



Minneapolis-St. Paul International Airport Noise Oversight Committee (NOC)



NOC Committee Members

Jeff Hart	User Co-Chair, Scheduled Airline Representative (Delta Air Lines)
Dianne Miller	Community Co-Chair, City of Eagan Representative (City of Eagan)
Ryan Barette	Minnesota Business Aviation Association Representative
John Bergman	At-Large Community Representative (Apple Valley City Council)
Cheryl Jacobson	City of Mendota Heights Representative (City of Mendota Heights)
John Klinger	Chief Pilot Representative (Delta Air Lines)
Ryan Krzos	City of Richfield Representative (Richfield City Council)
Patrick Martin	City of Bloomington Representative (Bloomington City Council)
Alex Mason	At-Large Airport User Representative (Endeavor Air, Inc.)
Angie Moos	Cargo Carrier Representative (United Parcel Service)
Linea Palmisano	City of Minneapolis Representative (Minneapolis City Council)
Casey Potter	Charter/Scheduled Operator Representative (Sun Country Airlines)

MEETING AGENDA

January 19, 2022 at 1:30 PM

Jeff Hart, Delta Air Lines, will be the acting Chairperson for the meeting

VIRTUAL MEETING FORMAT ONLY - The meeting is open to the public.

To participate, please join using the following options:

Microsoft Teams Link: [Click here to join the meeting](#)

By Phone: 612-405-6798, phone conference ID: 133 787 360#

1. Consent

1.1. Approval of November 10, 2021 Meeting Minutes

1.2. Reports

1.2.1. Monthly Operations Reports: November and December 2021

2. Public Comment Period

3. Business

4. Information

4.1. VOR Minimum Operational Network

4.2. MSP Air Service Updates

4.3. 2021 Complaint Data Assessment

4.4. 2021 Fleet Mix and Nighttime Operations Assessment

4.5. Website Update

5. Announcements

Adjourn



MSP NOISE OVERSIGHT COMMITTEE
DRAFT MEETING MINUTES
Wednesday, November 10, 2021, at 6:00 PM
By MS Teams, and Teleconference Only



Call to Order

A regularly scheduled meeting of the Minneapolis-St. Paul International Airport (MSP) Noise Oversight Committee, (NOC) having been duly called, was held Wednesday, November 10, 2021, by teleconference only. Chair Miller called the meeting to order at 6:00 p.m. The following participated in the teleconference:

Representatives: R. Barette, J. Bergman, C. Jacobson, J. Hart, J. Klinger, D. Miller, A. Moos, L. Moore, C. Potter, K. Rodriguez

Staff: Y. Bizen, B. Juffer, J. Lewis, K. Martin, M. Ross, D. Nelson, L. Werner

Others: R. Krzos – City of Richfield, H. Rand – Inver Grove Heights, S. Fortier – FAA, J. Ronken – FAA, D. Langer – FAA, D. Drozdal – FAA, J. Ronken – FAA, K. Gallatin, Lori G., and other members of the public

A quorum of four Community Representatives, and four Industry Representatives was established by roll call attendance:

Community Representatives: Bergman, Jacobson, Miller, Moore, Rodriguez

Industry Representatives: Barrette, Hart, Klinger, Moos, Potter

1. Consent

1.1. Approval of September 15, 2021, Meeting Minutes

There were no questions or revisions to the September 15 meeting minutes.

1.2. Reports

1.2.1. Monthly Operations Reports: September and October 2021

Michele Ross, Assistant Technical Advisor to the NOC, provided September 2021 data and preliminary data for October 2021. The data for October had not been finalized at the time of this meeting. (Presentation materials are available on <https://metroairports.org/msp-noise-oversight-committee>):

September

- Total Operations: 26,770
- Nighttime Operations: 1,301
- North/South/Mixed: 45/47/13 (%)
- RUS (Priority 1/2/3/4): 47/4/0/50 (%)
- RJ/Narrow/Wide: 45/52/3 (%)
- Complaints: 11,006
- Complaint locations: 315
- Top 10 Households: 59%

October (preliminary)

- Total Operations: 27,275
- Nighttime Operations: 1,296
- North/South/Mixed: (%)
- RUS (Priority 1/2/3/4): 42/10/0/47 (%)
- RJ/Narrow/Wide: 41/56/3 (%)
- Complaints: 11,177
- Complaint locations: 306
- Top 10 Households: 58%

- Hours of events*: 364
- Number of events*: 72,453
- R17 procedure: 99.8%
- EMH Corridor procedure: 96.4 %
- Crossing procedure day: 17.8%
- Crossing procedure night: 46.1%
- RUS: 50.5 %
- Hours of events*:
- Number of events*:
- R17 procedure: 99.6%
- EMH Corridor procedure: 94.1%
- Crossing procedure day: 20.1%
- Crossing procedure night: 35.2%
- RUS: 52.4%

* Aircraft sound events above 65dB.

Chair Miller mentioned that Eagan has been receiving a lot of calls regarding noise. She remarked that she was not surprised given that Runway 17 had been closed for seven weeks and when flights returned it proved bothersome for residents. **Chair Miller** noted she is working with MAC staff to understand the issues and noted that headings 120 and 140 seem to be particularly bothersome for residents as well as sweeping westbound turns off the parallel runways for the residents of north Eagan. **Chair Miller** assured residents that have been calling that we are looking into those issues and will get back to them.

1.2.2. Review of Fall Listening Session

Michele Ross, Assistant Technical Advisor to the NOC, provided an overview of the Fall Listening Session held on October 27. Attendees included one resident from Mendota Heights. Also in attendance were FAA and MAC staff, and the following NOC representatives, including Jeff Hart, Cheryl Jacobson, Linea Palmisano, Loren Olsen, John Klinger, and Kevin Gallatin.

During the Fall Listening Session, the NOC typically requests work plan item suggestions for the coming year. Staff provided a brief overview of past work plans and the draft work plan for 2022.

During the Listening Session, the NOC At-Large representative from Saint Paul, Kevin Gallatin, noted that he had been hearing from Highland Park residents with concerns of ground noise from the airport, particularly noting noise from the air base on the northeast side of the airport. Minneapolis NOC reps echoed these concerns for Minneapolis residents. Staff noted the prevalence during the fall for temperature inversion – which is a weather conditions that can exacerbate ground noise. Temperature inversion can occur when the air above the ground is warmer than the air near the ground.

Given these concerns from residents, staff would suggest a 2022 Work Plan addition to have a guest speaker from the Air National Guard attend a 2022 NOC meeting and provide information on the airfield activity to help clarify the activity and associated sound for residents.

There were no questions or comments.

1.2.3. Review of Residential Noise Mitigation Program Implementation Status

This item is included as a report only.

Chair Miller asked the Committee if they had any questions. Hearing none, Chair Miller asked for a motion to approve the consent agenda.

Member Jacobson moved, and **Member Moore seconded** approval of the Consent items listed above. The motion passed on the following roll call vote:

Ayes: Ten - Barrette, Bergman, Hart, Klinger, Potter, Jacobson, Miller, Moore, Moos, Rodriguez

Nays: None
Abstain: None

2. Public Comment Period

There were no public comments.

3. Business

3.1. Review and Approval of the 2021 NOC Accomplishments, 2022 NOC Work Plan, 2022 NOC Meeting Dates

Brad Juffer, Technical Advisor to the Noise Oversight Committee provided an overview of the 2021 NOC Accomplishments, 2022 NOC Work Plan, and 2022 NOC Meeting Dates and highlighted some 2021 Accomplishments:

- Ongoing review of MSP monthly operations reports (aircraft noise complaints, operations, runway use, noise events, and compliance with noise abatement procedures) though often overlooked, awareness of activity at MSP has been important in 2021 as the ongoing recovery of travel during the pandemic has caused disruptions not seen before.
- Updates from Delta and Sun Country Airlines and the MAC's Director of Air Service Development about current and projected airline schedules as well as impact to airport operations resulting from the COVID 19 pandemic.
- Updates on airfield construction activities, allowed the NOC to also have a future awareness of airfield impacts and activity.
- Fleet Mix and Nighttime Operations Assessment, 2020 MSP Complaint Data Assessment, MSP 2020 Annual Noise Contour Report, are annual reports and studies that are done each year for the Committee.
- FAA briefing regarding the Neighborhood Environmental Survey
- Update regarding the FAA's efforts to re-evaluate noise measurements methods at U.S. airports. The FAA briefing regarding the Neighborhood Environmental Survey was handled at the special meeting in February to respond to the Federal Register Notice on the Neighborhood Environmental Survey.
- Honoring Pam Dymtrenko's service and her contribution to the NOC.

Juffer noted that the NOC's endorsement for the continuation of the Noise Mitigation Program in a manner consistent with the provisions of the Consent Decree and the request for MAC staff to continue exploration of the program with the parties to the Consent Decree was duly noted and appreciated by MAC Commission and Staff. **Juffer** personally thanked on behalf of MAC staff, the Committee members for volunteering their time and talent. The Draft NOC 2022 Work Plan was presented to the NOC in September. Items I thru K were added since that draft was distributed. Staff also provided recommendations on 2022 NOC meeting dates.

Chair Miller asked if there were any questions or comments from the Committee; hearing none, she asked if there was a motion for the following requested action.

Requested action: APPROVE AND RECOMMEND TO THE MAC PLANNING, DEVELOPMENT AND ENVIRONMENT COMMITTEE APPROVAL OF THE 2021 MSP NOC ACCOMPLISHMENTS, 2022 MSP NOC WORK PLAN AND 2022 NOC MEETING DATES

Member Bergman moved, and **Member Potter seconded** the requested action. There was no further discussion from the Committee, so a roll call vote was taken.

The motion passed on the following roll call vote:

Ayes: Ten - Barrette, Bergman, Hart, Jacobson, Klinger, Potter, Miller, Moore, Moos, Rodriguez

Nays: None

Abstain: None

4. Information:

4.1. Update on the MSP Long Term Plan and Associated Stakeholder Engagement

Lydia Werner, Airport Planner, provided a status update of the MSP Long-Term Plan (LTP) and associated engagement activities. The MAC is responsible for long-term planning for each of its airports. The MSP Airport LTP is a forward-looking planning tool that studies facility and infrastructure needs based on projected 20-year passenger demand and aircraft operations.

The LTP was started in 2019 with the inventory, baseline conditions and forecasts were completed prior to the COVID-19 pandemic. Due to the pandemic, planning was put on pause. When signs of air service recovery became apparent, Ricondo and Associates were reengaged to look at forecasts again and they are in the process of updating them now. 2020 actual numbers, operations, payments, etc., will be considered as well as the recovery period specific to Minneapolis, estimated to be between the 2022 to 2025 timeframe. This will be published on the website under the LTP tab within the next few weeks along with a shared and updated, executive summary.

The MAC is currently working with three firms: Ricondo for terminal planning, Kimley-Horn for landside planning, and HNTB for airside planning. Work scopes are being finalized for each of the firms and will also cover facility requirements and alternatives analysis of development. Phasing and environmental land use considerations is work that is yet to be completed.

Most of the work is anticipated to be completed by the mid-2022, with a draft document going out for a public comment period. A MAC Board approval will then be sought, followed by a Met Council review. There will be opportunities for public engagement, some events have already occurred as well as three public events in the future. The stakeholder advisory panel meetings are scheduled to begin again in December 2021.

The Airside, Landside and in Terminal working groups met in October to reengage and get back up to speed on project status. These groups will continue to meet throughout the LTP process.

There were no questions or comments from the Committee.

4.2 Update on Eagan Request to FAA

Brad Juffer, Technical Advisor to the Noise Oversight Committee, noted that in September of 2019, the Eagan City Council sent a letter to the NOC requesting endorsement of the

recommendations developed by the Eagan Airport Relations Commission to modify specific procedures to reduce the number of departures from MSP that fly over residential portions of Eagan. The NOC considered the letter and the specific requests in November 2019 and forwarded its endorsement of four requests to the MAC Commission for review. In December 2019, the MAC Commission unanimously approved forwarding the proposals to the Federal Aviation Administration (FAA). The FAA conducted a high-level safety and feasibility review of these proposals and determined two had merit and warranted further consideration. The NOC reviewed the two proposals in May 2020, including comprehensive noise modeling and analysis to determine the potential impact of the changes. After review, the NOC concluded that one amended proposal should continue through the process and forwarded the request to the MAC Commission. In June 2020, the MAC reviewed and unanimously supported sending the amended proposal to the FAA to conduct the next step in the process: a feasibility and safety assessment. The FAA responded to the MAC Commission's June 2020 letter and participated in the September 2020 NOC meeting. The FAA tentatively determined that the suggested procedure was feasible but was unable to do a more detailed feasibility and safety analysis due to current traffic levels at the airport. **Juffer** introduced **Sean Fortier**, FAA to provide a status update.

Fortier said that due to the constraints with the state of air service recovery and as well as construction at MSP, the FAA has yet to test the recommended Runway 17 procedures. Operations are currently at about 80 percent of 2019 levels and the recovery is anticipated to be very slow in returning to 2019 levels. Therefore, FAA did not feel that it was prudent to move forward and start to work on this process of procedure development parameters testing even though major construction is complete, and Runway 17 and all other surfaces are available for use. Additionally, during the upcoming winter months North flow is typically favored and not ideal for testing.

FAA is meeting in November with the local safety council, a collaborative work group that exists to evaluate safety. The group is comprised of air traffic controllers and managers who evaluate various safety issues and make recommendations to the facility for implementation of new procedures, processes, or any other type of activity. The group will be tasked with developing and testing process parameters and procedures to implement a testing period. Once the personnel are trained on the testing procedures and parameters, FAA would begin testing in earnest. A typical testing period is 90-120 days. The timeframe will be determined by the safety council. The testing period will most likely start late January to early February, which would lead into the Spring months when South flow is favored for the heart of the testing period.

When a test like this is developed, there is typically a 30 day look ahead evaluation period as well as a 30 day look back and try to make determinations of the efficacy or possible impact to safety and efficiency of our noise abatement procedures and runway use. FAA will work with the MAC throughout the evaluation. FAA will be seeking input from the MAC and sharing information, as appropriate, with the NOC to inform the Committee of the process and progress. There are always time periods within the testing process to either extend or terminate testing, if safety issues are found, or make permanent the procedure post evaluation.

To recap the timeline, FAA will be meeting with the local safety council, November 23rd.

Chair Miller thanked **Fortier** and mentioned that she appreciated the level of effort and teamwork. Chair Miller mentioned it is a great example of partnership between the MAC, the FAA and local communities and the Committee is looking forward to more updates in the new year.

4.3 Meet the Fleet

Brad Juffer, Technical Advisor to the Noise Oversight Committee, noted that MAC staff launched an exciting video series to bring our airports to our neighbors. In partnership with our talented NOC pilots, Meet the Fleet gives viewers a behind-the-scenes look at various aircraft types that frequent MSP. The videos feature commentary from pilots who share interesting facts about specific aircraft, identifying characteristics, common routes, and an up-close look at the fleet. The third video in the series highlights the Boeing 737-800. MAC staff would like to personally thank Sun Country Airlines and Chief Pilot, Casey Potter for participating in this video and lending their equipment and expertise to this effort: www.youtube.com/watch?v=37KI96UK7tw

There were no questions or comments from the Committee.

5 Announcements

January NOC Meeting

Wednesday, January 19, 2022 @ 1:30 pm

Location TBA

Winter Listening Session

Wednesday, January 26, 2022 @ 6:00 pm

Location TBA

6. Adjourn

Chair Miller thanked the members of the Committee, NOC staff and residents in attendance. The meeting was adjourned at 6:45 pm.

MEMORANDUM

ITEM 1.2.1

TO: MSP Noise Oversight Committee (NOC)

FROM: Michele Ross, Assistant Manager, Community Relations

SUBJECT: **REVIEW OF MSP MONTHLY OPERATIONS REPORTS: NOVEMBER AND DECEMBER 2021**

DATE: January 5, 2022

Each month, the MAC reports information on MSP aircraft operations, aircraft noise complaints, sound levels associated with MSP aircraft operations, and compliance with established noise abatement procedures on its interactive reporting website:

<https://customers.macnoms.com/reports>.

At the January NOC meeting, MAC staff will provide a summary of this information for November and December 2021. To view these summary reports prior to the meeting, visit the “Archive” section at the link above.

MEMORANDUM

ITEM 2

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: PUBLIC COMMENT PERIOD

DATE: January 5, 2022

Members of the public are welcome to listen to the NOC meeting. During the meeting, a public comment period of no more than 20 minutes is included on the agenda. Individuals who wish to speak during the public comment period may do so by following the directions of the chairperson.

Below are some rules of decorum for speaking at NOC meetings.

- Each speaker will have one opportunity to speak and is allotted three (3) minutes. The public comment period is limited to 20 minutes.
- The chairperson will open the public comment period by asking for participants who wish to speak to indicate their desire following the direction of the chairperson. When called upon to speak by the chairperson, the meeting organizer will unmute your line. Speak clearly into your phone and state your name and address. If you are affiliated with any organization, please state your affiliation.
- Commenters shall address their comments to the NOC and not to the audience.
- Use of profanity, personal attacks, or threats of violence will not be tolerated.
- Interruptions from the audience, such as speaking out of turn, shouting, and other disruptive behavior are not permitted.
- If special assistance is needed to make a public comment, please contact the NOC Secretary at least two days prior to the meeting by sending an email to: nocsecretary@mspmac.org.

MEMORANDUM

ITEM 4.1

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **VOR MINIMUM OPERATIONAL NETWORK**

DATE: January 5, 2022

The Federal Aviation Administration (FAA) continues to upgrade the nation's navigation infrastructure, phasing out older components. One such component is the VOR, or Very High Frequency (VHF) Omnidirectional Range, which is an aircraft navigation system developed in the 1950s. This ground-based system uses line-of-sight radio navigation to determine aircraft position. It also requires pilots to tune in to a radio frequency and identify VOR ground stations using Morse Code.

The FAA seeks to reduce the nationwide inventory of VORs through its VOR Minimum Operational Network (MON) program. In total, there are over 900 VORs across the United States. The FAA VOR MON program aims to decommission a third, reducing the total to about 600. Flight procedures currently using VORs will be updated to use satellite-based technology. The following video by the FAA provides more information about the agency's VOR MON program:

<https://www.youtube.com/watch?v=2WOjg-RvRME>

The MSP VOR is located on the north side of the airport near Highway 62 and 28th Avenue South. It is previously scheduled to be decommissioned on September 8, 2022 but the project has been delayed due to the impacts of COVID-19. New satellite-based flight procedures will be established that will seek to replicate existing departure procedures. The FAA's preliminary analysis indicates that there should be little, if any, noticeable change to communities near MSP. The FAA will provide regular updates and will coordinate with the MAC, airport users, the MSP Noise Oversight Committee and the public.

More information from the FAA is available here:

[www.faa.gov/about/office org/headquarters offices/ato/service units/techops/navservices/gbng/vormon](http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gbng/vormon)

The FAA last updated the NOC on this work at their meeting on January 29, 2020. The FAA will again provide an update on this topic at the January 19, 2022 NOC meeting.

MEMORANDUM

ITEM 4.2

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **MSP AIR SERVICE UPDATES**

DATE: January 5, 2022

The COVID-19 pandemic continues to impact flight activity at MSP. Passenger levels and associated aircraft takeoffs and landings have been depressed below normal levels since late March 2020. This reduced level of activity changed the experience for many residents living near MSP for most of 2020 and 2021. It is expected that passenger levels and aircraft operations will not fully return to pre-pandemic levels for many years.

To keep NOC members updated and prepared with information about upcoming air service to address community concerns that may arise, the NOC has invited Brian Peters, MAC Director of Air Service Development, Gregg Davis, Delta Air Lines and Casey Potter, Sun Country Airlines to provide an update about future airline schedules and communicate how those schedules will impact airport operations.

MEMORANDUM

ITEM 4.3

TO: MSP Noise Oversight Committee (NOC)

FROM: Michele Ross, Assistant Manager, Community Relations

SUBJECT: **2021 COMPLAINT DATA ASSESSMENT**

DATE: January 5, 2022

The 2022 NOC Work Plan includes generation of an MSP Complaint Data Assessment. The assessment examines complaint data trends from 2019 through 2021 and includes the following sections:

- 2019 – 2021 Annual Complaint and Households
 - 2021 Total Households Filing Complaints
 - 2021 Top 10 Households Filing Complaints
 - 2021 New Households Filing Complaints
 - 2019-2021 Total Complaints
 - 2021 Ground Noise and Runup Complaints
- 2021 Complaints Filed by Complaint Reason
- 2019 – 2021 Complaints Filed by Top 10 Cities
- 2019 – 2021 Households Filing Complaints by Top 10 Cities
- 2021 Complaints Filed by City
- 2020 To 2021 Comparison – Households Filing Complaints by City
- 2021 Households Filing Complaints by Home Purchase Year
- Number of Households by Home Purchase Year
- 2019 – 2021 Complaint and Operations by Time of Day
- 2021 Complaints and Operations Ratio by Hour
- Complaint and Operation Monthly Ratio
- 2021 Complaints by Aircraft Category
- 2021 Complaints by Aircraft Type
- 2021 Top 10 Flights that Generated Complaints
- 2019 – 2021 Complaints by Flow
- 2019-2021 Total Flow
- 2021 Complaints by Temperature and Weather Conditions

This report will be made available as an addendum to the packet prior to the meeting. Staff will present information from this report at the January 19, 2022 NOC meeting.

MEMORANDUM

ITEM 4.4

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **2021 FLEET MIX AND NIGHTTIME OPERATIONS ASSESSMENT**

DATE: January 5, 2022

The 2022 NOC Work Plan includes an assessment of current fleet mix and nighttime operational trends.

The report provides year-end 2021 data in comparison with historical trends. The report includes the following sections:

- MSP Fleet Mix
 - Historical Carrier Jet Trends
 - Trends in Aircraft Passenger Load Factors
 - MSP Carrier Jet Usage with Cumulative Certificated Noise Levels
 - Average Altitude Trends
- Nighttime Operations
 - Average Daily Nighttime Operations
 - Nighttime Operations by Runway, Airline, Aircraft Type, Origin/Destination
 - Trends in Nighttime Operations by Hour
 - Scheduled versus Actual Nighttime Operations by Hour

Staff will present information from this report at the January 19, 2022 NOC meeting.



**2021 ANNUAL MSP FLEET MIX AND
NIGHTTIME OPERATIONS REPORT**
JANUARY 2022

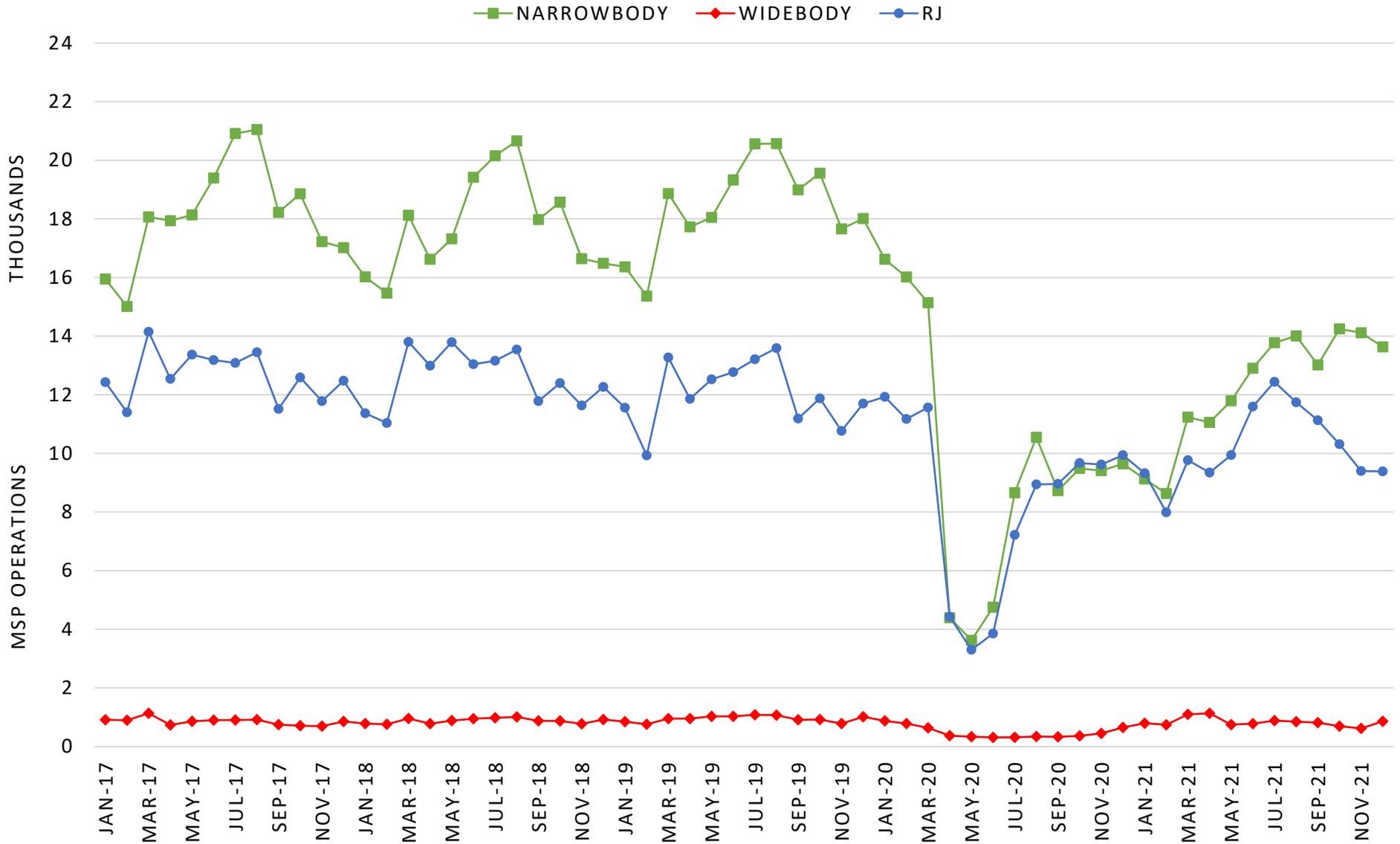
COMMUNITY RELATIONS OFFICE

2021 ANNUAL MSP FLEET MIX AND NIGHTTIME OPERATIONS REPORT

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MSP FLEET MIX REPORT

MONTHLY CARRIER JET COUNTS BY TYPE



HUSHKIT BY YEAR: 2017 - 26, 2018 - 32, 2019 - 18, 2020 - 8, 2021 - 68

MSP FLEET MIX REPORT
WIDEBODY JET ACTIVITY



WIDEBODY	TYPE	2017	2018	2019	2020	2021
	A310	0.0%	0.0%	0.0%	0.0%	0.0%
	A330	0.8%	0.7%	0.6%	0.3%	1.0%
	A340	0.1%	0.0%	0.0%	0.0%	0.0%
	A350	0.0%	0.0%	0.0%	0.1%	0.0%
	A380	0.0%	0.0%	0.0%	0.0%	0.0%
	B742	0.0%	0.0%	0.0%	0.0%	0.0%
	B744	0.0%	0.0%	0.0%	0.0%	0.1%
	B748	0.0%	0.0%	0.0%	0.0%	0.1%
	B762	0.1%	0.0%	0.0%	0.0%	0.0%
	B763	0.5%	0.8%	1.1%	1.1%	1.8%
	B764	0.0%	0.0%	0.1%	0.0%	0.2%
	B767	0.0%	0.0%	0.0%	0.0%	0.0%
	B777	0.4%	0.4%	0.5%	0.1%	0.0%
	B7878	0.0%	0.0%	0.1%	0.0%	0.1%
	DC10	0.3%	0.2%	0.0%	0.1%	0.0%
	MD11	0.5%	0.3%	0.2%	0.4%	0.2%
Total	2.7%	2.8%	3.0%	2.6%	3.6%	

MSP FLEET MIX REPORT
NARROWBODY JET ACTIVITY



NARROWBODY	TYPE	2017	2018	2019	2020	2021
	A220	0.0%	0.0%	0.3%	0.9%	2.0%
	A319	6.7%	6.4%	6.7%	7.0%	6.6%
	A20N	0.0%	0.0%	0.0%	0.3%	0.5%
	A320	7.3%	6.9%	8.1%	5.7%	6.0%
	A21N	0.0%	0.0%	0.0%	0.0%	0.0%
	A321	0.5%	2.2%	6.6%	9.6%	10.4%
	B717	5.2%	5.9%	7.8%	2.4%	0.4%
	B72Q	0.0%	0.0%	0.0%	0.0%	0.0%
	B733	0.4%	0.0%	0.0%	0.0%	0.0%
	B734	0.0%	0.0%	0.0%	0.1%	0.1%
	B735	0.0%	0.0%	0.0%	0.0%	0.0%
	B7377	5.0%	4.7%	3.8%	2.6%	2.1%
	B738	9.8%	10.1%	11.3%	10.8%	11.1%
	B739	5.0%	7.5%	8.1%	8.0%	8.7%
	B38M	0.0%	0.1%	0.0%	0.0%	0.3%
	B73Q	0.0%	0.0%	0.0%	0.0%	0.0%
	B757	5.9%	6.1%	5.1%	5.0%	4.6%
	DC9Q	0.0%	0.0%	0.0%	0.0%	0.0%
	MD80	2.5%	0.3%	0.0%	0.0%	0.0%
MD90	8.8%	6.8%	0.6%	0.0%	0.0%	
TOTAL	57.3%	57.0%	58.7%	52.4%	52.7%	

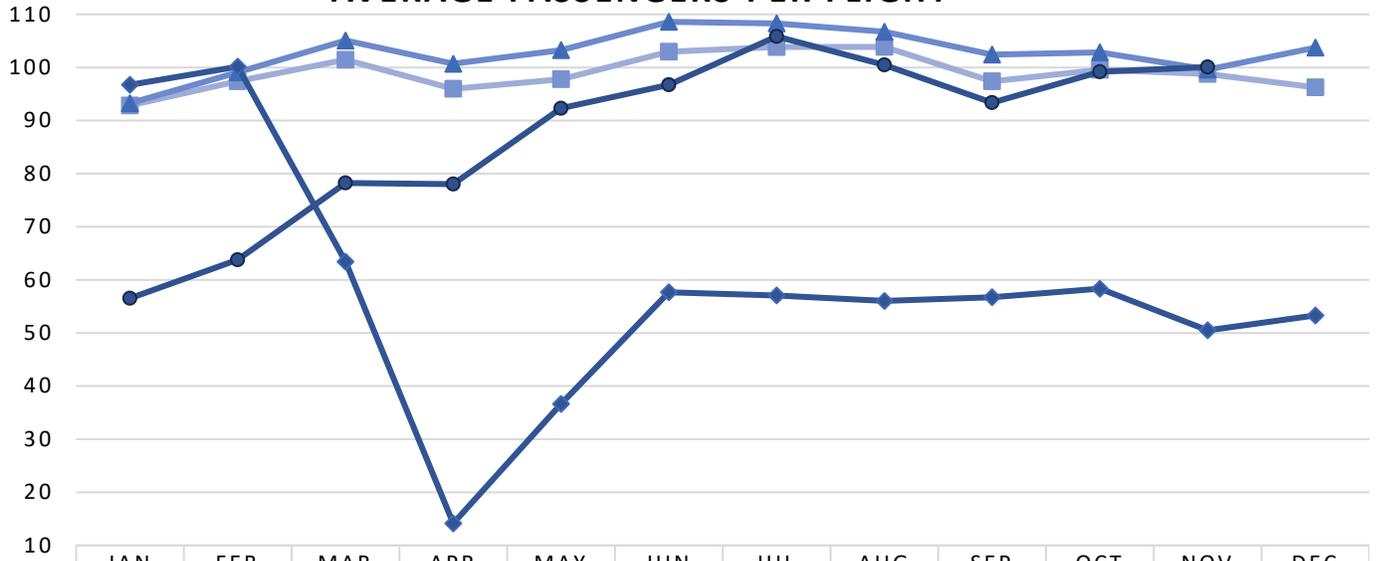
MSP FLEET MIX REPORT
REGIONAL JET ACTIVITY



REGIONAL JET	TYPE	2017	2018	2019	2020	2021
	CRJ	0.0%	0.0%	0.0%	0.0%	0.0%
	CRJ1	0.1%	0.0%	0.0%	0.0%	0.0%
	CRJ2	16.2%	14.3%	12.9%	10.8%	11.9%
	CRJ7	4.8%	7.0%	3.9%	2.9%	2.3%
	CRJ9	11.3%	13.0%	13.8%	20.2%	21.3%
	E135	0.0%	0.0%	0.0%	0.0%	0.0%
	E145	0.1%	0.0%	0.0%	0.4%	0.2%
	E170	7.1%	5.5%	7.3%	10.6%	7.3%
	E190	0.5%	0.3%	0.4%	0.1%	0.3%
	J328	0.0%	0.0%	0.0%	0.0%	0.4%
Total	40.0%	40.2%	38.3%	45.0%	43.7%	

MSP FLEET MIX REPORT

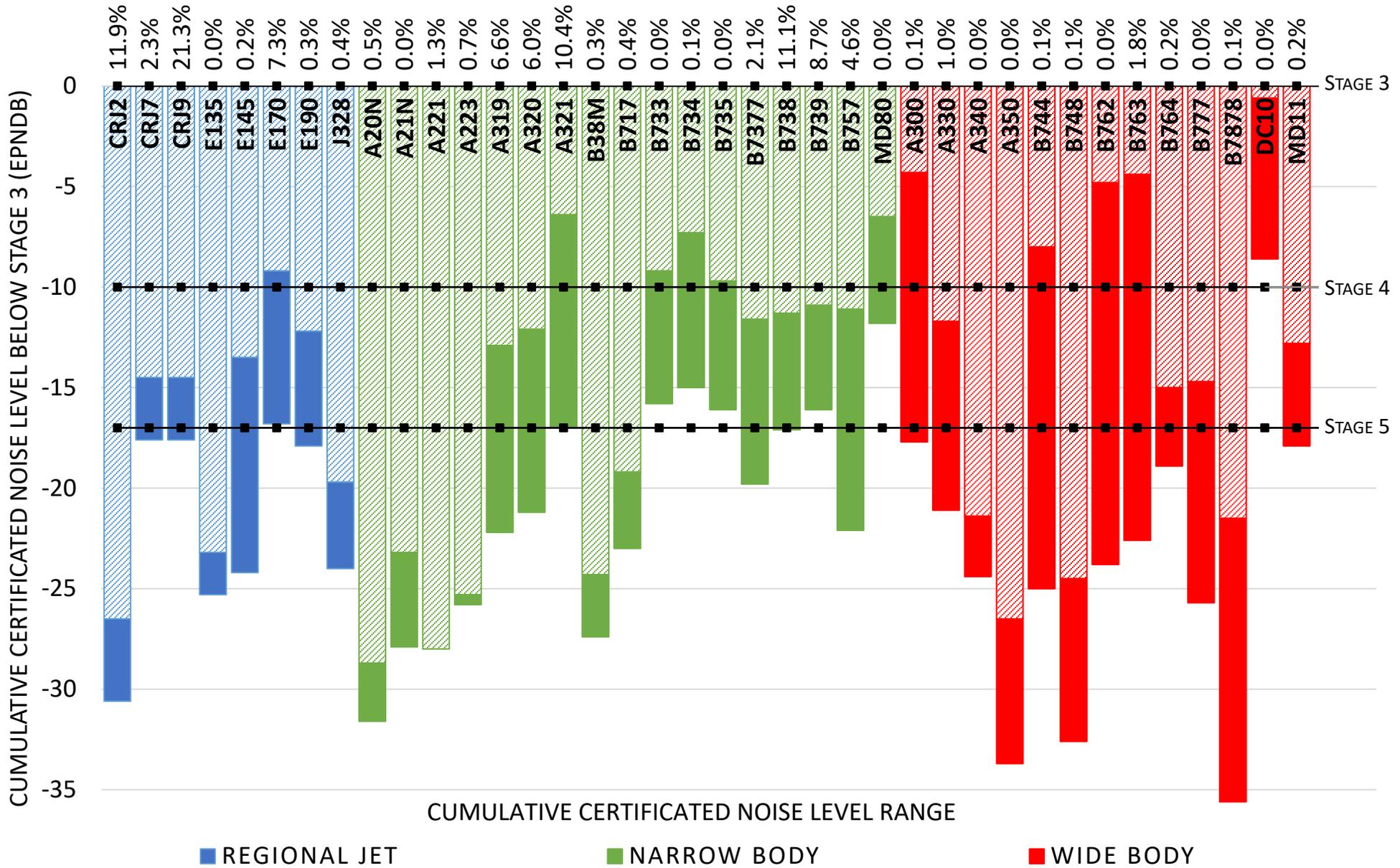
AVERAGE PASSENGERS PER FLIGHT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2018	92.8	97.4	101.4	96.0	97.8	103.0	103.8	103.9	97.4	99.6	98.8	96.2
2019	93.3	99.1	105.1	100.7	103.3	108.6	108.3	106.7	102.4	102.8	99.6	103.7
2020	96.7	100.1	63.4	14.1	36.6	57.7	57.1	56.0	56.7	58.3	50.5	53.3
2021	56.5	63.8	78.2	78.0	92.3	96.7	105.8	100.5	93.4	99.2	100.1	

SOURCE: MSP MONTHLY OPERATIONS REPORTS

2021 MSP CARRIER JET USAGE WITH CUMULATIVE CERTIFICATED NOISE LEVELS

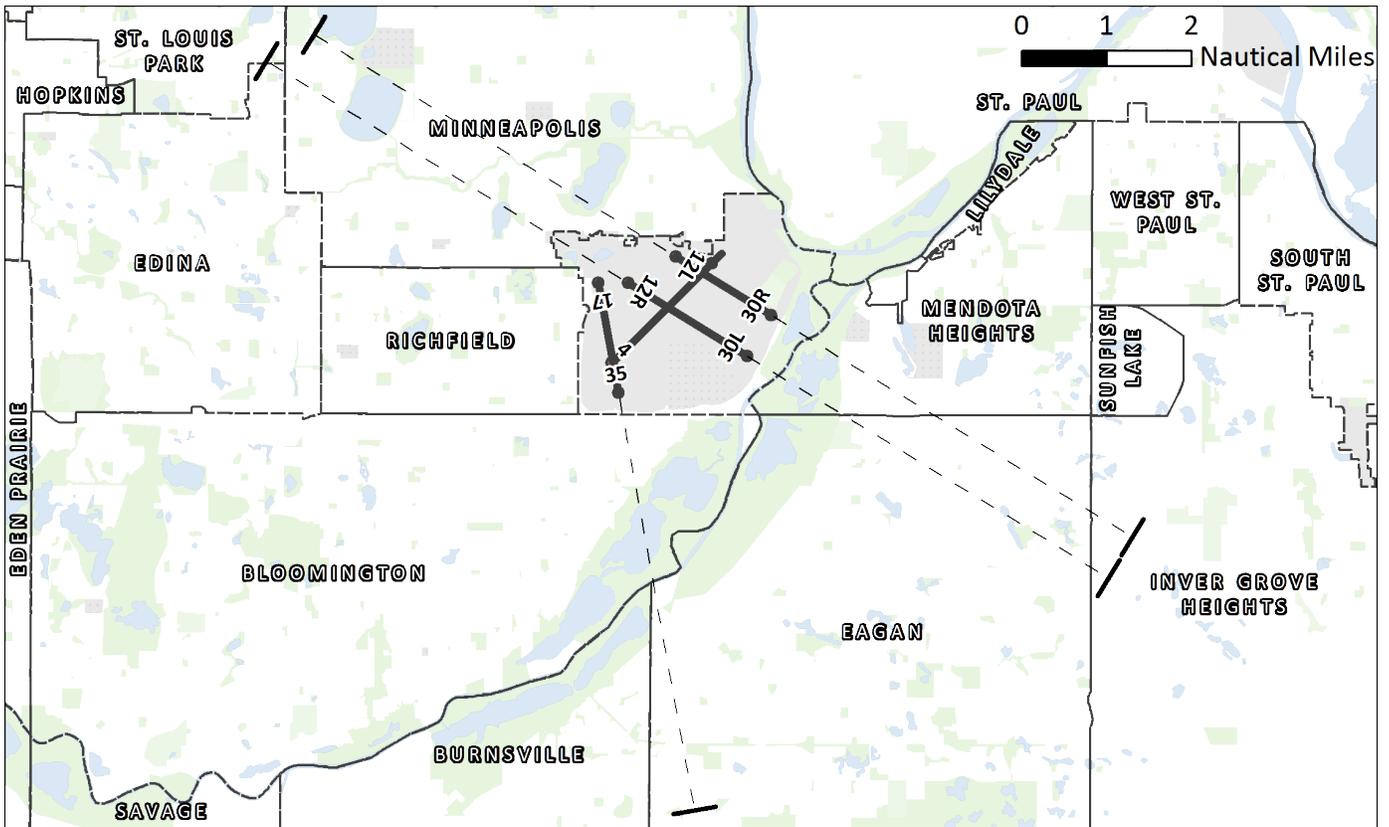
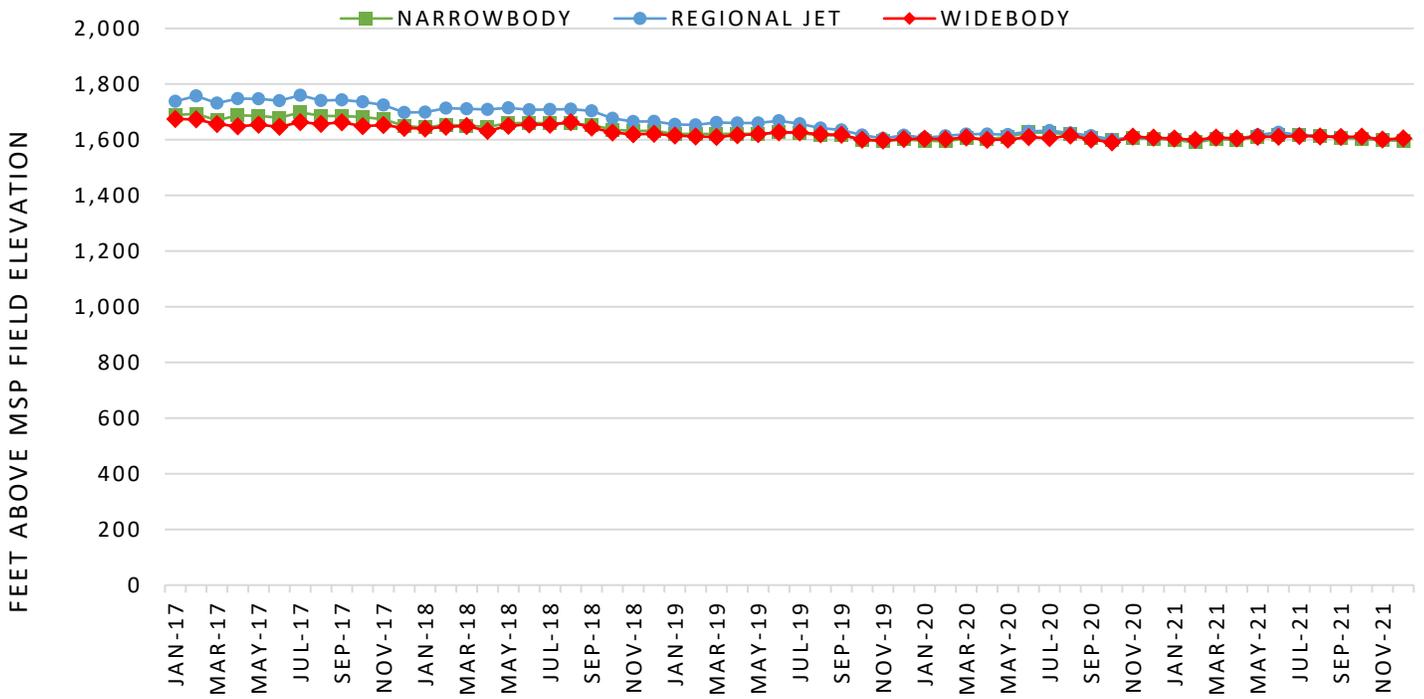


SOURCE: USAGE DATA: MACNOMS; NOISE CERTIFICATION DATA: EUROPEAN AVIATION SAFETY AGENCY

CUMULATIVE CERTIFICATED NOISE LEVELS REPRESENTED AS A RANGE TO ACCOUNT FOR MULTIPLE CERTIFICATION VARIABLES (WEIGHT, MODEL, ENGINE TYPE, AIRFRAME CONFIGURATION, ETC)

MSP FLEET MIX REPORT

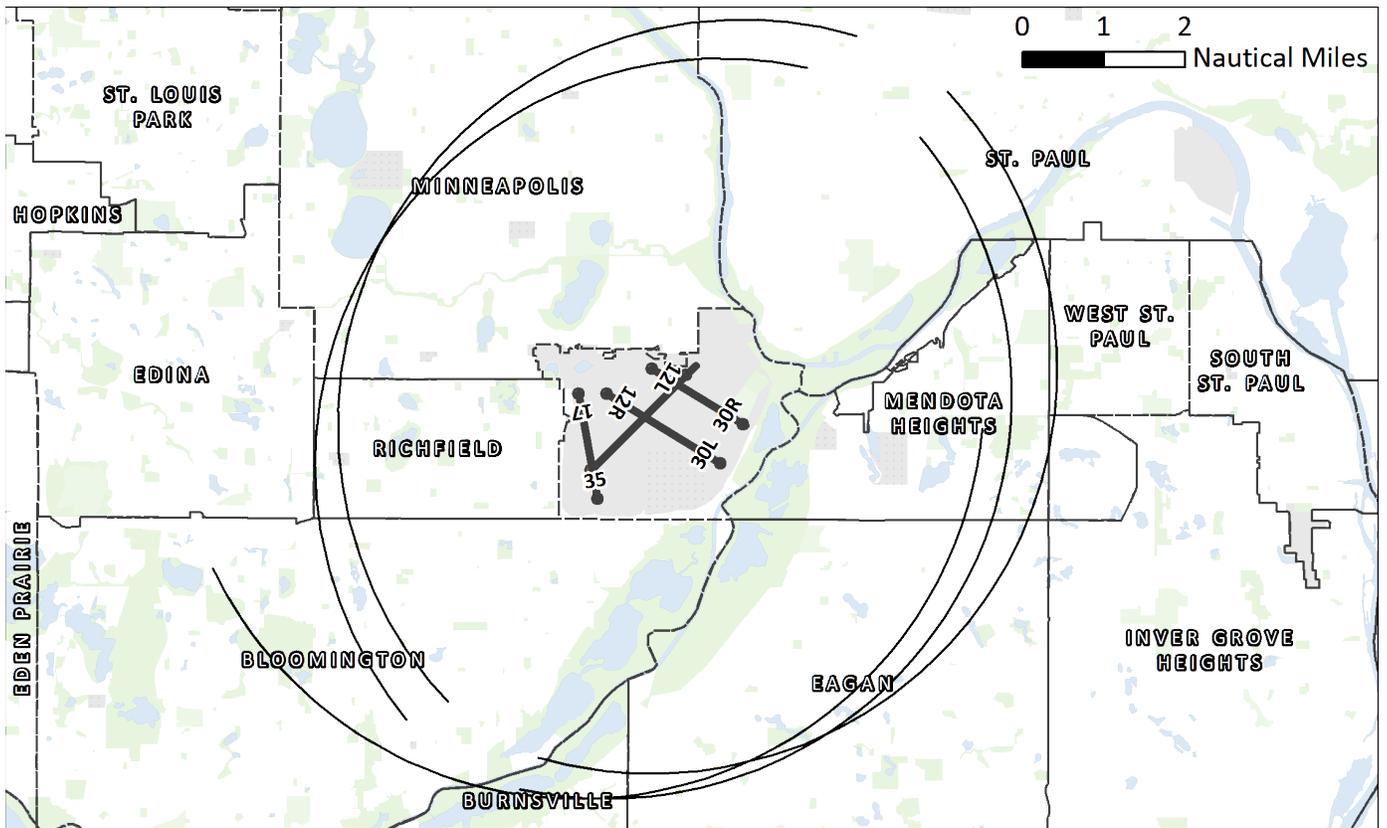
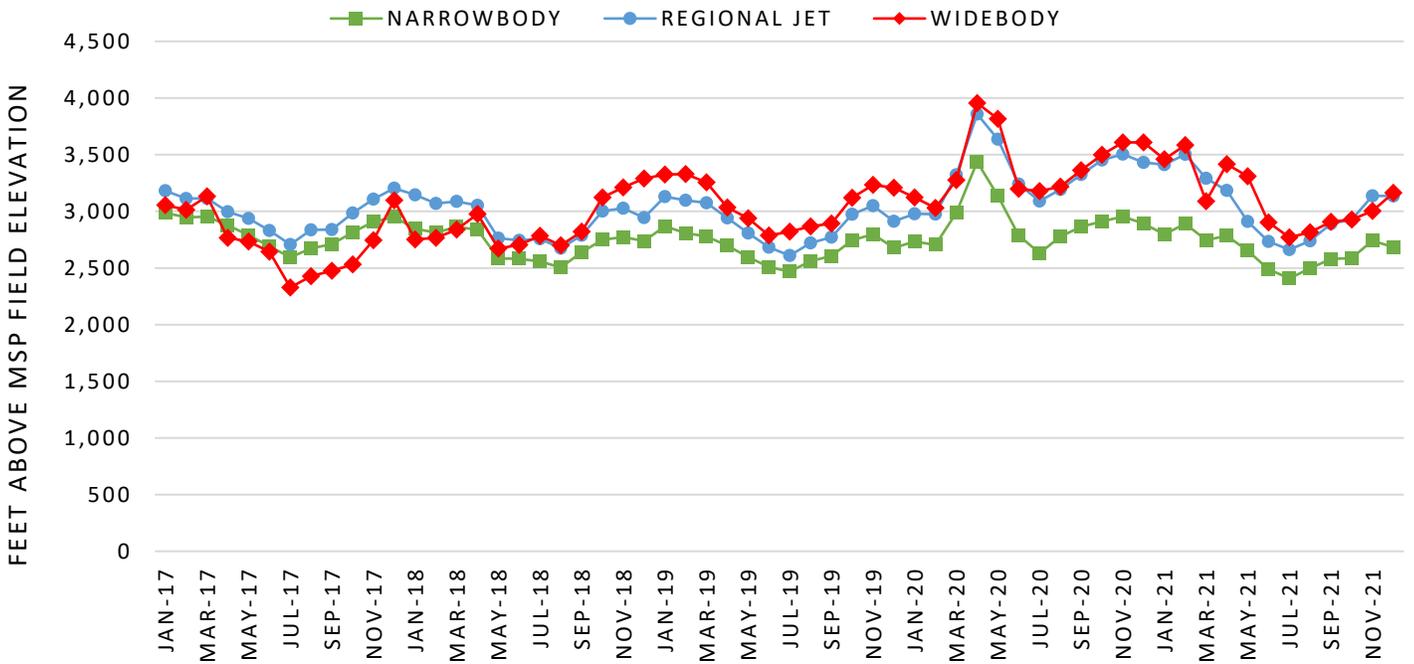
AVERAGE ALTITUDE FOR AIRCRAFT ARRIVING TO MSP



MEASUREMENT GATE IS FIVE NAUTICAL MILES FROM THE THRESHOLD OF THE ARRIVAL RUNWAY

MSP FLEET MIX REPORT

AVERAGE ALTITUDE FOR AIRCRAFT DEPARTING FROM MSP

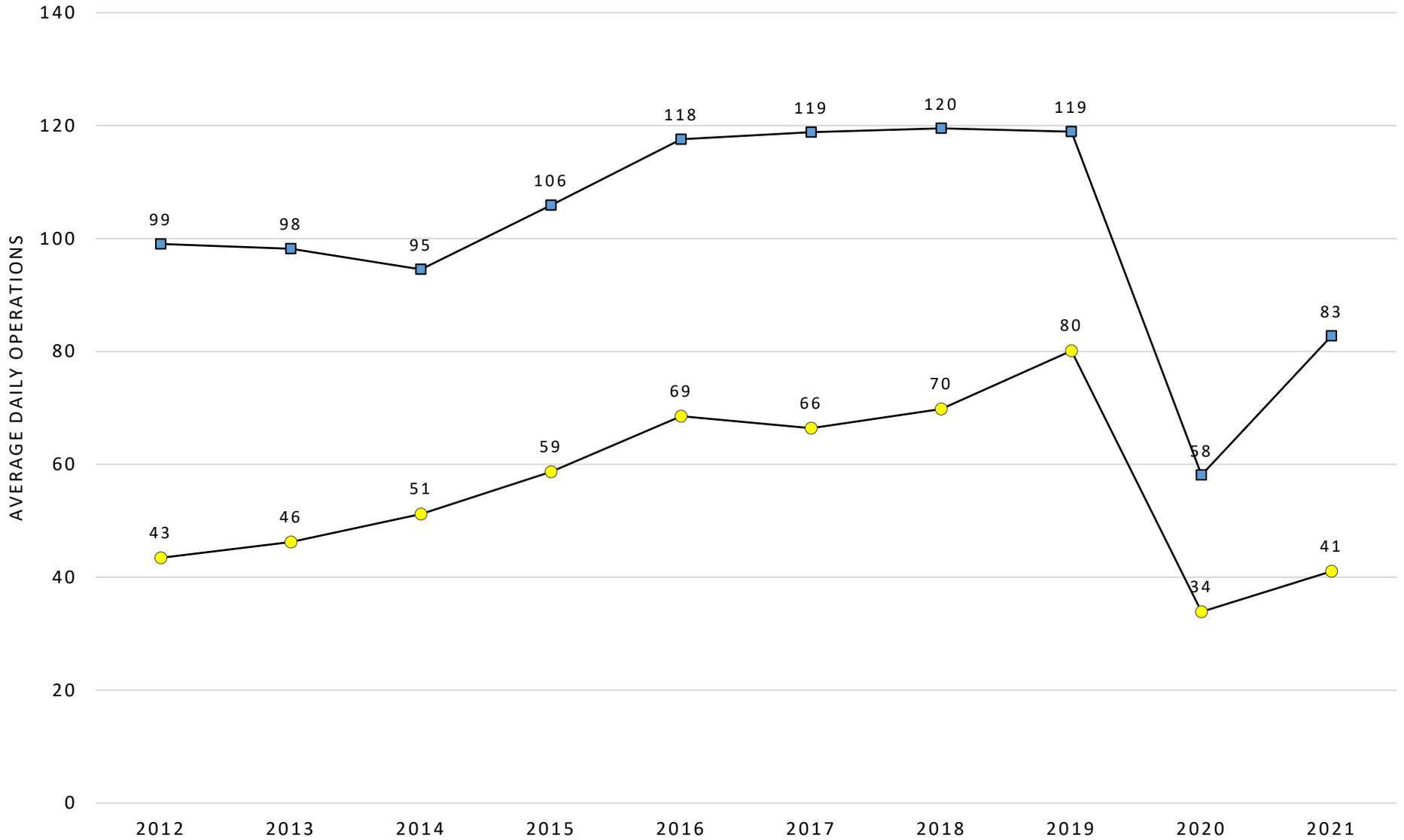


MEASUREMENT GATE IS AN ARC FIVE NAUTICAL MILES FROM THE START OF TAKEOFF ROLL

MSP NIGHTTIME OPERATIONS REPORT

AVERAGE DAILY NIGHTTIME OPERATIONS

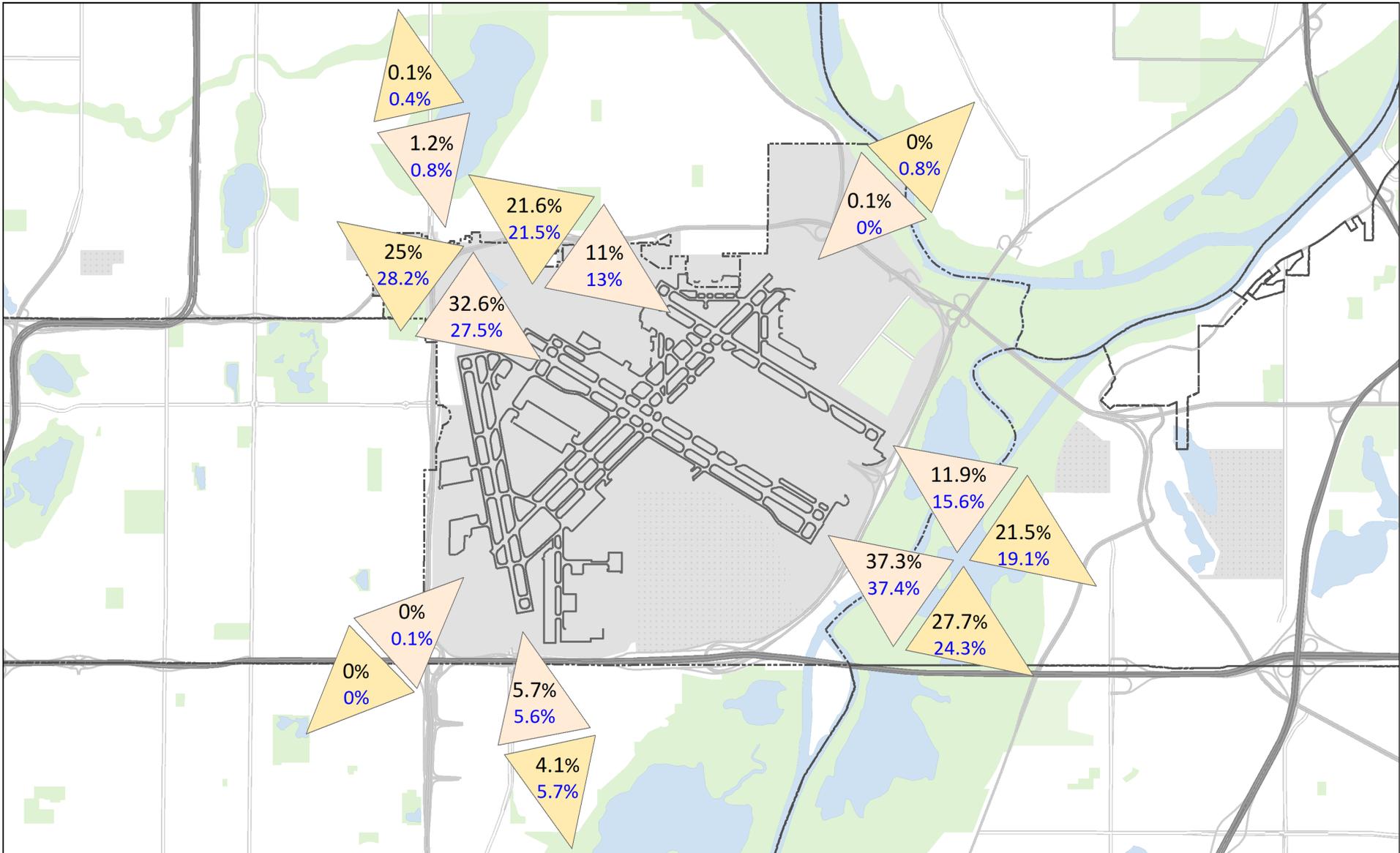
—●— 10:30 PM - 6:00 AM —■— 10:00 PM - 7:00 AM



MSP NIGHTTIME OPERATIONS REPORT
NIGHTTIME OPERATIONS BY RUNWAY
(10:30 PM – 6:00 AM)

RWY	ARR / DEP	OVERFLIGHT AREA	2021			2018 - 2020 AVERAGE		
			TOTAL NIGHT OPS	AVERAGE DAILY NIGHT OPS	%	TOTAL NIGHT OPS	AVERAGE DAILY NIGHT OPS	%
04	ARR	SO. RICHFIELD/BLOOMINGTON	0	0.0	0.0%	23	0.1	0.1%
12L	ARR	SO. MINNEAPOLIS/NO. RICHFIELD	1,174	3.2	11.0%	2,008	5.5	13.0%
12R	ARR	SO. MINNEAPOLIS/NO. RICHFIELD	3,473	9.5	32.6%	4,250	11.6	27.5%
17	ARR	SO. MINNEAPOLIS	133	0.4	1.2%	120	0.3	0.8%
22	ARR	ST. PAUL/HIGHLAND PARK	15	0.0	0.1%	0	0.0	0.0%
30L	ARR	EAGAN/MENDOTA HEIGHTS	3,981	10.9	37.3%	5,776	15.8	37.4%
30R	ARR	EAGAN/MENDOTA HEIGHTS	1,272	3.5	11.9%	2,414	6.6	15.6%
35	ARR	BLOOMINGTON/EAGAN	613	1.7	5.7%	865	2.4	5.6%
TOTAL NIGHTTIME ARRIVALS			10,661	29.2		15,456	42.3	
04	DEP	ST. PAUL/HIGHLAND PARK	2	0.0	0.0%	53	0.1	0.8%
12L	DEP	EAGAN/MENDOTA HEIGHTS	929	2.5	21.5%	1,319	3.6	19.1%
12R	DEP	EAGAN/MENDOTA HEIGHTS	1,199	3.3	27.7%	1,683	4.6	24.3%
17	DEP	BLOOMINGTON/EAGAN	176	0.5	4.1%	391	1.1	5.7%
22	DEP	SO. RICHFIELD/BLOOMINGTON	0	0.0	0.0%	1	0.0	0.0%
30L	DEP	SO. MINNEAPOLIS/NO. RICHFIELD	1,083	3.0	25.0%	1,953	5.3	28.2%
30R	DEP	SO. MINNEAPOLIS/NO. RICHFIELD	935	2.6	21.6%	1,485	4.1	21.5%
35	DEP	SO. MINNEAPOLIS	3	0.0	0.1%	31	0.1	0.4%
TOTAL NIGHTTIME DEPARTURES			4,327	11.9		6,916	18.8	
TOTAL NIGHTTIME OPERATIONS			14,988	41.1		22,372	61.1	

MSP NIGHTTIME OPERATIONS REPORT
NIGHTTIME OPERATIONS BY RUNWAY MAP
 (10:30 PM – 6:00 AM)



MSP NIGHTTIME OPERATIONS REPORT
NIGHTTIME OPERATIONS BY AIRLINE
 (TOP 15 BY COUNT)

2021	AIRLINE	ID	COUNT	PERCENT OF AIRLINE OPERATIONS OCCURRING AT NIGHT	PERCENT OF CONTRIBUTION TO NIGHTTIME TOTAL
	DELTA	DAL	3,597	3.6%	25.1%
	SUN COUNTRY	SCX	3,214	15.6%	22.4%
	SKYWEST AIRLINES	SKW	1,632	2.3%	11.4%
	UPS	UPS	1,271	33.2%	8.9%
	AMERICAN	AAL	1,219	15.9%	8.5%
	SOUTHWEST	SWA	957	10.3%	6.7%
	FEDEX	FDX	679	19.6%	4.7%
	GULF & CARIBBEAN CARGO	TSU	367	96.8%	2.6%
	ALASKA	ASA	283	21.8%	2.0%
	ENDEAVOR AIR	EDV	281	0.7%	2.0%
	ENVOY AIR	ENY	201	12.6%	1.4%
	UNITED	UAL	194	4.0%	1.4%
	SPIRIT	NKS	179	5.2%	1.2%
	FRONTIER AIRLINES	FFT	129	11.1%	0.9%
MESA AIRLINES	ASH	119	7.0%	0.8%	

2020	AIRLINE	ID	COUNT	PERCENT OF AIRLINE OPERATIONS OCCURRING AT NIGHT	PERCENT OF CONTRIBUTION TO NIGHTTIME TOTAL
	DELTA	DAL	2,688	3.6%	23.0%
	SUN COUNTRY	SCX	2,355	16.0%	20.1%
	UPS	UPS	1,359	38.8%	11.6%
	SKYWEST AIRLINES	SKW	1,203	2.2%	10.3%
	FEDEX	FDX	725	23.8%	6.2%
	SOUTHWEST	SWA	577	6.9%	4.9%
	AMERICAN	AAL	572	8.7%	4.9%
	SPIRIT	NKS	492	14.1%	4.2%
	GULF & CARIBBEAN CARGO	TSU	366	95.8%	3.1%
	REPUBLIC AIRLINES	RPA	355	7.2%	3.0%
	ALASKA	ASA	239	18.0%	2.0%
	ATLAS AIR (USA)	GTI	223	76.6%	1.9%
	FRONTIER AIRLINES	FFT	220	17.8%	1.9%
	UNITED	UAL	191	6.4%	1.6%
ENDEAVOR AIR	EDV	130	0.4%	1.1%	

*AIRLINE OPERATIONS OCCURRING AT NIGHT REPRESENTS THE PERCENTAGE OF RESPECTIVE AIRLINE SCHEDULE THAT OCCURS AT NIGHT

*CONTRIBUTION TO TOTAL IS RESPECTIVE AIRLINE CONTRIBUTIONS TO OVERALL MSP NIGHT OPERATIONS

MSP NIGHTTIME OPERATIONS REPORT
2021 NIGHTTIME OPERATIONS BY AIRCRAFT
 (TOP 15 BY COUNT)

AIRCRAFT CODE	DESCRIPTION	COUNT	NOISE LEVEL CERTIFICATION (EPNdB BELOW STAGE 3)
B738	BOEING 737-800	4,284	11.3 - 17.1
B757	BOEING 757-200	1,841	11.1 - 22.1
A321	AIRBUS INDUSTRIES A321	1,463	6.4 - 17
CRJ9	CANADAIR REGIONAL JET CRJ-900	1,243	14.5 - 17.6
B739	BOEING 737-900	970	10.9 - 16.1
E170	EMBRAER 170	693	9.2 - 16.8
B763	BOEING 767-300	661	4.4 - 22.6
CRJ2	CANADAIR REGIONAL JET CRJ-200	658	26.5 - 30.6
B7377	BOEING 737-700	643	11.6 - 19.8
A319	AIRBUS INDUSTRIES A319	614	12.9 - 22.2
A320	AIRBUS INDUSTRIES A320	483	12.1 - 21.2
A330	AIRBUS INDUSTRIES A330	287	11.7 - 21.1
A300	AIRBUS INDUSTRIES A300	137	4.3 - 17.7
B38M	BOEING 737-8 MAX	97	24.3 - 27.4
MD11	MCDONNELL DOUGLAS MD11	94	12.8 - 17.9

NOISE CERTIFICATION DATA SOURCE: EUROPEAN AVIATION SAFETY AGENCY

CUMULATIVE CERTIFICATED NOISE LEVELS REPRESENTED AS A RANGE BELOW STAGE 3 NOISE LEVELS TO ACCOUNT FOR MULTIPLE CERTIFICATION VARIABLES (WEIGHT, MODEL, ENGINE TYPE, AIRFRAME CONFIGURATION, ETC)

MSP NIGHTTIME OPERATIONS REPORT
2021 NIGHTTIME OPERATIONS BY ORIGIN AND DESTINATION
 (TOP 15 BY COUNT)

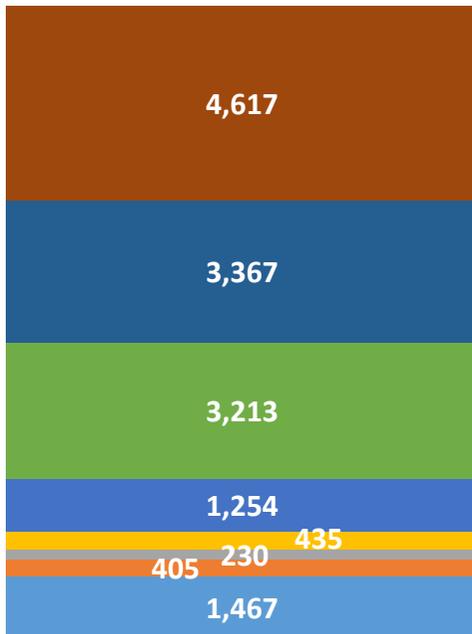
AIRPORT CODE	ORIGIN AIRPORT	COUNT
PHX	PHOENIX	1,049
LAS	LAS VEGAS	707
SEA	SEATTLE	618
DFW	DALLAS FORT WORTH	606
LAX	LOS ANGELES	471
ATL	ATLANTA	468
MEM	MEMPHIS	419
SDF	LOUISVILLE	388
DEN	DENVER	348
PDX	PORTLAND	339
SFO	SAN FRANCISCO	310
MCO	ORLANDO	303
MIA	MIAMI	283
CLT	CHARLOTTE	268
ORD	CHICAGO O'HARE	240

AIRPORT CODE	DESTINATION AIRPORT	COUNT
ATL	ATLANTA	357
FAR	FARGO	220
RAP	RAPID CITY	210
BIS	BISMARCK	201
DLH	DULUTH	199
TVF	THEIF RIVER FALLS REGIONAL	178
DEN	DENVER	177
FSD	SIOUX FALLS	176
GFK	GRAND FORKS	175
RST	ROCHESTER MN	164
LAS	LAS VEGAS	132
MIA	MIAMI	131
ONT	ONTARIO	124
PHX	PHOENIX	118
ORD	CHICAGO O'HARE	109

MSP NIGHTTIME OPERATIONS REPORT
NIGHTTIME OPERATIONS BY HOUR

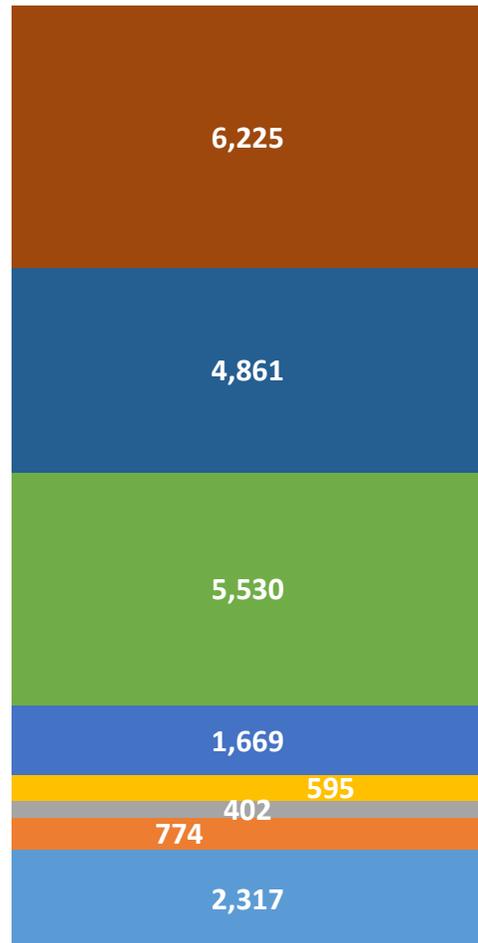
2021

0:00 1:00 2:00 3:00
 4:00 5:00 22:30 23:00



3-YEAR HISTORICAL AVERAGE

0:00 1:00 2:00 3:00
 4:00 5:00 22:30 23:00

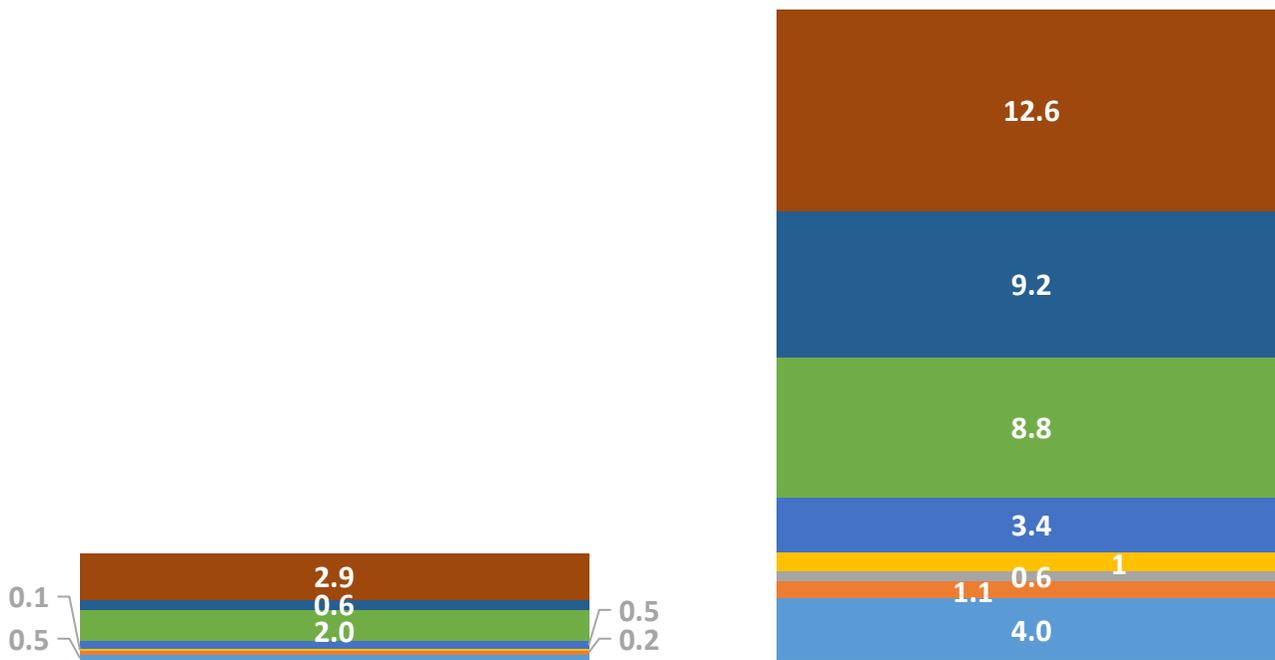


MSP NIGHTTIME OPERATIONS REPORT
SCHEDULED VERSUS ACTUAL OPERATIONS
 (AVERAGE BY HOUR)

DAILY SCHEDULED NIGHT OPERATIONS



DAILY ACTUAL NIGHT OPERATIONS



GENERAL AVIATION AND CHARTER AIRCRAFT OPERATORS DO NOT REPORT SCHEDULED OPERATIONS



Metropolitan Airports Commission

6040 28th Avenue South, Minneapolis, MN 55450

macnoise.com

This report is for informational purposes only.

MEMORANDUM

ITEM 4.5

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: WEBSITE UPDATE

DATE: January 5, 2022

The Metropolitan Airports Commission (MAC) recently launched a fully redesigned version of its MetroAirports.org website.

The website is the MAC's primary online channel for providing a wide variety of information related to its business operations and to engage the public with content tied to its seven airports.

The redesign includes increased use of photos, video and graphics, and optimized viewing on mobile devices.

Among the many components designed for easier navigation and interaction, the macnoise.com website's content is now consolidated within MetroAirports.org and found in the Community Connection dropdown menu under Aircraft Noise.

Staff will present information about the redesign at the January 19, 2022 NOC meeting.