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Changes in Air Service at US Airports in the Wake of the Covid-19 Pandemic

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A 50-seat regional jet taxiing on the apron of Erie, PA airport. Photo: Hongyu Liu

Loss of Air Service Threatens Small US Airports

The Covid-19 pandemic intensified shifts in the US domestic air travel that now put regular air service at many small US airports at risk.

By Juhana Rossi

Erie International Airport in Pennsylvania has lots of things a regional airport needs.

It has a newly added glazed air bridge. It has a runway expanded a decade ago to handle larger jets. It has a terminal with a modern passenger flow system, a full-service restaurant and Internet hot spots.

The problem is it has almost no flights.

Like a growing number of regional airports around the country, Erie has been hit by the Coronavirus pandemic and structural trends in the United States airline industry that are whittling service away. In Erie's case, its schedule has dropped from seven daily flights in 2019 to just two these days.

The loss of service is “a big deal,” says the airport’s director Derek Martin, standing on the apron pointing out one change after another. “It is a major deal for the community of Erie and to all small communities that have lost service.”

Inside the terminal one recent day, Erie resident Kevin Quinn noticed the change.

"I miss the diversity of flights and times, " Quinn says as he waited for a 1:15 pm flight to Charlotte, NC, on his way to a family reunion. "You're limited to only two flights now, and it's a kind of hardship," he says.



Kevin Quinn and his guide dog Ashley flew from Erie to Charlotte, NC. Photo: Hongyu Liu

This hardship isn't unique to Erie or to Quinn. A growing number of US air travelers are grappling with curtailed access to domestic flights as a robust rebound from the Covid-19 downturn in air travel still eludes many small to midsize airports such as Erie.

At worst, these airports now face the risk of losing their access to the US commercial air network in the coming years, curtailing travel options and economic growth in the communities they serve.

A Columbia University School of Journalism analysis of the 354 largest airports in the lower 48 states, based on Bureau of Transportation Statistics data, shows that among the 89 largest airports serving at least one million departing domestic passengers each year, 74 airports saw their number annual departures grow from 2021 and to 2022.

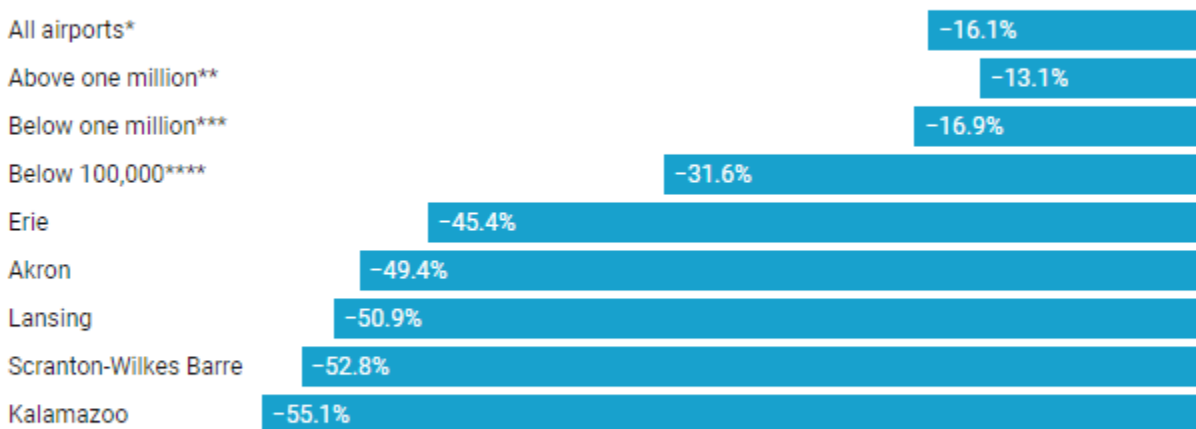
This means that at the largest US airports such as Atlanta-Hartsfield, JFK in New York and O'Hare in Chicago continued their steady rebound from lows hit after the Coronavirus pandemic grounded air travel and devastated the airline industry in 2020.

However, among the remaining 265 airports—those with annual passenger figures between 10,000 and one million—the story is strikingly different. Almost two-thirds of these airports have gone in the opposite direction, recording fewer scheduled departures in 2022 than in 2021. The downturn is having ripple effects ranging from inconvenience for leisure flying to potential damage to local economies that depend on business travelers having access to good flight connections.

On a state level, these ripple effects have hit most in Pennsylvania, Michigan, and Ohio, where flight departures at smaller airports have dropped by as much as half since 2019. The biggest service cutbacks in these states have affected airports such as Erie, Scranton-Wilkes Barre, Kalamazoo, Lansing and Akron, which all are a relatively short drive from larger airports and depend on the smallest regional jets for their air service.

Rebound from the Covid-19 Lags at Small Airports

Relative change in the annual scheduled domestic passenger flight departures from 2019 to 2022



Average for the largest 354 airports in the lower 48 states; **Average for airports with more than one million annual departing domestic passengers; *Average for airports with fewer than one million annual departing domestic passengers; ****Average for airports with fewer than 100,000 annual departing domestic passengers;*

Source: Bureau of Transportation Statistics • [Get the data](#) • Created with [Datawrapper](#)

At least three airports fitting this profile—what might be termed "in-between airports"—, Toledo in Ohio, Williamsport in Pennsylvania and Dubuque in Iowa, have since 2019 entirely lost flights by carriers that once connected them to larger air travel hubs.

Imperiled air service at these in-between airports is not a blip. It reflects a two-decade evolution in the US airline industry stemming from multiple factors including fewer

pilots, a shift to larger aircraft, airline consolidation and the elimination of less-profitable flights.

The disruption caused by the Covid-19 pandemic has amplified these trends, making airlines more selective in their route planning.

When contacted for comments on their business plans and changes at the airports mentioned in this article, the three major network carriers—American Airlines, United Airlines, and Delta Air Lines—did not respond.

The trade group for the largest US airlines says the changes were borne out of necessity. “We've had a scarcity of planes and pilots, and airlines are optimizing which markets to put them in,” says John Heimlich, Vice President and Chief Economist at Airlines for America, the trade group.

On the ground, sluggish recovery at many small to midsize is already having a distinct, tangible effect: “The airlines are realizing that it's okay for the highway to be the first access mode to the air transportation system,” says William Swelbar, the chief industry analyst at aviation consultancy firm Swelbar-Zhong in Sterling, Virginia.

In other words, American air travelers who have been accustomed to accessing the commercial air network from their local airports now face longer drives to larger airports. For leisure travelers this change can be just an inconvenience; for businesses it can be a major burden.

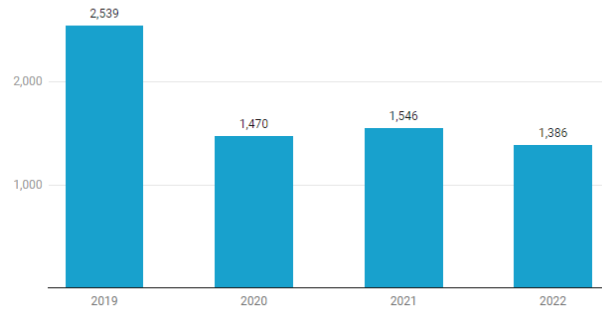
The change is keenly felt in Erie. Erie is surrounded by three large airports—Pittsburgh, Buffalo, and Cleveland—all within roughly a two-hour driving distance, give or take fifteen minutes.

Erie is now losing significant numbers of passengers to these airports “because we don't have the seats available to meet the demand of people trying to travel from our community,” says Martin the airport director.

To estimate the extent of Erie’s losses—or “leakage,” in industry terminology—to neighboring airports, 2019 can be used as a reference point. In that year, Erie maintained three daily flights to both Detroit and Chicago. It also had a daily connection to Philadelphia, which was discontinued during 2019 and replaced with a connection to Charlotte, now Erie's sole destination.

Departures Nearly Halved at Erie

Number of annual scheduled domestic passenger flight departures at Erie, PA airport



Source: Bureau of Transportation Statistics • [Get the data](#) • Created with [Datawrapper](#)

Using the travel figures from 2019 as the starting point, Martin estimates that there is demand for at least 230,000 annual departing seats in Erie. Last year Erie only had 62,000 enplanements last year, suggesting that at least more 150,000 travelers from Erie opted for surrounding airports.



Derek Martin manages Erie airport. Photo credit: Hongyu Liu

With over 15 years of experience in airport management, Martin recognizes that wider industry trends such as a pilot shortage, which existed even before the Covid-19 pandemic, partly account for Erie's current predicament. However, he insists that without the shockwave caused by the pandemic, it's highly unlikely that Erie would have lost its frequent connections to Chicago and Detroit.

"But the pandemic did happen. Now we're trying to work through its aftermath," he states.

An airport losing its air service has consequences that extend beyond traveler inconvenience, to local economies. As a 2020 Federal Aviation Administration report on the economic impact of civil aviation put it: "U.S. industries and consumers rely on civil aviation's capacity to provide dependable services that bolster business and personal opportunities."

Having regular air service is "extremely important," says Thomas Laird, the Chief Executive Officer and main owner of Expivia, an Erie-based contact service outsourcer with more than \$10 million in annual revenue. The company's office is about a five-minute drive from the airport.

Erie's reduced air service has forced Laird to plan and book his flights out of Erie sooner to secure travel on the flights he wants. Alternatively, Laird has driven to Pittsburgh, Cleveland, or Buffalo to catch a convenient flight.

What especially frustrates Laird is how the lack of flights makes managing client relationships more difficult because it is now harder to fly in and out of Erie.

"We have a new client whose training team struggled to get into Erie," he says.



Thomas Laird manages a business that needs good air service. Photo credit: Hongyu Liu

The dwindling interest of airlines in operating at airports such as Erie can be traced back to a series of transformations over the past two decades, leading to profound structural changes within the airline industry. They include consolidation, the transition to larger aircraft, and a shortage of pilots, with the combined impact intensified by the Covid-19 pandemic.

Since 2000, the number of U.S. airlines has dwindled as larger and relatively stronger airlines have acquired smaller, financially weaker counterparts. High-profile mergers included American Airlines' acquisition of TWA in 2001 and US Airways in 2013, with the latter having previously bought America West in 2005. Delta merged with Northwest Airlines in 2009, and United Amalgamated with Continental in 2010.

According to Daniel Friedenjohn, a professor at Embry-Riddle Aeronautical University, this consolidation has had a dual effect on the industry. Consolidation has dampened competition, enabling the fewer dominant carriers to achieve greater financial success.

"But less competition also means that airlines may not be as willing to fly to smaller airports because they can be more selective. It's a different industry than it was 20 years ago," he states.

At the same time, the industry has been going through what, in airline jargon, is known as "upgauging," or the practice of replacing smaller aircraft with larger ones on a specific route or service.

For instance, the average size of regional jets in the U.S. rose from 57 seats in 2010 to 68 in early 2023, according to data compiled by consultancy firm Cirium for Airlines for America, the industry trade group. For larger single-aisle passenger jets, such as the ubiquitous Airbus A320 and Boeing 737 type aircraft, the average went from 142 seats in 2010 and 164 in 2023.

Upgauging is driven by straightforward economic reasoning. By utilizing larger and newer aircraft, airlines can distribute their labor and fuel costs across a larger number of seats, as Friedenjohn says.

"For airlines, this provides some protection. In some markets, airlines can reduce capacity by cutting back on the number of frequencies but still offer the same number of seats," Friedenjohn says.

The way upgauging has played out is illustrated by 50-seat regional jets, which are currently the smallest airliners operating within the commercial air network.

When 50-seaters entered the airline service in significant numbers in the mid-1990s, they embodied an industry-wide shift towards larger aircraft, says Greg Campbell, Director of the Virginia Department of Aviation.

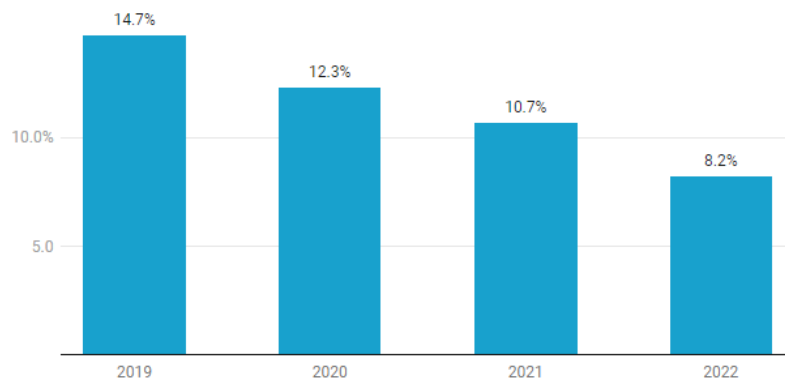
“If you go back to time 20 years ago, you would’ve still seen 19-seaters operating in some smaller markets. Then it migrated up to where the minimum platform was a 30-seater and then the 50-seater,” Campbell says.

But now, upgauging is catching up with the 50-seat airliners.

They are technically aging and have become more costly to operate on a per-seat basis in comparison to newer, larger, and more fuel-efficient aircraft. As more 50-seaters have retired, the number of departures by 50-seat regional jets dropped more than halved from 2019 to 2022, while their share of all domestic commercial departures fell dropped to less than ten percent in 2022.

50-seaters Fly Less

share of 50-seat regional jets of all domestic flight departures*



*At the 354 largest airports in the 48 lower states

Source: Bureau of Transportation Statistics • [Get the data](#) • Created with [Datawrapper](#)

At an aggregate level, the growth in domestic airline travel is now driven more by larger aircraft carrying more passengers than by airlines increasing their number of flights. This trend was evident during the industry recovery from the Covid-19 downturn.

The total number of departures at the 354 largest airports in the lower 48 states dropped 14.4 percent from 2019 to 2022. The decrease in the number of passengers over the same period was smaller, just 7.9.

This can be explained in part by higher load-factors or planes being fuller, but it also reflects how U.S. airlines are operating fewer flights with larger aircraft, says Jay Shabat, an author and an analyst at Skift Airline Weekly.

In addition to consolidation and upgauging, the third trend re-shaping the airline industry is pilot shortage.

Airlines in the United States now employ practically all available and qualified 95,000 airline pilots in the country, with retirements projected to outpace new entrants in the coming years, according to data compiled by the Regional Airlines Association.

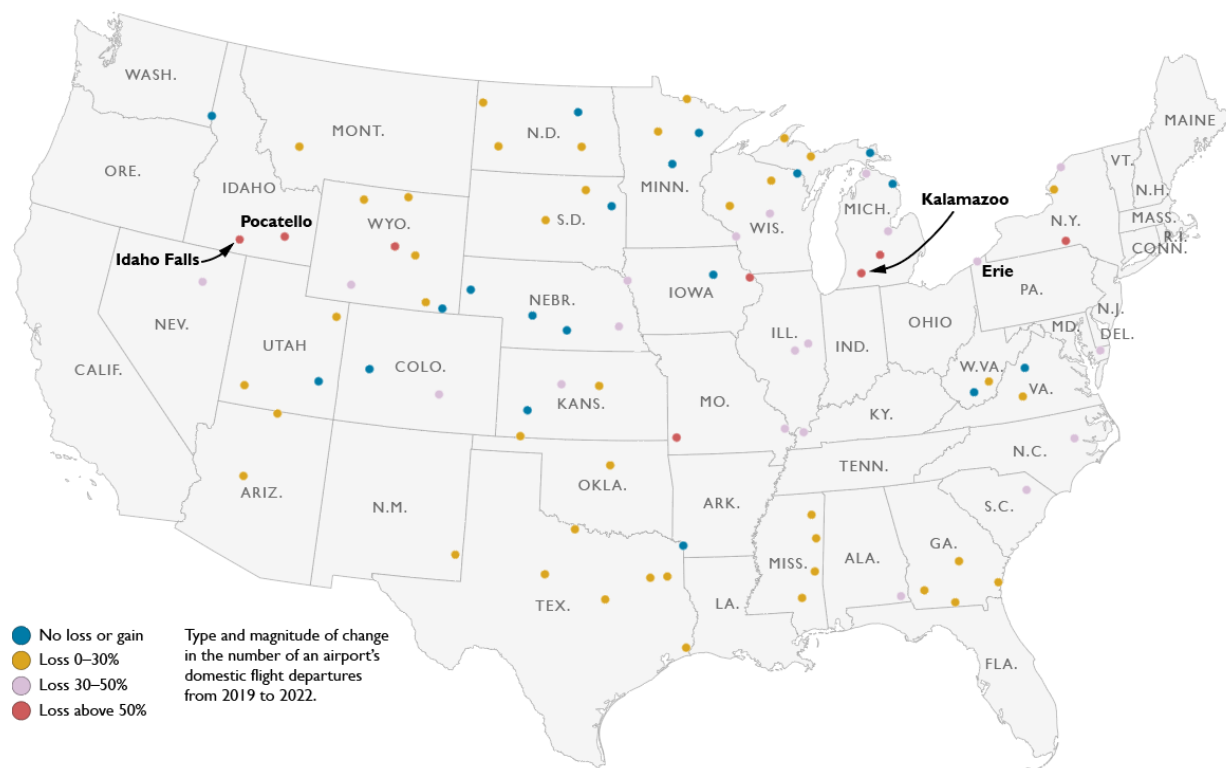
This pilot shortage was already hampering the airline industry long before the Covid-19 pandemic but has gotten worse. On average, airline pilots are older, and they are compelled to leave the workforce once they hit 65. The supply of pilots exiting the military has declined, and barriers to entry into profession, including the cost of training, remain high.

During the Covid-19 pandemic, airlines furloughed pilots in great numbers. Many pilots retired or took buyouts. Then, when travel began to rebound in 2021, airlines started to ramp up their operations rapidly. That push stalled because there weren't enough pilots to fly all the grounded aircraft. Airlines prioritized and staffed larger aircraft first, keeping smaller regional jets on the ground and leaving airports that rely on them in the lurch.

This mostly affected airports where air service primarily comes from the smallest or 50-seat regional jets. Among them is Kalamazoo airport in Michigan, where 50-seater jets accounted 95.6 percent for all scheduled departures in 2022.

Most Small Regional Airports Lost Flights in the Wake of the Pandemic

Airports where 50-seat regional jets accounted for more 80% in domestic flight departures in 2022.

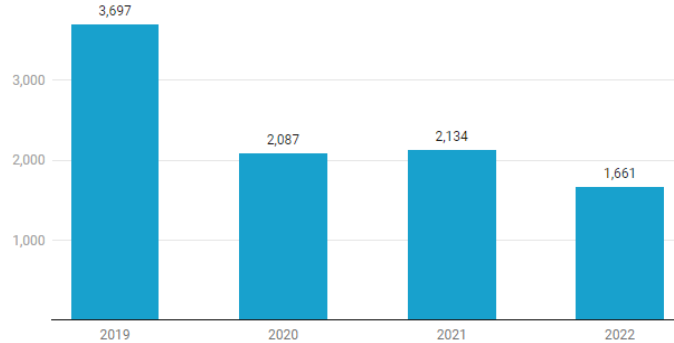


Source: Bureau of Transportation Statistics

“Things started to recover quickly after a vaccine was found. But then the pilot shortage hit,” says Craig Williams, manager of Kalamazoo airport in Michigan. This clipped wings from the recovery, with Kalamazoo seeing fewer departures in 2022 than in 2021.

Recovered Stalled at Kalamazoo

Number of annual scheduled domestic passenger flight departures at Kalamazoo, MI airport



Source: Bureau of Transportation Statistics • [Get the data](#) • Created with [Datawrapper](#)

Combined with regional demographic and economic changes, the impact of airlines' prioritizing large jets of shows up in flight data at airports maintained by the U.S. Bureau of Transportation Statistics.

Domestic departures rose from 2019 to 2022 at eight of the largest airports with more than five million annual departing passengers, and on average, the largest airports that enjoyed the best recoveries saw their departures grow by 6.1 percent from 2019 to 2020. Reasons for this vary, but typically traffic growth at large airports is underpinned by overall population and economic growth and by increase in leisure traffic.

Domestic Air Travel Rebounded at Many Large Airports

The ten largest gainers in terms of relative change in the number of domestic departures from 2019 to 2022 among airport with at least 5 million annual departing domestic passengers.

	Name	Location	State	Departures* in 2022	Change**	50- seaters' share***
1	Austin - Bergstrom International	Austin	TX	87,491	30.5%	0.0%
2	Miami International	Miami	FL	104,355	17.9%	0.0%
3	John F. Kennedy International	New York	NY	132,508	5.2%	0.0%
4	John Wayne Airport-Orange County	Santa Ana	CA	45,978	4.6%	0.0%
5	Nashville International	Nashville	TN	88,787	4.2%	1.8%
6	Harry Reid International	Las Vegas	NV	174,475	3.1%	0.0%
7	Ronald Reagan Washington National	Washington	VA	141,620	1.2%	0.0%
8	Orlando International	Orlando	FL	145,614	0.9%	0.0%
9	LaGuardia	New York	NY	162,197	-2.9%	0.0%
10	Denver International	Denver	CO	277,694	-3.8%	14.2%

*Scheduled Domestic Passenger Flights. **Percentage change in the number domestic flight departure from 2019 to 2022. ***Share of 50-seat regional jets of all domestic flight departures in 2022.

Source: Bureau of Transportation Statistics • Created with Datawrapper

In contrast, traffic failed to pick up from the Covid-19 nadir at many small airports that rely on 50-seater regional jets for their air service. The ten airports in that group that suffered the worst declines typically are relatively close to bigger airports with better service, or simply serve very sparsely populated communities.

For example, Pocatello airport in Idaho lost two thirds of its departures from 2019 to 2022. The airport serves a small community about a 50-minute drive from the bigger community of Idaho Falls, where the airport saw departures grow 60.7 percent from 2,894 in 2019 to 4,562 in 2022.

Small Airports Served by the Smallest Jets Face Pressure

The ten largest gainers in terms of relative change in the number of domestic departures from 2019 to 2022 among airport with at least 5 million annual departing domestic passengers

Name	Location	State	Departures in 2022*	Change**	50-seaters' share***
Pocatello Regional	Pocatello	ID	367	-66.7%	99.2%
Joslin Field - Magic Valley Regional	Twin Falls	ID	435	-66.0%	93.1%
Central Wyoming Regional	Riverton/Lander	WY	391	-61.7%	100.0%
Greater Binghamton/Edwin A. Link Field	Binghamton	NY	376	-60.5%	93.1%
Dubuque Regional****	Dubuque	IA	441	-55.2%	100.0%
Kalamazoo/Battle Creek International	Kalamazoo	MI	1,661	-55.1%	95.6%
Joplin Regional	Joplin	MO	629	-52.9%	100.0%
Capital Region International	Lansing	MI	1,931	-50.9%	81.5%
Central Wisconsin	Mosinee	WI	1,798	-47.8%	99.8%
Sioux Gateway Brig Gen Bud Day Field	Sioux City	IA	684	-47.1%	99.3%

*Scheduled Domestic Passenger Flights. **Percentage change in the number domestic flight departure from 2019 to 2022. ***Share of 50-seat regional jets of all domestic flight departures in 2022. ****Dubuque lost its air service in September 2022.

Source: Bureau of Transportation Statistics • Created with Datawrapper

Not all airports that rely on 50-seaters are not at the mercy of the route planning of network airlines. About half of them are safeguarded by the Essential Air Service (EAS), a federal program designed to ensure a minimum level of air service to smaller communities.

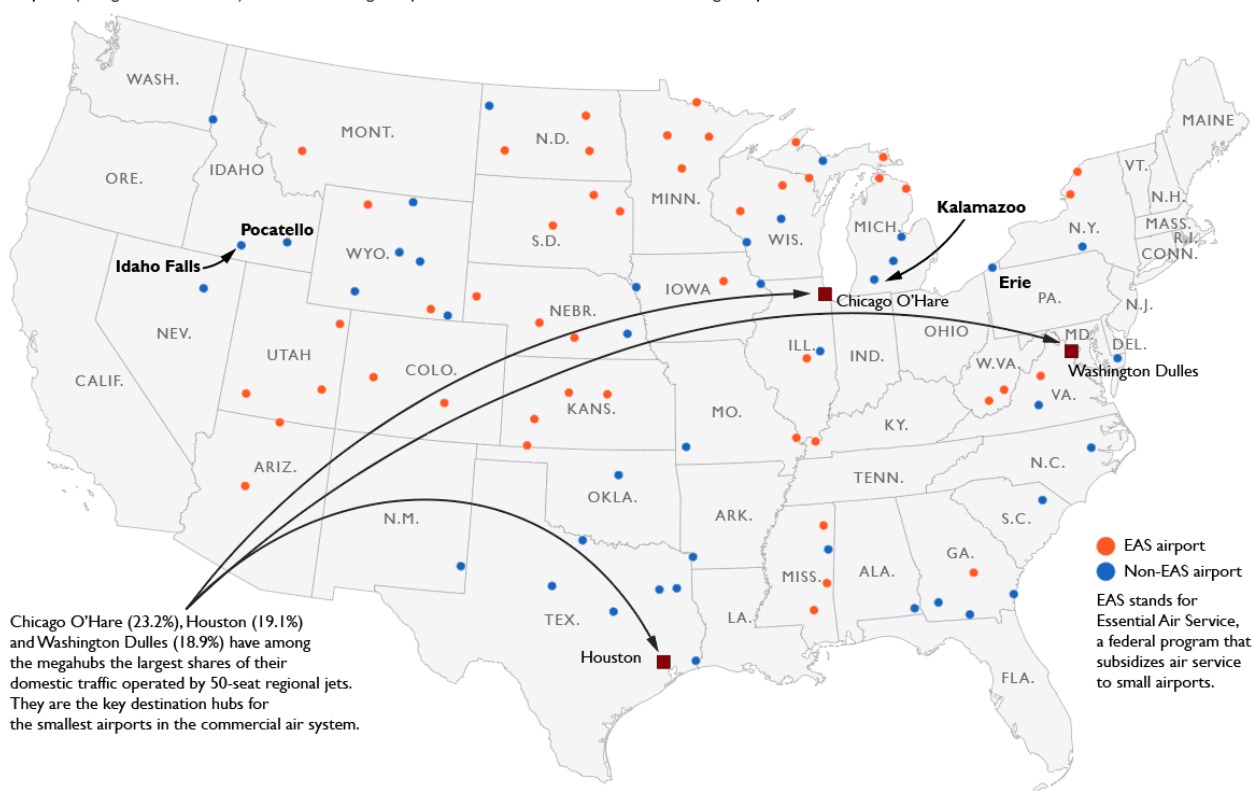
In the EAS, airlines bid on routes in a competitive tendering process, after which the federal government provides a subsidy to the winning airline to operate the route, ensuring air service continuity in smaller markets.

Data illustrates the effect of the EAS program. The 47 airports that rely on 50-seaters and are part of the EAS program had, on average, 9.1 percent fewer departures last year than in 2019. In contrast, their counterparts lacking the EAS's protection saw an average annual decline of 30.8 percent from 2019 to 2022.

Some of the most severely affected airports could even face a total loss of flights. These airports rely on 50-seaters for their air service, are situated relatively close to a larger airport offering more connections and are not included in the EAS program. Pocatello, Kalamazoo and Erie are typical examples of these airports, although each airport's situation is influenced by a myriad of factors, some general and others unique to the airport.

Small Regional Jets Are the Mainstay Airliners at 89 US Airports

Airports (orange and blue circles) where 50-seat regional jets accounted for more 80% in domestic flight departures in 2022.



Source: Bureau of Transportation Statistics

Going forward, a key measure for airports now facing uncertainty over their connections to the commercial air network is the number of their daily departures. As a general guideline, an airport needs at least three daily departures to a larger airport to maintain a feasible air service, according to William Swelbar, the commercial aviation analyst.

"Departures are what's important to a small airport. If I'm a business traveler and I only have two departures a day and I need to be at a meeting at noon, but the morning flight gets canceled, I will miss my whole day. So likely then I will drive to an alternative airport with a longer menu of service," he says.

For example, Kalamazoo airport lies a 2-hour drive from Detroit, and Grand Rapids airport is just 50 minutes away. "Historically, our traffic has been about 70 percent business and 30 percent leisure. I know business travelers aren't price-sensitive, but they are time-sensitive," Williams says.

According to the feedback from customers that Williams has received, if long intervals between departures from Kalamazoo result in long waits for a connecting flight at the layover hub, passengers prefer to drive to a larger airport rather than fly first from Kalamazoo and then wait at a larger airport.

From 2019 to 2022, Kalamazoo saw its daily departures drop in half and lost its connection to Minneapolis. Currently, American operates three daily flights to Chicago O'Hare, and Delta runs two to Detroit, with plans to add a third flight to Detroit in October.

"Adding that third flight will be a game changer. People living just a 10-minute or a 15-minute drive from our airport will start thinking again that, okay, now I will have only an hour- or two-hour wait for my connecting flight. A third daily flight will reduce our leakage of passengers to other airports," Williams says.

Looking ahead at their uncertain future, the simplest way for airports now on the verge of losing all air service to protect their connectivity is to demonstrate to airlines that the local market is large enough to justify an immediate increase in frequencies and future upgauging to larger aircraft as 50-seaters are phased out.

Aircraft one size category larger fit into the 70- to 90-seat range of regional airliners, such as the Bombardier CRJ700 and CRJ900, along with the more modern 76-seat Embraer E-175. The latter now establishes the baseline for capacity and costs of the smallest airliner within the commercial air network.

"If your community can't support it, the likelihood of having air service in the near term is very diminished," says Martin, the airport manager at Erie.

Martin is striving to increase flights and establish new connections for Erie. In a first positive development, American Airlines will be increasing its daily flights from Erie to Charlotte from two to three, starting in September.



Erie had 62,000 departing passengers on scheduled domestic flights in 2022. Photo credit: Hongyu Liu

The longer-term plan involves re-establishing frequent daily connections to western destinations like Chicago O'Hare. To enhance Erie's appeal to airlines, the airport has lowered its landing fees to the extent that it expects to incur operating losses in the coming years.

These projected losses, which could total up to \$5 million over the next three to five years, will be offset by the airport's reserve fund. This fund has ample resources thanks to the operating profits the airport has accrued in the past. If everything goes according to plan and flights and passengers return to Erie, the losses will gradually diminish and the airport will eventually break even.

In addition to these efforts, the airport is courting the low-cost carrier, Avelo, with a proposal to initiate four weekly flights to Florida. Service to a leisure destination by a low-cost carrier like Avelo doesn't replace the extensive air service network provided by legacy carriers, but it brings passengers and revenue to the airport, thereby helping to cover the overall operating costs.

"The airport is currently reducing the costs of its current carrier, American. We are working to attract additional carriers at the same reduced rates, and we're hoping to attract a low-cost carrier that will provide us with a higher throughput of passengers," Martin sums up the airport's gameplan.

The airport and its owner, the Erie Regional Airport Authority, are working in unison with the local business advocacy organization, the Erie Regional Chamber and Growth Partnership.

The chamber aims to raise a total of \$1.5 million in public and private funds to be offered as direct financial incentives to airlines over several years, says Jake Rouch, Vice President of Economic Development at the chamber.

“We’re very confident that the loss of air service to our market was driven by our cost structure, which is something we can address,” Rouch comments, who has been involved in the planning process.

The paramount objective of the plan is to restore Erie airport’s access to the legacy carriers’ route systems to its former state, says the chamber’s Chief Executive Officer James Grunke. According to Grunke, there was a lot of finger-pointing when United Airlines terminated its connection from Erie to Chicago in June.

“If anyone was asleep at the switch, it was the community for not understanding how vital the airport is to our economic prosperity,” Grunke states.

Whether Erie airport can return to its former traffic levels is anyone’s guess. The airport does have one strong advantage: there is ample natural demand for air service at Erie because the airport serves a community of more than 300,000 people, which includes several colleges and a significant amount of business activity.

Smaller airports than Erie have successfully upgauged. For example, Joslin Field airport in Twin Falls, Idaho, which serves a community of 100,000 people, saw its departures fall from 1,280 in 2019 to 435 last year.

However, its single daily connection to Salt Lake City will double to twice daily starting in September. American Airlines, which operates the route, will also upgrade from a 50-seater to an Embraer E-175, offering a 70-seat configuration.

As the shakeup continues at small regional airports, passengers like Kevin Quinn in Erie must adapt to the new reality: access to the domestic air network is no longer just a quick drive away.

According to Quinn, when people in Erie talk about the airport, the conversation often centers on the lack of flights. “Most people are going to Cleveland, Pittsburgh, or Buffalo because they’re cheaper and there are more flight options,” Quinn says while waiting to catch his flight to South Carolina.

In the past, Quinn has reluctantly taken this option. “From here to my house, it’s a 15-to-20-minute drive maximum,” he says. “To Pittsburgh, Buffalo, or Cleveland, it’s approximately two hours. If I have to pay someone like Uber or Lyft to take me to an airport, it is a lot cheaper drive from my house to here versus Cleveland.”