

Air Service

Introduction and Context

Since 2008, the commercial service airline industry has changed significantly as airlines have merged and cut back inventory (seats) in order to regain, maintain and grow profitability. There are a number of factors that have evolved since that time and are impacting Minnesota. Impact areas include:

- A. The evolution of air service at the Minneapolis-St. Paul International Airport
- B. The change in the air service providers for the Essential Air Service (EAS) contracts at eligible Minnesota airports
- C. The impact of Ultra Low-cost Carriers (ULCC) airlines serving the market

This white paper discusses these impact areas in more detail.

The Evolution of Air Service at Minneapolis-St. Paul International Airport

For decades, Minneapolis-St. Paul International Airport (MSP) was a large hub commercial service airport dominated by Northwest/Delta which accounted for approximately 80% of the total enplaned passengers (travelers boarding aircraft at that airport) using MSP. Because of that dominance, competing airline service from other airlines that operated hub and spoke systems was limited to their large hub airports such as Chicago, Atlanta, Denver, Dallas-Ft. Worth, etc., but fares were similar to Northwest/Delta. The primary option to serve Minneapolis-St. Paul passengers looking for lower cost fares was offered by Sun Country which provided a combination of scheduled and charter flights to popular leisure destinations.

In the 1990's and early 2000's, Minneapolis-St. Paul was often cited as a community where fares were higher than others, and this was attributed, by experts who analyzed hub airport fare pricing, to the fact that one airline controlled the majority of the flights, largely controlling pricing to the most popular destinations. The Metropolitan Airports Commission (MAC) increased efforts during this period to bring new service and competition to the market with the goal of lowering fares.

In 2008, Southwest began service to MSP. Southwest is seen as an industry leader in offering lower fares. Historically, when Southwest has entered new markets, competing airlines have responded by lowering fares. The introduction of Southwest at MSP began a movement where more low cost and a new wave of “no frills” ultra low-cost carriers (ULCCs) entered the market. Airlines, such as Spirit, Frontier, Alaska, and Jet Blue entered the market and now offer more options to the traveling public. In addition, other existing airlines have expanded service to new destinations further expanding competition.

The result of this expansion of competition not only reshaped MSP, but also had an impact on the Greater Minnesota airports and their connections in MSP. Historically, passengers would board a Delta flight in their originating city and fly to MSP to connect with flights to their ultimate destination, frequently on Delta. This is not as prevalent as it was due to availability of lower fares to more destinations from other airlines.

In the airline industry, there is a practice called “code sharing”. Airlines will have contractual relationships with other airlines for connecting flights to allow passengers to reach certain destinations while being treated as a passenger on the airline of the original reservation. An example is when a passenger books a multi-city flight on United, but Boutique Air flies one of the connecting segments because United does not fly to that city. Boutique Airlines is treated as a “code share” of United and the passenger is able to check their bags at the origin and claim them at the destination even though they flew two separate airlines.

Most of the new low-fare airlines did not have a “code share” relationship with Delta, the primary carrier serving Greater Minnesota airports. When passengers flew to MSP on Delta from their home airport and then a different airline out of MSP, they would have

to check bags at their home airport and then claim and recheck bags at MSP. To avoid this process and still use the lower fare options, an increased number of passengers started driving or took local ground shuttle/bus services to MSP. In the industry, this phenomenon is referred to as "leakage". This occurs when a traveler does not use their local airport and instead chooses to use another airport further away for various reasons including convince or ticket price. Utilizing low fare options that are now available at MSP has increased leakage from Greater Minnesota airports. Leakage has a financial impact on Greater Minnesota airports since the airport loses out on revenue sources such as the Passenger Facility Charge (PFC) of up to \$4.50 that is assessed to each passenger originating from the airport as well as other revenue sources such as parking, concessions and rental cars. Additionally, leakage can negatively affect an airport's ability to grow air service options.

In the same timeframe, Allegiant Air, which offers low fares and discounted travel packages (i.e. hotels, rental cars, event tickets, etc.) to numerous leisure destinations, established service from St. Cloud (STC). Allegiant Air also serves the border cities of Fargo and Grand Forks, ND and Sioux Falls, SD. The increase in low cost and low fare alternatives not only at MSP, but also at these airports provided low fare options for travelers and put further stress on the commercial service airports in Greater Minnesota.

These competitive factors have reshaped the alternatives for the traveling public in Minnesota. Delta continues to remain strong at MSP but manages their inventory of seats in order to maintain fares and achieve profitability. The additional low fare options at MSP, STC and the western neighboring states has resulted in Greater Minnesota airports having to refocus marketing efforts and programs to provide alternative strategies to encourage passengers to choose their local airport for their air transportation needs.

The Impact of Ultra Low-Cost Carrier (ULCC) Airlines

Ultra Low-cost Carrier (ULCC) airlines that offer low base fares with add-on fees for enhanced services such as assigned seats, overhead bag storage, and checked bags, represent the fastest growing segment in the commercial airline industry. ULCCs have developed as niche airlines that offer low cost limited service alternatives to cities where there is high demand. They continue to grow and offer competing service to larger demand markets.

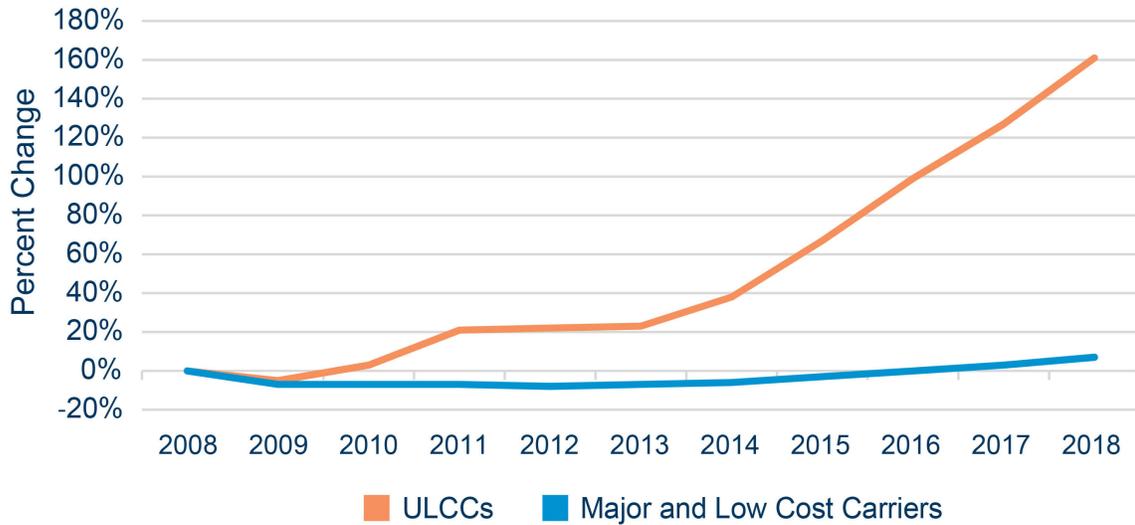
The two fastest growing ULCC airlines are Spirit and Allegiant Air. Spirit tends to focus on larger airports serving larger population bases and offers service to multiple destinations from MSP. Allegiant tends to avoid competitive hub airports with dominant major airlines and focuses on medium, small, and non-hub airports. Allegiant currently serves Minnesota passengers in St. Cloud as well as from Grand Forks, Fargo, and Sioux Falls. Allegiant commonly operates two flights a week per destination during the majority of the year with additional segments added during peak seasons and holidays.

When Allegiant and Spirit were first entered the US market, they offered limited destinations and their target passenger was the person who commonly chose to drive instead of fly. Both airlines have grown and are competing directly in markets traditionally dominated by the major airlines

The Expansion and Impact of Ultra Low-Cost Carriers on the Industry and Minnesota

Historically, airline service from MSP has been dominated by Northwest/Delta and offered service from other major airlines such as United and American Airlines. The primary low-cost carrier at MSP has been Sun Country and more recently Southwest. Over the last five years, the fastest growing segment in the industry has been the ULCCs. Figure 1 is a comparison of the total industry growth versus the ULCC growth from 2008.

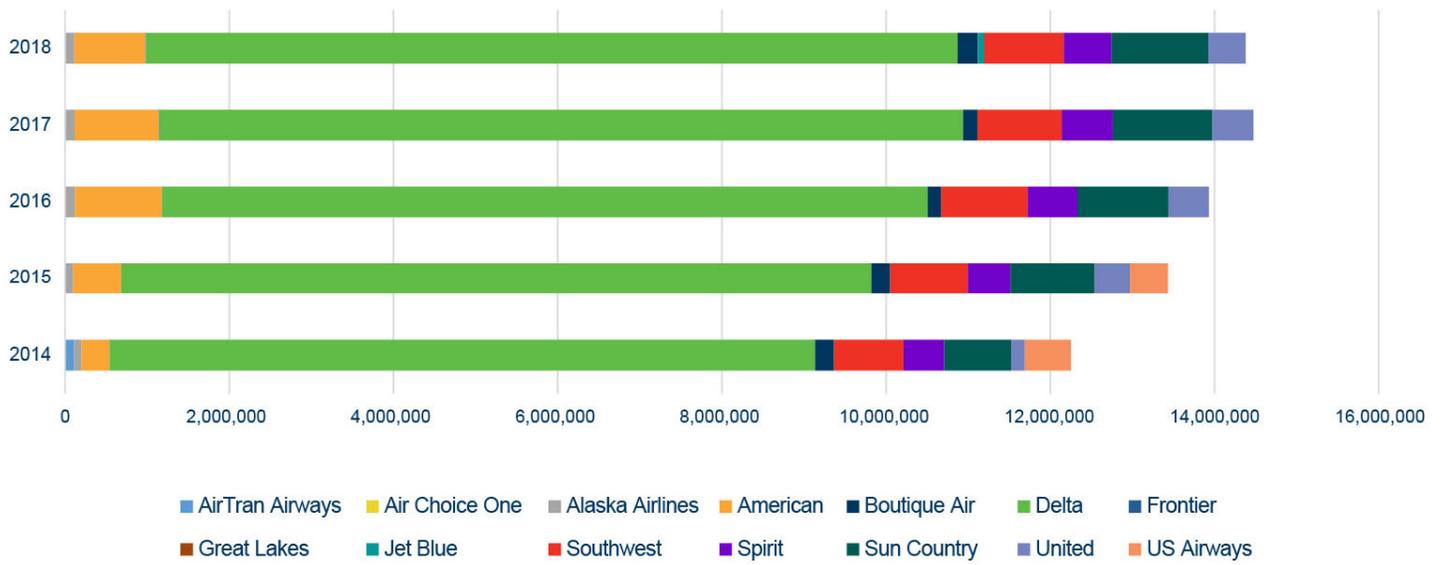
Figure 1 – Airline Industry Growth



Allegiant established service initially in Duluth and Rochester, but has cancelled service for a variety of reasons. For Duluth a primary reason was the weak Canadian dollar since Allegiant served a large amount of Canadian traffic. The lack of sales for add-on services and packages to the base ticket price was a contributing factor to Allegiant cancelling service in Rochester. At the same time service was being terminated at Duluth and Rochester, Allegiant added service to St. Cloud which did not have competing scheduled commercial airline service. After St. Cloud lost Delta and United service, the airport and market matched the Allegiant template and the airline service was added.

The far greater impact of ULCCs has been at MSP with the expansion of Spirit, Frontier, Sun Country and others. Figure 2 shows the change in enplanements on domestic airlines at MSP since 2014. Sun Country is evolving into a “no-frills” airline offering low base fares and charging for add-ons similar to Spirit. All of this ULCC expansion has introduced low fares at a hub where the major airlines have historically had more control on the ticket pricing. Because of the addition and competitiveness of their lower fare options at MSP, the ULCC market has experienced significant growth.

Figure 2: Domestic Airline Enplanements at MSP



The impact on this ULCC expansion and the resulting reduced fares to attract travelers has caused Greater Minnesota travelers to weigh the difference in fares to the time and cost of driving to MSP. This has become particularly impactful when the potential is a family traveling to a leisure destination, and the cost per person is significantly lower than what can be obtained from a major airline at their local airport. This economic decision will continue to draw passengers away from flying from their local airport and may affect the ability of an airport to sell sufficient seats to support the existing air service. Once a local passenger decides to drive to MSP for leisure trips and finds the experience acceptable, the traveler may make the same decision on business and other future trips.

The ULCCs provide a different product and price point, which allows for a service alternative at MSP and for Greater Minnesota travelers. This has placed pressure on Greater Minnesota airports to try to reverse the outward flow of passengers choosing to drive to MSP.

Essential Air Service

Prior to the Airline Deregulation Act in 1978, the government regulated the airline industry including fares and routes. The resulting deregulation of the industry gave air carriers freedom to determine which markets to serve domestically and what fares to charge for their service. The Essential Air Service (EAS) program was established to reduce the risk of certain small communities losing airline service by developing a funding program to guarantee that small communities served by certificated airlines before airline deregulation maintained a minimal level of scheduled air service. The United States Department of Transportation (U.S. DOT) is mandated to provide eligible EAS communities with access to the National Air Transportation System. This is generally accomplished by subsidizing two round trips a day to large- or medium- hub airports with 30- to 50-seat aircraft, or additional flights with 9 or fewer seat aircraft. The U.S. DOT currently subsidizes commuter and certificated air carriers to serve approximately 60 communities in Alaska and 115 communities in the lower 48 contiguous states that otherwise could not support scheduled air service.

Under this program, the U.S. DOT determines the minimum level of service required at each eligible community by specifying a hub through which the community is linked to the national network, a minimum number of round trips and available seats that must be provided, certain characteristics of the aircraft to be used and the maximum permissible number of intermediate stops to the hub.

After the DOT receives proposals, it formally solicits the views of the communities as to which carrier and option they prefer. After receiving the communities' views, the DOT is directed by 49 U.S.C. § 41733(c)(1) to consider five factors when making a carrier selection not in Alaska:

- 1) The demonstrated reliability of the applicant in providing scheduled air service
- 2) The contractual and marketing arrangements the applicant has made with a large carrier to ensure service beyond the hub airport
- 3) The interline agreements that the applicant has made with larger carriers to allow passengers and cargo of the applicant at the hub airport to be transported by the larger carrier(s) through one reservation, ticket, and baggage check in
- 4) The preferences of the actual and potential users of air transportation at the eligible place, giving substantial weight to the views of the elected officials representing the users of the service
- 5) Whether the air carrier has included a plan in its proposal to market its service to the community.

The EAS program has come under scrutiny over the past few years as federal budget cuts have been debated. There have been some enforcement and criteria amendments that have been enacted but the basic program has remained intact.

Table 1 includes the Minnesota cities that are currently receiving subsidies under the EAS program. Technically, St. Cloud meets the criteria as an EAS city but did not have commercial air service at the time when the Deregulation Act was passed and thus does not qualify for the subsidy program.

Table 1 – Minnesota Airports Currently Receiving EAS Subsidies

City	Airport	Destination	Air Carrier	Aircraft/ Maximum Seats	Annual Subsidy
Bemidji	Bemidji Regional Airport	Minneapolis St. Paul (MSP)	SkyWest Airlines (dba Delta Connection)	Bombardier CRJ200 50 Seats	\$1,309,684
Brainerd	Brainerd Lakes Regional Airport	Minneapolis St. Paul (MSP)	SkyWest Airlines (dba Delta Connection)	Bombardier CRJ200 50 Seats	\$1,973,113
Hibbing	Range Regional Airport	Minneapolis St. Paul (MSP)	SkyWest Airlines (dba Delta Connection)	Bombardier CRJ200 50 Seats	\$2,792,813
International Falls	Falls International Airport	Minneapolis St. Paul (MSP)	SkyWest Airlines (dba Delta Connection)	Bombardier CRJ200 50 Seats	\$2,981,632
Thief River Falls	Thief River Falls Regional Airport	Minneapolis St. Paul (MSP)	Boutique Air	Pilatus PC-12 8 Seats	\$3,350,312

Source: EAS Communities (not in Alaska) February 2019, Transportation.gov

The industry, in general, is in the midst of transitioning fleet type from smaller aircraft to larger narrow body aircraft. The major airlines have reduced the 50-seat jet fleet, the primary aircraft serving the EAS market, from over 600 aircraft to approximately 125 aircraft. The 50-seat jet will continue to be phased out of service. If airlines cannot operate the replacement aircraft at the desired revenue level in EAS communities, there is a risk that airlines may reduce the service to one flight per day, which would have a significant impact on the convenience, reliability and connectivity for local passengers. Alternatively, air service to EAS communities may be switched from costlier jet aircraft to small 9-19 seat propeller aircraft. Often, the traveling public perceives propeller aircraft as being a lesser quality experience than flying on a jet aircraft, which could result in current local passengers

making a choice to drive to MSP for their originating flights.

The 2012 State Aviation System Plan update indicated that leakage from the EAS airports in Minnesota was over 80%, meaning passengers chose to drive to another airport 80% of the time. Further increased leakage from EAS communities because of flight frequency, reliability, availability of ULCC options, or because of aircraft or schedules do not meet passenger needs, could have a future impact on the viability of air service to those communities. Additional challenges include the continuation of the EAS program, the level of funding, the availability of qualified pilots and potentially the migration from 50-seat aircraft to larger aircraft.

Changes in the Service Provider for the EAS Contracts:

Historically, Delta held the contract for the Greater Minnesota airports receiving a subsidy through the EAS program. In 2012, Delta decided to discontinue providing the service with Delta aircraft. SkyWest was the primary operator who was selected to replace Delta in Minnesota in a solicitation process conducted by the U.S. DOT. Under this arrangement which is referred to as “pro-rate” flying, SkyWest takes all risk and has a code share agreement with Delta which proves seamless to the passenger and allows the passenger to transfer to other Delta flights in MSP. One of the positive aspects of this change was fares generally were reduced for the Greater Minnesota to MSP segment of the route because SkyWest has a lower cost base and sets the fares. This lower fare helped stabilize local traffic for some of the EAS cities. SkyWest chose not to submit to provide service for Thief River Falls because of the limited number of passengers and subsequently, smaller operators have provided the service, with the most current being Boutique Air.

Airline Fleet Changes and the Impact on Greater Minnesota Airports

Since the industry financial challenges in 2008 and the consolidation of airlines, the remaining airlines have been successful at aggressively managing inventory (seats) and operations (flights) to increase fares and reduce costs. This has resulted in airlines:

- Retiring the inefficient 30-34 seat aircraft fleet
- Significantly reducing the use of 50 seat aircraft that serve smaller markets
- Increasing aircraft size with new aircraft replacing older aircraft
- Reducing frequency to match demand and capacity

The strict inventory management is having an impact on Greater Minnesota airports. In the past, when smaller aircraft were used, the airline could offer multiple flights per day that made traveler connections easier and more efficient. The frequency of flights to these cities has decreased because the smaller aircraft were retired. There was not enough incremental passengers to fill the seats on the replacement larger aircraft to support the historical number of flights. Therefore, the airlines decreased the number of flights to remove surplus seats in the market.

Delta plans to retire their 50 seat aircraft entirely when they reach the cycle limit (the number of take offs and landings that determine the engine life) which is currently projected to occur around 2020. Those aircraft will likely be replaced by a 70-76-seat jet which will put more stress on the Greater Minnesota airports such as Duluth to increase passengers or risk having reduced flight frequencies.

At the same time, the major airlines are also retiring older, mid-size jets such as the MD-80, MD-90, and some of the smaller series Boeing 737 aircraft and replacing them with new Airbus A321 and Boeing 737-900 series aircraft with seat capacity comparable to the Boeing 757 series aircraft. This increased seating capacity may result in reduced frequency in order to control inventory.

In 2018, Allegiant completed a fleet transition, transitioning from MD-80 aircraft to Airbus A319 and A320. The new fleet represents an increase in available seats and improves the profit potential through more sales and lower operating costs. This

increase in the capacity will put added pressure on smaller communities to fill the seats and maintain the service. Because of Allegiant's low fare structure, they will be able to market the low fares to communities in Greater Minnesota to fill the additional capacity.

Fleet Changes Impact on Duluth and Rochester

The Duluth and Rochester airports are not part of the Essential Air Service program so airline service is offered based upon the demand and is not reliant on a government subsidy. If a route does not perform to the level the airline desires, the service will be altered or cancelled.

In Duluth, the primary Delta aircraft has been the CRJ200 (50 seat jet) with periodic use of larger aircraft. As the 50 seat aircraft in Delta's fleet are retired, the aircraft will likely be replaced in Duluth by 76-seat aircraft which will add seats to the market. The market will need to respond so Delta maintains its targeted profit level, or there is a risk that frequency will be reduced. This could have a detrimental impact as fewer frequencies will extend connection times at MSP making flying out of Duluth less convenient. This could create an incentive for a passenger to choose to drive to MSP instead of flying out of Duluth.

SkyWest Airlines have traditionally provided the United service in Duluth to Chicago O'Hare (ORD) under a pro-rate contract where the operator, SkyWest in this case, takes the financial risk and gains the financial reward for positive performance on the Duluth-Chicago segment of the flight. Under that model, SkyWest sets the schedule and fares. Recently, a maintenance operation at Duluth has begun completing overhaul work for United Airbus series aircraft. As part of that change, United has started flying A320 aircraft on revenue flights to Duluth to avoid costs associated with repositioning a plane to Duluth for maintenance. These flights replace some SkyWest CRJ 200's but since the use of the A320's will be for cost avoidance, the pressure to fill the seats will be reduced and should not impact frequency.

Historically, Rochester has been served with American Airlines service to Chicago and Delta service to MSP on 50-seat aircraft. Delta has been successful in adding Atlanta service from Rochester in exchange for a reduction in frequencies to MSP. In addition, United has recently entered the Rochester market with service to Chicago to compete with American Airlines as United tries to re-establish its market dominance at Chicago. Once the current competition between United and American Airlines at Chicago is settled, it could result in the unsuccessful carrier pulling back its service which may impact Rochester.

Fleet Change Impact on Essential Air Service Cities

Cities in Minnesota that receive EAS subsidies include Bemidji, Brainerd, Hibbing, International Falls, and Thief River Falls. For the EAS cities, excluding Thief River Falls, SkyWest holds the contracts to operate 50-seat jets. Thief River Falls is served by Boutique Air which operates 8 seat aircraft. SkyWest's fleet is comprised of all regional aircraft. As the number of operable regional aircraft decreases due to retirements, SkyWest must first fulfill its contractual aircraft commitments to Delta, United, and American Airlines, and the remaining aircraft will then be used for EAS contracts. As the 50-seat aircraft fleet continues to decrease, SkyWest will have to abandon markets or upgrade to a limited number of 76-seat aircraft. Where this occurs, an airport must either increase passengers to fill the larger aircraft or airlines such as Boutique may enter the market offering 8-19-seat propeller aircraft. Propeller aircraft are often perceived as an inferior product by the flying public. In addition, these operators may not have code share agreements with a major airline, so the passenger may often have to pick up bags in MSP and be reprocessed. This adds to passenger inconvenience and provides a lesser level of service to EAS airports.

Another risk factor associated with the retirement of the 50-seat jet and the replacement with larger aircraft, is the potential for the reduction from two flights a day to one in order for the airline to manage supply and demand for pricing power and manage the limited availability of aircraft. If this happens because the airport cannot fill the additional seats of larger aircraft or because there are no aircraft or crews available, the timing with connecting flights at MSP will be extremely limited. In addition to having connection times that exceed the time it would take to drive to MSP from the Greater Minnesota airport, there is a concern that if a

flight is cancelled or delayed, the passenger may be stranded at MSP until the following day. Again, this puts pressure on the willingness of the passenger to initiate the flight locally and potentially undermines the long-term viability of the service.

The Pilot Shortage and Pilot Contract Constraints – The Impact on outstate Minnesota Airports

For a number of years, there has been industry discussion of the pilot shortage and its potential impact on the various segments of the industry. The highest paid pilot segment is the major airlines. A contributing factor to the pilot shortage has been the increase in the required experience hours from 250 to 1,500 hours for Airline Transport Pilots (ATP). There has also been a decrease in retired military pilots entering the industry due to the cutback in military pilots over the last decade and military incentives for pilots to continue their military service.

There are a significant number of existing commercial pilots reaching the mandatory retirement age of 65, primarily at the major airlines, and this will continue for the next few years. The pool of replacement pilots is limited because of the increased training requirements and the availability of retired military pilots with extensive experience decreasing. At this time, the major airlines are the least impacted by the pilot shortage because they either have a contract requiring their regional partners to provide a certain number of pilots to the major airline or they can offer substantially higher salaries to entice regional pilots to join them. Shifting of pilots from regional airlines to the major airlines and the loss of candidates to international airlines offering higher salaries is creating a void at the regional level. Regional airlines have traditionally offered captains salaries less than \$35,000. The pilot shortage has caused an increase in the pay range of a captain's annual salary of nearly \$55,000, which is still approximately less than half of what a captain would get at a major airline. With the regional contracts with the network airlines being set at a fixed cost, the regional airlines have to effectively absorb the salary increases.

As an example, Great Lakes Airlines (Great Lakes), which previously served Thief River Falls and operated 19-seat and 30-seat aircraft, was bound by the same 1,500 hour experience requirements. Based on the wages offered to regional pilots, Great Lakes could not supply two trained pilots per flight as required. Therefore, Great Lakes started blocking 10 seats per flight and flying 19-seat passenger aircraft as 9-seat passenger aircraft in order to avoid the two trained pilots per flight. A 9-seat passenger aircraft only requires one pilot with 1,500 hours of experience and is allowed to have a co-pilot with less experience. This shortage caused Great Lakes to cancel a number of flight contracts simply because they could not hire enough pilots to fly the routes, even with their change to 9-seat aircraft. As of March 2018, Great Lakes has ceased operations citing the pilot shortage as a primary contributor.

As the pilot shortage has progressed, airlines have been hesitant to put crews and aircraft in a position where they might be stranded because of weather. There has been a large increase in the number of proactively cancelled flights when weather predictions indicate large weather events because it is difficult to get the crews back in position to avoid further flight interruptions. There are limited reserve crews available to handle this type of disruption. It is also not unusual for flights to be cancelled towards the end of a month because the available crew members have reached the maximum number of hours they can fly for the month.

When airlines have to make decisions on what flights to cancel when resources are constrained or capacity at an airport is reduced because of weather, they weigh a number of factors including loads (the total seats sold), the ability to provide the passengers alternative travel arrangements (i.e. buses or taxis), other available flights that have capacity, the crew status, and the likelihood of the aircraft being stranded out of position. Greater Minnesota airports will be negatively impacted by these typical decision criteria. The current crew shortages are becoming a more significant factor in the decision to cancel flights.