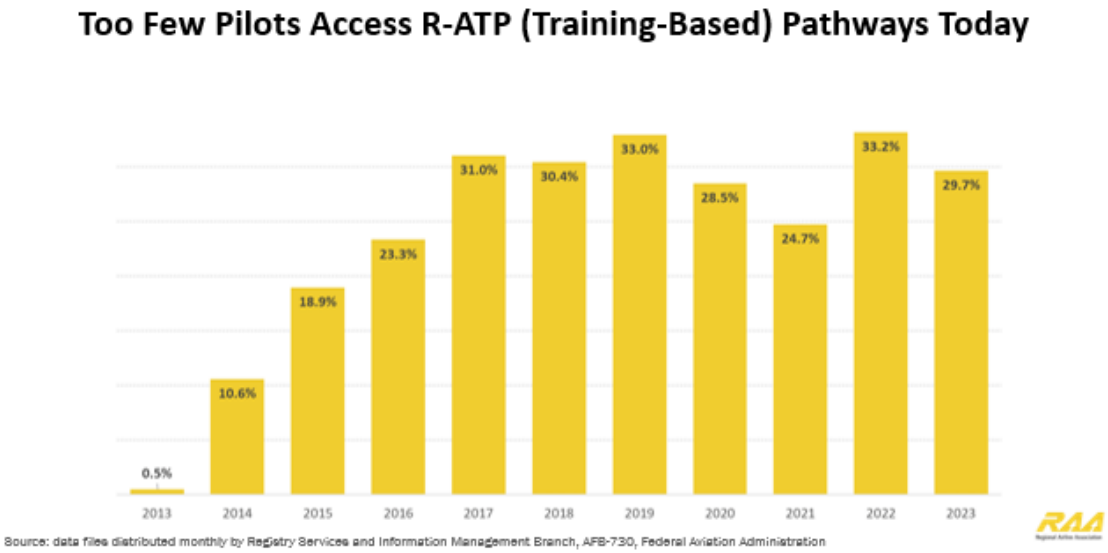
Two updates of the Pilot Source Study used by the FAA in formulating the FOQ rule, have produced peer-reviewed, empirical data. Each study demonstrated that R-ATP pathways are superior to hours-based qualification pathways and further showed a marked deterioration of pilot skill occurs while pilots build undisciplined flight hours between foundational training and being hired by an airline.[22]

[21] https://www.faa.gov/regulations_policies/rulemaking/recently_published/media/2120-aj67.pdf -- p 26)
[22] https://www.pilotsourcestudy.org, PSS 2015 and PSS 2018)

Notably, the FAA hasn't approved an R-ATP pathway for pilots who complete training at FAA-certificated flight schools, preventing the thousands of pilots from receiving more and better pilot training. It was Congress's intention to make safety enhancing pilot training improvements available to as many pilots as possible not just graduates of military and qualifying collegiate flight programs. In 2009, during consideration of the underlying bill, then Aviation Subcommittee Chairman Jerry F. Costello (D-IL) described this portion of the bill as follows:

> *"…because pilot groups, the FAA administrator and flight education universities have all cited the need to strengthen pilot academic training, the bill allows the FAA administrator to give credit towards the 1,500-flight-hour requirements if a* ***flight school*** *or a university provides academic training that exceeds the strengthened minimum ATP requirements in the bill."*[23]

In the years since the FOQ rule was adopted, only about one-third of pilots who receive their ATP do so through the R-ATP pathways. Entry to these pathways is limited by financial, geographic, and access barriers. Additionally, most pilots who complete flight training at flight schools already have a college degree and can't rationalize going back to school to get a professional pilot degree (an AA or BA.)



Despite additional empirical evidence on the relationship between flight hours and types of training and despite huge advancements in pilot training programs and technology, the FAA has done nothing to carry out the intent of Congress or incentivize continual improvement in pilot training programs. Airlines and highly credentialed pilot training institutions are requesting more safety enhancing R-ATP pathways that integrate flight time with support from modern training technologies, flight simulators, and advanced flight training devices. This will unequivocally enhance aviation safety and improve pilot training and proficiency by ensuring that pilots get the relevant experience the right way.

<u>Long-Term Solution: Remove Financial Barriers to Becoming a Pilot</u>

Regional airlines are investing in solutions to attract more people into the career path and to retain our existing workforce. As noted, the average pay for newly hired regional airline first officers now exceeds

[23] CREC-2009-10-14-pt1-PgH11328.pdf (congress.gov); emphasis added.

$100,000 per year.[24] Additionally, according to the Bureau of Labor Statistics, the median annual wages for airline pilots, copilots, and flight engineers in scheduled air transportation was $207,000 in May 2021.[25]

Unfortunately, the life changing financial opportunities available to pilots working today, are walled off behind systemic barriers that impair career access. Chief among these barriers is the high cost of flight education and training, which on its own costs around $80,000, and can dramatically increase to over $200,000 when combined with the added costs associated with a bachelor's degree. Federal financial aid is insufficient to facilitate a financial pathway for undergraduate students. This forces those who don't come from wealth to borrow from private lenders with high interest rates, assuming their parents qualify or want to shoulder the financial burden. Many families lack the credit histories and scores necessary to qualify for aid and are locked out altogether. Unlike other career paths that require additional professional credentialing, such as doctors and lawyers, accredited pilot training programs can't access additional lending available through graduate aid programs to cover the higher costs.

This is why increasing the student loan cap for accredited flight education and training programs to help cover the higher costs associated with these programs is critical. This will provide a financial pathway to everyone, which will both grow and diversify the profession. RAA anticipates that legislation will be introduced soon in the House of Representatives to increase the student loan cap for accredited flight education and training programs and urges Members of this Committee to support it.

In addition to increasing student loan caps, lawmakers should consider expanding and amending the Section 625 workforce development grant program for pilots to enhance outreach to the next generation of pilots.[26] The workforce program should be expanded to support activities related to pilot recruitment and training to help ensure long-term growth and diversification of the pilot profession. Activities should target outreach to school-age children and underrepresented populations along with training for commercial pilots.

Lawmakers should also consider expanding GI bill benefits to cover the full cost of flight training at FAA-approved pilot schools and allow the GI bill to cover private pilot certificates. Forcing veterans to pay for the private pilot certificates, which typically costs between $10,000 to $15,000, is a deterrent, and FAA-approved pilot schools are typically the lowest cost and quickest route to qualifying for an ATP. Passenger and cargo carriers no longer require commercial airline pilots to have a college degree, leaving little justification for continuing the current policy of discouraging veterans from pursuing this educational pathway. Lastly, flight education and training expenses incurred at FAA approved pilot training schools don't qualify for 529 plans – tax advantaged investment accounts that are used to save for a child's education. Lawmakers should support Rep. Mike Collin's (R-GA) *Aviation Workforce Development Act* (H.R.1818) to address the inequitable treatment of flight training programs.

Solutions for the Maintenance Technician Shortage

Expand Sec. 625 Grant Programs for Maintenance Technicians

Section 625 of the *FAA Reauthorization Act of 2018* authorized $10 million to recruit and train maintenance technicians and pilots.[27] FAA initiated the program in 2021 and received more than 300

[24] https://atpflightschool.com/become-a-pilot/airline-career/regional-airline-pilot-pay.html
[25] https://www.bls.gov/ooh/transportation-and-material-moving/airline-and-commercial-pilots.htm#tab-5; last available data.
[26] FAA Reauthorization Act of 2018, sec. 625; P.L. 115-254 (October 5, 2018).
[27] Id.

applications. Congress should expand the Maintenance Technician Program and make modifications to improve access to grant resources and ensure that successful programs can continue to receive funding and improve FAA's implementation.

Improve the Transition of Military Maintenance Professionals to Civil Aviation

The Aviation Technician Education Council estimates the civil aviation industry is capturing less than 10 percent of exiting veterans with aviation maintenance experience, in part because there is no clear path from the military to civil certification. The FAA reauthorization bill should include direction to the FAA to create a military competency examination that will provide a pathway to mechanic certification for servicemen and women, like what is available for military pilots. The FAA should also expedite repairman certificate applications for individuals with military technical experience applicable to aviation maintenance, even those from non-aviation specialties.

Regional Airlines' Top Priority is Advancing Aviation Safety

Today's unprecedented level of aviation safety is because Congress, the FAA, and aviation stakeholders, have continually worked together to evolve how we both detect and respond to risks to ensure that the United States operates the safest aviation system in the world. This Committee can take much credit for the United States' amazing aviation safety record and the many safety improvements mandated in the last decade, including in the *FAA Modernization and Reform Act of 2012*, the *FAA Extension, Safety, and Security Act of 2016*, the *FAA Reauthorization Act of 2018*, and the *2020 Aircraft Certification, Safety, and Accountability Act*.

Other key elements of this risk-based safety oversight system that have been developed and implemented by the FAA, industry, and labor in the last two decades include: the Commercial Aviation Safety Team (CAST); the Aviation Safety Information and Analysis Sharing (ASIAS) system; Aviation Safety Infoshare; the FAA's Safety Assurance System (SAS); and industry's Safety Management Systems (SMS).

Many of these safety systems and tools rely upon the use of unbiased, empirical data to detect, assess, and respond to risk appropriately. When this process is politicalized, the data is misrepresented or misinterpreted, or stakeholders are vilified, the process breaks down and risk is introduced.

For years, RAA has been raising the alarm that the 1,500-flight hour requirement is not having the intended effect of improving pilot training. Regional airlines have been warning that pilots entering airline training programs today are less prepared for the part 121 flying environment. This is because, despite their high flight time, they have not mastered swept wing jet aerodynamics, they lack crucial experience in congested airspace, they have no experience recovering from high altitude upsets, they have not experienced engine fires, failures, or other mechanical problems, they have never experienced icing, they have never operated in a thunderstorm, they have never experienced wind shear, and they have no experience operating in a multi-crew environment or using crew resource management, a cornerstone of flight safety.

In response to these deficiencies, regional airlines have had to act on their own to make sure that pilots have the relevant experience to fly for a commercial airline. Airlines must conduct remedial training to provide skills that should be part of a pilot's foundation but simply aren't. To keep flying safe, every regional airline has significantly expanded its training footprint to provide more classroom time, extra simulator and other training sessions, and have had to lengthen initial operating experience time before pilots are ready to fly. Airlines also fail out more candidates today than they did before the qualification

standards favored flight time over quality training. The result is that too many pilots waste their time and money on flight training and time building that leaves them ill-prepared for working at a regional airline. RAA has never sought to weaken aviation safety, instead we have consistently called for improvements to pilot training because the current standard permits the accumulation of simple flight hours, including in a hot air balloon, that do nothing to improve pilot skills and instead lengthen the time since a pilot has completed training and becomes eligible for hire, a period where skills are lost today.

Impeccable, empirical data from numerous peer reviewed studies[28] have continued to validate the conclusion reached by the FAA years ago— that the 1,500-flight hour requirement has no relationship to accident prevention and does not enhance pilot training.[29] In fact, the same studies FAA relied on to formulate new standards have been updated several times. Most importantly to today's hearing, each has demonstrated the *fallacy of relying on flight time as a proxy for pilot experience, instead showing harm*.

Two separate Aviation Rulemaking Advisory Committees have also recommended that the FAA increase the number of R-ATP pathways. Unfortunately, these recommendations have been misconstrued, and in some cases, shouted down. Fear and emotion are injected into the conversation that should be based on facts and data. For over ten years, this has prevented incorporating advancements in pilot training methods, curriculum, and technology into the 1,500-flight hour framework. Improvements that are heralded and recognized as safety enhancing for commercial and airline pilots are somehow inappropriate and counter-productive for pilots with less than 1,500 flight hours despite being heavily utilized to train pilots outside the United States.

Last month, I joined Secretary Buttigieg and Acting Administrator Nolan at the FAA Safety Summit. Stakeholders were called together to address an increase in aviation incidents on taxiways and runways. The Acting Administrator urged attendees to ask ourselves difficult and sometimes uncomfortable questions to strengthen aviation safety. We need to apply that same standard to the 1,500 hour requirement to ensure we are producing the best trained, highest quality pilots in the world.

Conclusion

RAA and our members look forward to working closely with this Committee to advance solutions to the aviation workforce shortages, including the development of a strong supply of safe, well-trained pilots. Advancing long- and short-term solutions to aviation workforce shortages will be needed in order to stop air service loss and restore connectivity and the economic and societal benefits that air service brings. Above all, safety will remain our top priority. Every solution must ensure the continued safety of our passengers, crewmembers and the public.

Thank you for the opportunity to testify.

[28] https://www.pilotsourcestudy.org/

[29] FAA Office of Aviation Policy and Plans Economic Analysis Division its Final Regulatory Evaluation Pilot Certification and Qualification Requirements for Air Carrier Operations, June 2013: *"The FAA reviewed the accidents in the National Transportation Safety Board (NTSB) accident database over the period 2001-2010 and, based on broad search criteria, found 31 accidents where it appeared that the rule's training and type rating requirements might have prevented or mitigated the accident. AVP also attempted to quantify the benefits of the 1,500- hour requirement, but AVP found no relationship between the 1,500-hour requirement and airplane accident." See*: https://www.regulations.gov/document/FAA-2010-0100-1925

Regional Airline Association

Appendix A

Market Exits By Carriers that Partner with Regional Airlines

Comparison of Air Service from July 2019 vs. Announced Schedules for July 2023

Alaska Airlines		
DUT	Dutch Harbor	AK

American Airlines		
MEI	Meridian	MS
TOL	Toledo (US) OH	OH
HVN	New Haven	CT
PIB	Hattiesburg/Laurel (US) MS	MS
DRT	Del Rio	TX
JLN	Joplin	MO
ITH	Ithaca	NY
ISP	Islip	NY
DLH	Duluth	MN
CYS	Cheyenne	WY
OAK	Oakland	CA
SUX	Sioux City	IA
MHK	Manhattan	KS
SWF	New York	NY
LGB	Long Beach	CA
DBQ	Dubuque	IA
IPT	Williamsport	PA

Delta Air Lines		
EWN	New Bern	NC
AVP	Wilkes-Barre/Scranton	PA
ISN	Williston (US) ND	ND
CAK	Akron/Canton	OH
APN	Alpena	MI
SCE	State College	PA
FSM	Fort Smith (US) AR	AR
SWF	New York	NY
MHT	Manchester (US) NH	NH
ASE	Aspen	CO
PIA	Peoria	IL
PHF	Newport News/Williamsburg	VA
ERI	Erie	PA
COD	Cody	WY
GJT	Grand Junction	CO
FNT	Flint	MI
LNK	Lincoln	NE

LSE	La Crosse	WI
Hawaiian Airlines		
JHM	Kapalua	HI
MKK	Hoolehua	HI
LNY	Lanai City	HI
United Airlines		
PBG	Plattsburgh	NY
ELM	Elmira/Corning	NY
STS	Santa Rosa (US) CA	CA
MLU	Monroe	LA
UIN	Quincy (US) IL	IL
MMH	Mammoth Lakes	CA
CKB	Clarksburg	WV
CWA	Wausau	WI
ISN	Williston (US) ND	ND
RST	Rochester (US) MN	MN
CLL	College Station	TX
EAR	Kearney	NE
MKG	Muskegon	MI
EAU	Eau Claire	WI
SPI	Springfield	IL
ERI	Erie	PA
ITO	Hilo	HI
SHD	Staunton/Waynesborough	VA
LWB	Lewisburg	WV
VPS	Destin/Ft Walton Beach	FL
EVV	Evansville	IN
PUB	Pueblo	CO
PIR	Pierre	SD
FLG	Grand Canyon (US) AZ	AZ
CGI	Cape Girardeau	MO
LAN	Lansing	MI
GRK	Killeen/Fort Hood	TX
PAE	Everett	WA
AEX	Alexandria (US) LA	LA
PAH	Paducah	KY
AZO	Kalamazoo/Battle Creek (US) MI	MI
COU	Columbia (US) MO	MO
OGS	Ogdensburg	NY
ATY	Watertown (US) SD	SD

OAG Published Schedules July 2019 vs. July 2023

Regional Airline Association

Appendix B

Comparison of Air Service By State April '19 vs. April '23

Sum of Frequency	Column Labels			
Row Labels	2019-04	2023-04	Grand Total	% Change
AK	28,644	23,659	52,303	-17%
AL	3,857	2,977	6,834	-23%
AR	3,153	2,634	5,787	-16.5%
AZ	19,082	18,665	37,747	-2.2%
CA	76,243	65,396	141,639	-14.2%
CO	26,158	27,781	53,939	6.2%
CT	2,779	2,504	5,283	-9.9%
DE		47	47	100.0%
FL	60,776	63,126	123,902	3.9%
GA	38,618	32,671	71,289	-15.4%
HI	13,321	14,565	27,886	9.3%
IA	3,065	2,066	5,131	-32.6%
ID	2,506	2,598	5,104	3.7%
IL	44,618	34,966	79,584	-21.6%
IN	6,222	5,045	11,267	-18.9%
KS	1,470	1,261	2,731	-14.2%
KY	8,037	6,455	14,492	-19.7%
LA	7,464	6,326	13,790	-15.2%
MA	15,856	15,274	31,130	-3.7%
MD	9,817	8,261	18,078	-15.9%
ME	1,844	1,611	3,455	-12.6%
MI	19,777	14,310	34,087	-27.6%
MN	15,995	12,269	28,264	-23.3%
MO	13,315	10,998	24,313	-17.4%

MS	1,484	1,272	2,756	-14.3%
MT	2,997	2,769	5,766	-7.6%
NC	32,241	27,721	59,962	-14.0%
ND	1,869	1,463	3,332	-21.7%
NE	3,085	2,459	5,544	-20.3%
NH	1,159	841	2,000	-27.4%
NJ	16,317	16,269	32,586	-0.3%
NM	2,843	2,732	5,575	-3.9%
NV	16,496	18,365	34,861	11.3%
NY	39,021	38,918	77,939	-0.3%
OH	10,931	8,209	19,140	-24.9%
OK	3,888	3,439	7,327	-11.5%
OR	9,179	7,432	16,611	-19.0%
PA	22,638	15,905	38,543	-29.7%
RI	1,696	2,147	3,843	26.6%
SC	5,883	6,058	11,941	3.0%
SD	1,305	1,132	2,437	-13.3%
TN	12,573	12,524	25,097	-0.4%
TX	71,735	68,492	140,227	-4.5%
UT	10,681	9,754	20,435	-8.7%
VA	27,590	25,036	52,626	-9.3%
VT	1,081	848	1,929	-21.6%
WA	20,270	18,865	39,135	-6.9%
WI	6,145	4,535	10,680	-26.2%
WV	1,017	778	1,795	-23.5%
WY	778	671	1,449	-13.8%
Grand Total	**747,519**	**674,099**	**1,421,618**	-9.8%

OAG Published Schedules April 2019 vs. April 2023