

GREETINGS:

We are pleased to present the Metropolitan Airports Commission's (MAC) 2020 Annual Report.

As the following pages reflect, 2020 was a year like no other.

For the first two months of the year, Minneapolis-St. Paul International Airport (MSP) was on track to set another passenger record and surpass 40 million travelers for the first time in the airport's history. January passenger levels surpassed those of January 2019 by 6.5 percent and February's were up 9 percent. MSP was bustling.

When the COVID-19 pandemic impacted Minnesota and the rest of the nation in March, that trajectory changed. Dramatically.

As you will see in this report, our response to the pandemic was a major focus in 2020. Finding the best path to persevere amidst a pandemic required collaborative planning and action with our airport partners.

We developed the Travel Confidently MSP health safety program, which included a playbook that established shared guidelines, expectations and actions for the MSP airport community.

The second goal was to help ensure our airports' success within a post-pandemic aviation industry. To that end, the MAC provided much needed relief to its airport partners - airlines, concessionaires, auto rental companies and reliever airport commercial service providersthrough various payment deferrals and reduced rents and fees. By investing in the partnerships that make our airport system among the best as well as the biggest in the nation, we positioned our airports well for a strong recovery and long-term sustainability.

Beyond the pandemic, we were able to celebrate a number of noteworthy achievements, documented on the following pages.

For many, 2020 will be remembered for the emergence of the pandemic. From a MAC perspective, 2020 was also a testament to the power of partnership and perseverance.

Thank you for your interest in the Metropolitan Airports Commission.

Sincerely,



Rick King Chairman



Brian Ryks Chief Executive Officer



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One of the nation's largest airport systems, the MAC's system connects the region to the world.

Through its robust arts program and emphasis on local restaurants and shops, MSP showcases Minnesota's extraordinary culture to millions of passengers from around the globe.

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MSP and the MAC's reliever airports are located in the Twin Cities metro area and are all within 35 miles of the downtowns of Minneapolis and Saint. Paul. The Twin Cities is also home to 16 Fortune 500 companies – one of the highest per-capita concentrations of large companies in the U.S. The MAC's system of airports is self-sustaining – it operates with no support from income or property taxes. Instead, MAC operations are funded by rent and fees from airport users. The MAC also delivers billions of dollars for the local economy and supports tens of thousands of jobs.

MISSION: Connecting you to your world

Minneanolie Min

VISION: Providing your best airport experience



AN UNPRECEDENTED CHALLENGE

While 2020 brought unprecedented challenges to the Metropolitan Airports Commission (MAC), early in the year excitement was palpable as the travel, airport and airline industries all predicted healthy growth for 2020.

To prepare for that growth, the MAC and its airport partners had been working on a myriad of initiatives to ensure MSP passengers experienced the same level of service they had come to expect, even as the number of passengers in the terminals increased. One of those initiatives included continued work on a multi-year project to expand MSP Terminal 1 ticketing and bag claim facilities.

When the COVID-19 pandemic began significantly impacting air travel in March, the MAC realized its passenger experience initiatives would need to shift in focus – and that the MAC's proven capacity for collaborative, innovative and flexible problemsolving would be needed more than ever.

In 2020, the number of PASSENGERS AT MSP DECREASED BY 62 PERCENT, WITH OPERATIONS DECREASING BY ALMOST 40 PERCENT, compared with 2019 levels – by far the largest one-year drop in the airport's history.



The early days of the pandemic

By early March it was evident a pandemic was on the MAC's doorstep.

Airports are an essential service to both Minnesota and the nation, so it was imperative the MAC act swiftly and decisively to maintain airport operations and help ensure the health and welfare of its employees, its airport partners and the traveling public.

The MAC had already been working with state and federal health agencies when it stood up its own Emergency Operations Center (EOC) in March. The MAC's EOC allowed for robust information sharing as well as rapid planning and response to evolving information about the virus and needs of the airport community. Among the EOC's first tasks was to establish new cleaning and safety protocols and to coordinate efforts with airlines and other airport partners – including national and state authorities – to help airport employees, visitors and travelers remain safe and informed.

To maintain physical distancing, the MAC board of commissioners began meeting via teleconference in March. The board also declared an emergency, providing MAC staff with the agility and flexibility needed to respond to the health and safety needs of travelers and employees, and to the operational needs of airport partners.

These early efforts became the backbone of the organization's ongoing response.

Protecting our employees

To help stem the spread of the virus, on March 13 Governor Walz directed all Minnesota businesses that could to begin having employees work from home.

As a result, approximately one-third of the MAC's employees began working remotely. The remaining employees directly involved in airport operations continued to report to work onsite – but with new safety measures and equipment in place.

Much of the MAC's response to the pandemic was developed by its COVID-19 Response and

Recovery Steering Group, a group of employees from across the organization who brought decades of combined airport experience and a vast network of public health, government and travel experts to the conversations. Many of the MAC's strategies for helping keep people safe while continuing to operate its airports came from this group.

One of the group's first tasks was to develop and provide training for a MAC COVID-19 Preparedness Plan, which continues to serve as a guide to employees for COVID-19 protocols and policies.



In December, Government Technology magazine awarded its

TECHNOLOGY INNOVATION AWARD

COVID-19 EPAREDNESS PLAN

to the MAC for its use of technology to improve internal operations in response to the COVID-19 pandemic. SPECIAL DISTRICTS

TECHNOLOGY

OPERATIONS CATEGORY

EOC Data Visualization Lunch and Learn Series Metropolitan Airports Commission

> government 🥞 av at st technology

It was no small feat to ensure the MAC's more than 600 employees had the information they needed to protect themselves while working at seven MAC airports as well as at home.

To ensure employees had access to that information, whether they were working onsite or remotely, a COVID-19 Employee Response portal was established. This portal was to be a vital link for employees not only to receive up-to-date information, but also to guide efforts to maintain their overall wellbeing during the protracted pandemic.

While the portal and managers communicated day-to-day changes occurring due to the pandemic, weekly communication from senior leaders helped employees stay informed about the ever-changing aviation industry landscape and provided a steady, unifying voice in a time of great uncertainty.



- A requirement to wear face coverings while onsite.
- Daily temperature checks and a self-assessment checklist used by employees to monitor possible COVID-19 symptoms before reporting to work onsite.
- Limits on the number of people allowed to meet in person at one time and guidance on how to do so safely.
- Scheduled shift workers so the same people always work together and are separated from other groups, providing easier contact tracing should someone fall ill and inhibiting the ability of an outbreak to interfere with essential activities.

- Mandated weekly COVID-19 tests for many on-site personnel.
- Signs in workspaces reminding employees to wear a face covering, physically distance themselves from others, and wash their hands frequently.
- Enhanced vehicle, equipment and workplace cleaning protocols.
- The addition of HEPA filters in bunk rooms for maintenance and fire personnel who stay overnight during snow events or who work 24-hour shifts.
- Changes to the MAC's leave of absence policy to ensure employees could take time off for COVID-19 related issues without losing certain paid-time-off benefits they had already earned.



Protecting our travelers

The MAC's actions to protect travelers played out in tandem with its efforts to protect employees.

The MAC understood that to help keep travelers safe it would need assistance from its many aviation and airport partners. This is where the MAC reaped the benefits of already strong partnerships and its dedication to providing exemplary service to the traveling public.



These are just a few of the initiatives implemented to help protect travelers from COVID-19:

- Creating the Travel Confidently MSP program to establish consistent safety practices across the MSP community and to communicate those efforts to the public.
- Coordinating with airport restaurants and retail establishments to ensure travelers continued to have access to food and other essential items in a safe and socially distanced manner.
- Installing in MSP's terminals more than 200 Plexiglas shields, 150 hand sanitizing stations and 3,000 reminders to social distance, wear a face covering and wash your hands.
- Implementing in partnership with Delta Air Lines – an anti-microbial security bin system to help reduce the possibility of spreading the virus that causes COVID-19.

- Promoting and mandating mask wearing, along with the airlines.
- Collaborating with the state of Minnesota to transform a former MSP auto rental space into one of the state's most popular COVID-19 testing sites.
- Acquiring American Association of Airport Executives GBAC Star and Airports Council International Airport Health accreditations requiring the highest facility standards for cleanliness, safety and operational measures.
- Encouraging use of MSP's pre-booked parking option, a touchless approach to booking and paying for parking and for entering and exiting MSP's ramps.
- Establishing virtual methods for engaging with airport partners at MSP and the reliever airports.



Behind the many innovative plans, strategies and evaluations, the driving force was always A FOCUS ON PEOPLE – THEIR SAFETY, HEALTH AND WELLBEING.

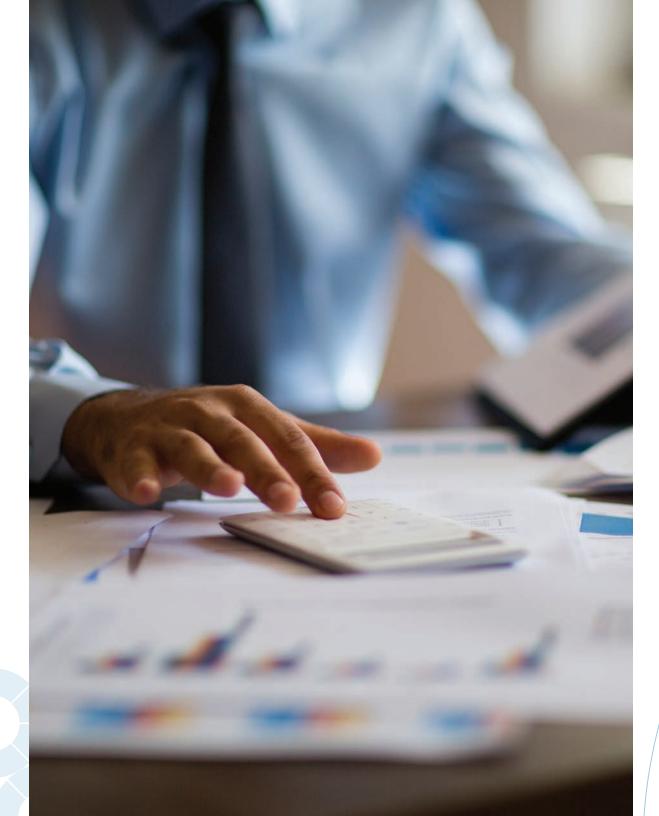
Protecting our finances

By late April, when passenger levels at MSP had dipped to less than five percent of normal, the MAC had already begun taking steps to protect not only its human resources, but also its financial resources.

To do that the MAC:

- Immediately reduced non-essential expenditures, totaling \$24 million of the 2020 operating budget.
- Preserved jobs by instituting a hiring freeze, except for positions deemed critical.
- Delayed, reduced or deferred a total of \$130 million worth of capital program projects over the next several years.
- Used a portion of the \$125 million Coronavirus Aid, Relief and Economic Security (CARES) Act funding it was granted to offset losses in operating revenue estimated at \$193 million in 2020.
- Approved a 2021 budget that reflects an \$18 million decrease in operating expenses over the 2020 adopted budget.

The MAC continues to monitor and evaluate expenses closely for additional savings and to restrict expenses to essential work only.



PARTNERSHIPS AND PERSEVERANCE

The Minnesota Legislature established the MAC more than 75 years ago to "provide and promote safe, convenient, environmentally sound and cost-effective aviation services" in the Twin Cities Metro Area. While the MAC has weathered national recessions and turbulent times in the airline and aviation industry, at no time has it faced the magnitude of financial and operational strain it does today.

It was the MAC's forward-thinking, fiscally conservative decisions that brought it through in past years. And it will be that same tenacity



and sound decision making that will allow the MAC to survive and thrive into the future.

Stronger Together

In any crisis, one can choose either to go it alone or work with others to find solutions. For the airport industry, it was crucial in 2020 that airports worked closer than ever for the good of their customers and the industry.

When the pandemic reached U.S. airports, the MAC was well-positioned to become a trusted voice for airports as they faced the communal

need for a swift, effective and consistent response to the crisis.

The MAC's senior management's long involvement in and leadership positions with Airports Council International-North America and the American Association of Airport Executives - two industry groups that represented and advocated for airports during the pandemic - means the MAC will have a lasting impact on how the industry rebounds and thrives into the future.

IN ANY CRISIS, one can choose either to go it alone or work with others to find solutions.

New Ways of Working

As many businesses across the globe experienced, the pandemic thrust many MAC employees – almost overnight – into a remote work scenario to maximize social distancing.

One of the reasons the MAC could so quickly move to this model is the significant investment the organization has made in information technology. Over the past couple of years, the MAC:

- Replaced and upgraded 580 laptops and desktop computers, the majority being laptops to better enable remote work
- Initiated data and file migration to a cloudbased system to allow for anywhere-access
- Streamlined the process by which staff can securely connect while working remotely
- Accelerated deployment of collaboration tools to allow for more productive and interactive virtual meetings

MAC employees who are already working remotely will continue to do so in 2021. The organization continues to leverage the lessons learned in 2020 to keep employees safe while maintaining a focus on productivity, efficiency and workforce equity.

Succeeding Together

The MAC cannot fulfill its mission to connect people to the world without its partners. Airlines and air service are essential to that mission, as are concessionaires and service companies that make travel more convenient and enjoyable.

When the pandemic hit, the airport community knew it needed to band together and support each other to position Minneapolis-St. Paul International Airport (MSP) for a robust recovery as the pandemic eased.

To that end, the MAC in 2020 deferred certain fees for some MSP tenants and reliever airport commercial operators and waived particular fees for MSP airlines, concessionaires and auto rental companies.

Thoughts for the Future

While the aviation industry has made progress toward recovery, a return to normal passenger and operations levels will be slow, particularly for business travel. Industry and financial experts predict it could be 2024 or later by the time the industry recovers fully. The proliferation of communication and collaboration technologies may also have a long-term impact on business travel.

Regardless of the timeline, the MAC will continue to build upon the many initiatives and partnerships begun in 2020 to ensure it is positioned for growth and to help keep employees, travelers, and everyone else who uses its facilities safe and healthy.



MSP AIRPORT IMPROVEMENTS

While many planned 2020 construction projects at MSP were deferred, others were already well underway, were essential or were brought forward to maximize federal contributions through the CARES Act.



Key projects included:

- Continued progress on the multi-year expansion and modernization of Terminal 1 ticketing and bag claim facilities
- Expansion of Concourse G to make way for increased gate hold seating, enhanced concessions, and development of space for a new Delta Sky Club
- Reconstruction of the inbound roadway at Terminal 1 that took advantage of reduced vehicle traffic during the pandemic. The new concrete roadway is expected to last 40 years, twice as long as it would had the MAC used asphalt.
- Completion of the new Silver Parking Ramp that includes new auto rental and ground transportation facilities
- Installation of major artworks on and inside the new Silver Parking Ramp
- Remodel of the MSP Terminal 1 valet parking facility and customer service lobby



RELIEVER AIRPORTS

The Metropolitan Airport Commission's (MAC) six general aviation airports – referred to as the reliever airports – play a vital role in the MAC's seven-airport system. They are called relievers because they relieve aircraft congestion at Minneapolis-St. Paul International Airport.

They also serve as home base for many businesses, as well as a Minnesota National Guard unit, Minnesota State Patrol planes and helicopters, several flight schools, and many private pilots. In addition, corporate aircraft from companies large and small make their home at these airports. For some, 2020 and the COVID-19 pandemic acted as a catalyst for beginning or completing their flight education or pilot training, a significant contribution to the system's two percent overall increase in operations over 2019.

In 2020, the MAC invested about \$15 million in capital improvement projects at its reliever airports, with a majority being spent on improvements at Lake Elmo and Crystal airports.

Learn more about the MAC's reliever airports at: metroairports.org/general-aviation

Airport	2019	2020	Change	% Change
21D	31,208	29,799	-1,409	-4.50%
ANE	71,740	70,852	-888	-1.20%
FCM	104,405	124,382	19,977	19.10%
LVN	29,835	31,314	1,479	5.00%
MIC	41,541	39,509	-2,032	-4.90%
STP	40,394	30,188	-10,746	-26.30%
Total	319,663	326,004	6,381	2.00%



Together the reliever airports LOGGED 326,004 TAKEOFFS AND LANDINGS IN 2020 – an increase of two percent over 2019.



Located south of the Twin Cities in Lakeville, Airlake (LVN) is among the smallest of the MAC's general aviation airports. Although used mostly by recreational pilots, LVN is near an industrial park and ideally suited for business aviation. A fixed-base operator provides fuel, airframe and mechanical maintenance, flight training, charter flights and supplies. The MAC completed a long-term comprehensive plan for LVN in 2018. Pending environmental review and approval and identification of funding sources, the plan calls for improvements that aim to better meet the needs of business aircraft and improve land use compatibility.

Airlake Airport in 2020

Takeoffs and landings 31,314
Rank of operations among relievers5
Number of based aircraft140
Rank of based aircraft among relievers5
• Number of runways1
• Runway dimensions 4,099' x 75'



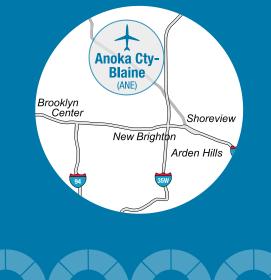


ANE Anoka County-Blaine Airport

Located in the Twin Cities' north metro area, the Anoka County-Blaine Airport (ANE) boasts the most diverse aircraft fleet among the MAC's reliever airports. A variety of vintage, experimental, recreational and corporate aircraft are based at ANE. As one of the MAC's larger-sized reliever airports, it is one of the busiest. Businesses based at the airport provide specialty flight training, maintenance and avionics, and fixed-based operator services. LifeLink III also provides medical flight services from ANE.

Anoka County-Blaine Airport in 2020

Takeoffs and landings 70,852
• Rank of operations among relievers2
Number of based aircraft
• Rank of based aircraft among relievers1
• Number of runways2
• Runway dimensions 5,000' x 100'
4,855' x 100'
4,055 × 100





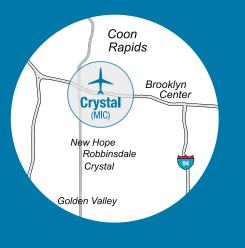


Named for the city in which it is located just northwest of the Twin Cities, Crystal Airport (MIC) serves both recreational and business operators. The airport is also home to nationally and regionally known aircraft parts and maintenance facilities, a busy flight training operation and a medical flight provider. It also boasts the only turf runway within the Twin Cities metro area.

Based on the findings of the airport's 2035 long-term comprehensive plan, MIC underwent major improvements in 2020. That plan, and the resulting construction projects, aimed to right-size the airfield for the number of flights and aircraft types, as well as improve airfield safety. In July the MAC opened a self-service fueling facility at MIC. The new, state-of-the-art facility ensures fuel is available to the airport community 24 hours a day, year-round.

Crystal Airport in 2020

Takeoffs and landings
• Rank of operations among relievers
Number of based aircraft161
• Rank of based aircraft among relievers4
• Number of runways3
• Runway dimensions 3,268' x 75' 2,122' x 150'







Flying Cloud (FCM) is the busiest airport in the MAC's reliever airport system. Located in the southwest corner of the Twin Cities metro area, FCM is home base for many corporate jets and flight schools.

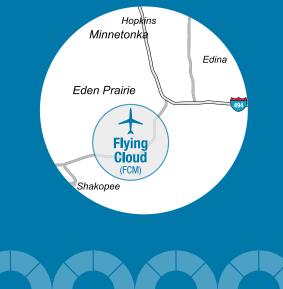
Full-service operators offer corporate aircraft services, recreational flight training, and aircraft

charter, rental, sales, and maintenance. Life Source also flies out of FCM.

Of the MAC's six reliever airports, FCM experienced the most operations in 2020, many of them for the purpose of flight training.

Flying Cloud Airport in 2020

Takeoffs and landings 124,382
• Rank of operations among relievers1
Number of based aircraft
• Rank of based aircraft among relievers2
• Number of runways3
• Runway dimensions 5,000' x 100' 3,900' x 75' 2,691' x 75'





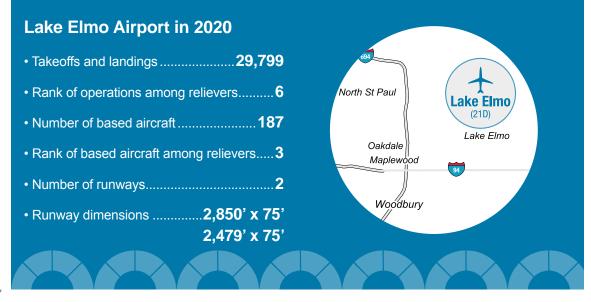
21D Lake Elmo Airport

Located between Saint Paul to the west and the St. Croix River to the east, Lake Elmo Airport (21D) is convenient for both business and leisure travelers and is one of the most active general aviation airports in the state. A fixed-base operator provides fueling, flight training and aircraft maintenance services.

In 2020, preparation for the construction of a new Runway 14-32 began. This included relocating an adjacent roadway – 30th Street North – just south of the airport, to keep it out of the new runway protection zone. Earthwork grading for the runway and its associated taxiways, erosion control measures, a utility relocation, and landscaping also took place in 2020 in preparation for the runway's final completion date expected in 2022. The Lake Elmo Airport Joint Airport Zoning Board (JAZB) also continued its work in 2020 after a short hiatus due to the pandemic.

A JAZB is tasked with developing a zoning ordinance for land uses around an airport that achieve a balance between providing a reasonable level of safety while allowing for compatible community development.

Lake Elmo Airport's JAZB is comprised of representatives from Baytown Township, Oak Park Heights, Lake Elmo, and West Lakeland Township. In September, the group approved a draft zoning ordinance for submission to the Minnesota Department of Transportation for its review.





STP St. Paul Downtown Airport

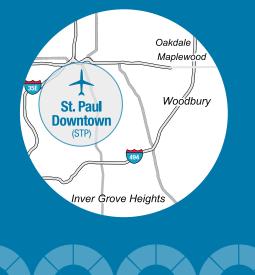
Just across the Mississippi River from downtown Saint Paul, the St. Paul Downtown Airport (STP) is a popular home base for corporate aircraft due to its location and the longest runway length - 6,941 feet - in the MAC reliever airport system.

Two fixed-base operators provide services such as fueling, maintenance, aircraft storage and line services. Aircraft charter services are also available. The airport is also the only MAC reliever airport with an onsite restaurant, Holman's Table. STP is a primary reliever airport for the MAC. Aircraft operations at STP declined by 26 percent in 2020 due to reduced demand brought on by the pandemic.

And while Holman's Table was subject to the state's pandemic-related restrictions and was shuttered at times, it continues to operate within the state's current parameters, even expanding its footprint to include the building's lobby to ensure patrons were spaced appropriately.

St. Paul Downtown Airport in 2020

Takeoffs and landings
Rank of operations among relievers5
Number of based aircraft 91
• Rank of based aircraft among relievers6
• Number of runways3
• Runway dimensions 6,941' x 150'
4,004' x 150'
3,642' x 100'







The Minnesota Legislature created the Metropolitan Airports Commission (MAC) in 1943 to promote the efficient, safe handling of air commerce and to develop the full potential of the Minneapolis-Saint Paul metropolitan area as an aviation center.

As a public corporation of the state, the MAC generates the revenues it needs to operate through rents and user fees, not general tax appropriations. Bonding and financing authority – along with MAC-generated cash and state and federal aviation grants and fees – fund capital investments in the MAC's seven-airport system. The organization maintains an AA – senior bond rating, among the highest of any U.S. airport operator.

The organization is governed by a 15-member policy board. The MAC board establishes policies, ordinances and budgets. The board chair and 12 commissioners are appointed by Minnesota's governor, eight of which represent metropolitan districts and four that represent Greater Minnesota. The mayors of Minneapolis and Saint Paul are commissioners but may appoint a voter to serve in their place. The chair and mayoral appointees serve at the will of the elected officials who appoint them. All other commissioners serve four-year, staggered terms, providing continuity when administrations change.

In 2020, the MAC board voted to institute a minimum hourly wage at Minneapolis-St. Paul





Carl Crimmins

District A

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District E

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Rick King Commission Chair



Timothy Baylor District D



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Donald Monaco Outstate Duluth

As of February 3, 2021



Braj Agrawal District B



Rodney Skoog District F



Ikram Koliso City of Saint Paul



Randy Schubring Outstate Rochester



James Lawerence District C



Richard Ginsberg District G



Patti Gartland Outstate St. Cloud



categories. The wage, which is higher than the state's and includes scheduled increases, went into effect on January 1, 2021.

In September, the board took action to ensure labor peace and worker retention language was added to the MAC's contracts.

Together these actions will help ensure MSP has a stable, experienced and high-quality workforce for years to come.

The MAC operates much like a city, with its own administrative offices and police, fire, emergency dispatch and maintenance departments. Executive Director and Chief Executive Officer Brian Ryks oversees dayto-day operations and administration of the organization.

The MAC is among the most efficient airport operators in the nation, keeping the cost to airlines low and encouraging growth in air service and airline competition.

Learn more about the MAC

- Visit our websites at metroairports.org and mspairport.com and subscribe to our e-newsletters.
- Follow MSP Airport on Instagram, Facebook, Twitter, and YouTube.



International Airport (MSP) for certain job



Brian Ryks Executive Director Chief Executive Officer



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Bridget Rief Planning & Development



Scott Zaczkowski Internal Audit



Chad Leave Management & Operations



This appendix is prepared in accordance with the requirements of Minnesota Statutes Section 473.621. It presents MSP passenger and aircraft operations activity, current airport capacity in terms of operations and passenger enplanements, average length of delay statistics, and technological developments affecting aviation and their effect on operations and capacity at the airport. This appendix also includes the number of operations and based aircraft at each of the MAC's reliever airports in 2020 compared with 2019.

MSP F	Revenue Passenger Su	mmary				
Rank	Airline	2018	2019	2020	Gain/Loss 2019-2020	% Change 2019-2020
1	Delta	26,254,595	27,305,753	9,797,141	(17,508,612)	-64.12 %
2	Sun Country	2,349,393	2,873,671	1,508,344	(1,365,327)	-47.51%
3	American	2,103,725	2,055,211	895,408	(1,159,803)	-56.43 %
4	Southwest	1,944,336	1,821,369	655,981	(1,165,388)	-63.98 %
5	United	1,588,226	1,603,161	570,061	(1,033,100)	-64.44%
6	Spirit	1,149,731	1,160,057	443,315	(716,742)	-61.79%
7	Frontier	486,713	501,247	173,039	(328,208)	-65.48%
8	Alaska Airlines	350,940	337,892	107,397	(230,495)	-68.22 %
9	JetBlue	153,816	224,595	38,132	(186,463)	-83.02%
10	Air Canada	118,141	120,308	16,941	(103,367)	-85.92 %
11	KLM	87,467	97,902	15,968	(81,934)	-83.69%
12	Aer Lingus		45,178	9,622	(35,556)	-78.70%
13	Air Choice One	10,093	10,413	3,771	(6,642)	-63.79%
14	Boutique Air	9,605	9,830	3,114	(6,716)	-68.32 %
15	Icelandair	90,858	82,629	2,058	(80,571)	-97.51%
16	Denver Air Connection			1,783	1,783	
17	Air France	56,040	71,946	0	(71,946)	-100.00%
18	Condor	28,840	26,102	0	(26,102)	-100.00%
	Total	36,782,519	38,347,264	14,242,075	(24,105,189)	-62.86%

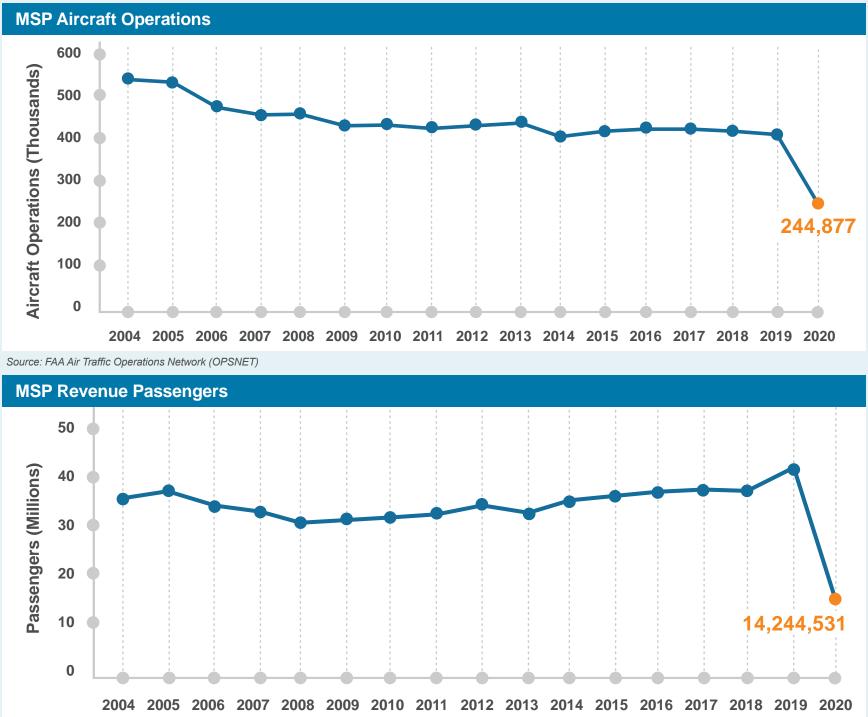
Source: MAC Year End Operations Reports – 2-6-2021. Note, this chart reflects numbers of paying passengers only. Each year's totals are greater if you also count non-revenue passengers such as airline employees with flight benefits.

MSP Revenue Passenger Market Share

Rank	Airline	2018	2019	2020	Gain/Loss 2019-2020
1	Delta	71.39%	71.21%	68.79%	-2.42%
2	Sun Country	6.39%	7.49%	10.59%	3.10%
3	American/ US Airways	5.72%	5.36%	6.29%	0.93%
4	Southwest/AirTran	5.29%	3.03%	4.61%	1.58%
5	United	4.32%	4.18%	4.00%	-0.18%
6	Spirit	3.13%	4.75%	3.11%	-1.64%
7	Frontier	1.32%	1.31%	1.22%	-0.09%
8	Alaska Airlines	0.95%	0.88%	0.75%	-0.13%
9	JetBlue	0.42%	0.59%	0.27%	-0.32%
10	Air Canada	0.32%	0.31%	0.12%	-0.19%
11	KLM	0.21%	0.26%	0.11%	-0.15%
12	Aer Lingus	0.00%	0.12%	0.07%	-0.05%
13	Air Choice One	0.03%	0.03%	0.03%	0.00%
14	Boutique Air	0.03%	0.03%	0.02%	-0.01%
15	Denver Air Connection			0.01%	0.01%
16	Icelandair	0.25%	0.22%	0.01%	-0.21%
17	Air France	0.15%	0.19%	0.00%	-0.19%
18	Condor	0.08%	0.07%	0.00%	-0.07%

MSP Airport Operations

Year	Air Carrier	Air Taxi	Itinerant General Aviation	Military	Total Operations
2013	285,278	132,241	11,510	2,544	431,573
2014	292,445	105,606	11,272	2,437	411,760
2015	303,357	86,497	11,691	2,829	404,374
2016	311,271	87,198	11,489	2,940	412,898
2017	319,278	82,861	11,521	2,043	415,703
2018	321,650	72,609	10,081	2,573	406,913
2019	329,323	64,980	9,732	2,038	406,073
2020	199,558	38,508	4,935	1,876	244,877



Source: FAA Air Traffic Operations Network (OPSNET)

Airfield capacity is typically described in terms of hourly capacity and annual capacity under various weather conditions. The table below reflects the hourly capacity for MSP in optimum, marginal and poor weather conditions.

MSP Airfield Capacity

Weather Conditions	Operations per hour
Optimal Rate (1)	
Marginal Rate (2)	
IFR Rate (3)	114

Notes:

- (1) Ceiling and visibility above minima for visual approaches.
- (2) Below visual approach minima but better than instrument conditions.
- (3) Instrument flight rules (IFR) are required in meteorological conditions with a cloud ceiling less than 1,000 feet or visibility less than 3 miles.

Source: Federal Aviation Administration Air Traffic Control Tower Analysis

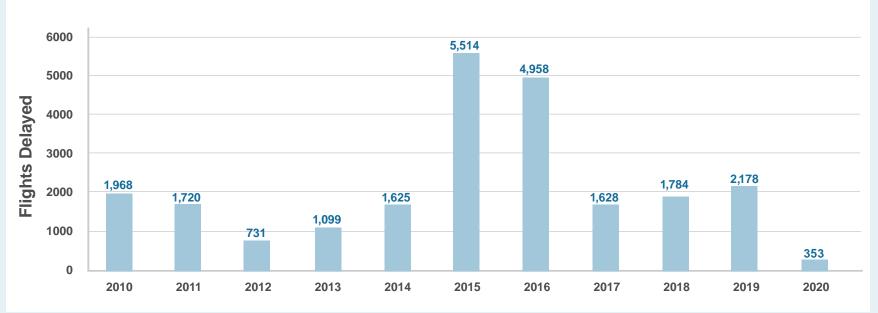
MSP's current airfield capacity is 158 aircraft operations in optimum conditions. When instrument flight rules are being used due to low-level, heavy cloud cover and/or low visibility capacity drops to 114 operations.

Airfield Delay

The FAA Air Traffic Operations Network (OPSNET) database counts flights that were reported by Air Traffic Control (ATC) to be delayed for more than 15 minutes. The chart below depicts the annual number of MSP flights delayed by ATC in 2010 through 2020.

The FAA combines arrival and enroute delays into one category, and

MSP Flights Delayed By ATC



Notes: Beginning in 2015, RNAV arrival procedures and Converging Runway Operations were implemented at MSP. Source: FAA Air Traffic Operations Network (OPSNET)

reports delays for aircraft that accumulate 15 minutes or more holding delay at each facility throughout the entire route of flight. Delays of fewer than 15 minutes are not counted, nor are delays not initiated by ATC.

In 2020, there were 353 delayed flights at MSP, which is a decrease of 1,825 flights when compared to 2019.

Airfield Delay per Aircraft Operation

When calculating the average delay per flight operation, delay is averaged by each flight's taxi time and airborne time. The total averaged delay is expressed in minutes of delay per operation. The current industry standard for estimating delay is established by the FAA Aviation System Performance Metrics (ASPM). The FAA uses ASPM results to create performance benchmarks for airports each year. Since 2005, use of

ASPM data has been a well-supported methodology to calculate aircraft delays, accepted by both government and industry, as the most valid, accurate and reliable metric.¹

When compared to other large hub U.S. airports as shown in the table below, MSP ranked 28th with an overall average delay of 4 minutes in 2020; in 2019 MSP ranked 20th with an overall average of 5.7 minutes of delay.

Top 20 Large Hub Airports with Highest Average Total Delay per Operation 2019-2020

Rank	Airport	2020 Total Airports Operations	2020 Average Minutes of Delay per Operation	2019 Average Minutes of Delay per Operation	2019 Rank	Change from 2019 to 2020
1	CLT	397,983	9.6	10.6	4	-1.0
2	DFW	514,702	8.4	8.4	8	0.0
3	ORD	538,211	8.3	11.7	2	-3.4
4	EWR	216,100	6.9	10.7	3	-3.8
5	IAH	267,169	6.8	8.2	10	-1.4
6	LGA	140,882	6.7	11.9	1	-5.2
7	SEA	296,056	6.3	8.7	7	-2.4
8	PHL	220,123	6.1	9.1	6	-3.0
9	IAD	175,944	5.5	6.9	14	-1.4
10	DEN	442,571	5.5	7.1	12	-1.7
11	DCA	133,729	5.3	7.8	11	-2.5
12	MEM	202,728	5.2	5.2	25	0.0
13	SFO	231,164	5.1	8.3	9	-3.2
14	ANC	245,283	5.0	4.2	48	0.8
15	DAY	33,343	4.8	5.0	29	-0.2
16	PHX	310,324	4.6	5.2	26	-0.5
17	MCO	225,692	4.5	6.2	18	-1.7
18	JFK	206,727	4.5	9.3	5	-4.8
19	LAX	379,364	4.4	7.0	13	-2.5
20	SLC	276,816	4.3	4.7	35	-0.4
28	MSP	244,877	4.0	5.7	20	-1.7

Source: FAA Aviation System Performance Metrics ¹ Prior to 2005, the industry standard was the FAA's Consolidated Operations and Delay Analysis System (CODAS); the U.S. Department of Transportation (DOT) Airline Service Quality Performance (ASQP) data were used to compare optimal versus actual taxi and flight times for MSP.

Technological Developments and Capacity Enhancements at MSP

The FAA continuously explores potential capacity-enhancing development/technology to increase airport efficiency and reduce delay. When advances are identified, efforts are made to implement the technology at the busiest airports. This section describes these efforts as they apply to MSP.

Installation of ASDE-X at MSP was completed in 2009 and provides seamless coverage for complete aircraft identification information. This equipment also allows for future implementation and upgrade to Next Generation (NextGen) navigation technology (Automatic Dependence Surveillance – Broadcast, "ADS-B"); ADS-B uses a Global Navigation Satellite System to broadcast critical information.

In 2020, aircraft operating at MSP were equipped with ADS-B/Cockpit Display of Traffic Information (ADS-B/CDTI) technology per federal policy for aircraft operating in capacity-constrained airspace, at capacityconstrained airports (including MSP) or in any other airspace deemed appropriate by the FAA.

Ongoing Precision Instrument Approach Capabilities

In addition to runway separation and configuration, airfield capacity can be affected greatly by how the runways are equipped for inclement weather. A number of precision instrument approaches continue to be available at MSP as summarized in the table below.

Precision Instrument Approaches *Table A-3*

MSP	CAT 1	CAT 2	CAT 3
Runways	30R	30L	12L
			12R
			35

Notes: The term decision height is defined as the height at which a decision must be made during a precision approach to either continue the landing maneuver or execute a missed approach.

Precision approaches are categorized based on decision height and the horizontal visibility that a pilot has along the runway. Visibility values are expressed in statute miles or in terms of runway visual range (RVR) if RVR measuring equipment is installed at an airport. The different classes of precision instrument approaches are:

- i. Category I (CAT I) provides approaches to a decision height down to 200 feet and a basic visibility of 3/4 statute miles or as low as 1,800 feet runway visual range (RVR).
- ii. Category II (CAT II) provides approaches to a decision height down to 100 feet and an RVR down to 1,200 feet.
- iii. Category IIIa (CAT IIIa) provides approaches without a decision height (down to the ground) or a decision height below 100 feet and an RVR down to 700 feet.
- iv. Category IIIb (CAT IIIb) provides approaches without a decision height or a decision height below 50 feet and an RVR down to 150 feet.
- v. Category IIIc (CAT IIIc) provides approaches without a decision height and RVR. This will permit landings in "0/0 conditions," that is, weather conditions with no ceiling and visibility as during periods of heavy fog.

Source: MSP Airfield Operations, FAA

The MAC Reliever Airports

The MAC's six general aviation reliever airports are open for public use 24 hours per day. Aircraft operators must choose an airport at which to base their aircraft. Airports in Minnesota are required to submit to the State a report that identifies the aircraft based at their facilities for 180 days or more. The tables below show the 2019 and 2020 reliever

airport operations and reliever airport based aircraft. The operations totals are obtained from the FAA for MAC reliever airports with an air traffic control tower. For the two reliever airports without an air traffic control tower (LVN and 21D), the operations totals are estimated through various methods and available data.

Reliever Airport Operations							
Airport	LVN	21D	MIC	STP	FCM	ANE	ANNUAL TOTAL
2019	29,835	31,208	41,541	40,934	104,405	71,740	319,663
2020	31,314	29,799	39,509	30,188	124,382	70,852	326,045
YY Comparison 2020-2019	1,479	(1,409)	(2,032)	(10,746)	19,977	(888)	6,382

Source: MAC Airfield Development, MAC Reliever Airports, and FAA Air Traffic Operations Network

Reliever Airports Based Aircraft							
Airport	LVN	21D	MIC	STP	FCM	ANE	ANNUAL TOTAL
2019	141	191	165	103	369	378	1,347
2020	140	187	161	91	363	365	1,307
YY Comparison 2020-2019	(1)	(4)	(4)	(12)	(6)	(13)	(40)

Source: MAC Airfield Development and MAC Reliever Airports

LVN = Airlake | 21D = Lake Elmo | MIC = Crystal | STP = St. Paul Downtown | FCM = Flying Cloud | ANE = Anoka County-Blaine

MSP AIRPORT NAMED **BEST AIRPORT IN NORTH AMERICA** 4 YEARS IN ROW



The Airport Service Quality award is based on travelers' satisfaction scores as reported to Airports Council International. Thank you to all the employees, volunteers and passengers for making MSP the best of the best.

Category: 25-40 million passengers



Minneapolis-St. Paul International • Airlake • Anoka County-Blaine • Crystal • Flying Cloud • Lake Elmo • St. Paul Downtown

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