



**MSP NOISE OVERSIGHT COMMITTEE**  
**FINAL MEETING MINUTES**  
Wednesday, January 18, 2023, at 1:30 PM  
MAC General Offices  
6040 28<sup>th</sup> Avenue South  
Minneapolis, MN 55450



**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, January 18, 2023, at the Metropolitan Airports Commission (MAC), General Offices, Lindbergh conference room, a teleconference option was also provided. **Chair Hart** called the meeting to order at 1:30 p.m. The following participated in the meeting:

**Representatives:** S. Alig, R. Barrette, S. Calvert, J. Hart, C. Haven, C. Jacobson, N. Jerome, P. Martin (virtual), A. Moos, L. Olson, C. Potter

**Staff:** B. Ryks, R. Fuhrmann, M. Killian, J. Lewis, K. Martin, D. Nelson, B. Peters, N. Pesky, M. Ross

**Others:** L. Moore – Bloomington, D. O’Leary – Sunfish Lake, H. Rand – Inver Grove Heights, G. Davis, Delta, D. Langer – FAA, S. Fortier – FAA, N. Rao - FAA, W. Eckenrode – FAA, E. Johnson – FAA, H. Wulf – FAA, J. Miniace - FAA, K. Archer – FAA, N. Benson, B. Raker – Eagan ARC, C. Kozlak – Met Council, J. Egan

A quorum of at least four Community and four Industry Representatives was established.

**Community Representatives:** Alig, Jacobson, Jerome, Martin, Olson

**Industry Representatives:** Barrette, Calvert, Haven, Hart, Moos, Potter

**1. Consent**

**1.1. Approval of November 16, 2022, Meeting Minutes**

There were no questions or revisions to the November 16, 2022, meeting minutes.

**1.2. Reports**

**1.2.1. Monthly Operations Reports: November and December 2022**

**Michele Ross, Technical Advisor**, provided the following November and December 2022 operations updates. She prefaced that 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>

<b>NOV</b>	<b>DEC</b>
• Total Operations: 23,886	• Total Operations: 24,020
• Nighttime Operations: 1,466	• Nighttime Operations: 1,676
• North/South/Mixed: 40/43/10 (%)	• North/South/Mixed: 39/49/4 (%)

- RUS (Priority 1/2/3/4): 37/15/0/47 (%)
  - RJ/Narrow/Wide: 31/65/4 (%)
  - Complaints: 7,127
  - Complaint locations: 163
  - Top 10 Households: 67%
  - Hours of events\*: 339
  - Number of events\*: 66,282
  - R17 procedure: 99.7%
  - EMH Corridor procedure: 96.3%
  - Crossing procedure day: 22.9%
  - Crossing procedure night: 40%
  - RUS: 52.7%
- RUS (Priority 1/2/3/4): 37/14/0/49 (%)
  - RJ/Narrow/Wide: 30/66/4 (%)
  - Complaints: 5,038
  - Complaint locations: 107
  - Top 10 Households: 72%
  - Hours of events\*: 291
  - Number of events\*: 60,847
  - R17 procedure: 99.7%
  - EMH Corridor procedure: 92.9%
  - Crossing procedure day: 24.4%
  - Crossing procedure night: 41%
  - RUS: 51%

\* Aircraft sound events above 65dB.

There were no questions or comments.

**Chair Hart** asked for a motion to approve the consent agenda item. **Member Alig** moved to approve the motion; **Member Barrette** seconded the motion. The motion passed by unanimous vote.

## 2. Public Comment Period

There were no public comments.

## 3. Business

There were no business items on the agenda.

## 4. Information

### 4.1. VOR Minimum Operational Network

**Nitin Rao, FAA Community Engagement Officer for the Great Lakes Regional Administrator's Office**, briefed the Committee on the Very High Frequency Omni-Directional Range (VOR) Minimum Operational Network (MON) program, explaining that the VOR is a ground-based navigation aid/electronic system that provides information for high and low altitude routes and airport instrument flight procedures. It is part of a conventional navigation procedure and is used in instrument flight procedures and navigation. The VOR has been maintained as a critical component of the National Airspace System (NAS) since the 1950s. A lot has changed since the 1950s with the advent of GPS and other efficiencies. The FAA nationwide has transitioned to Performance Based Navigation (PBN) in many places and continues to do so.

The FAA has approximately 1,000 VOR systems in place nationwide and the goal is to discontinue 306 systems by 2030. To date, 141 have been discontinued. The process for MSP will begin next week with a kick-off meeting to develop procedures that will replace current procedures that reference the VOR when it is decommissioned in 2025.

The FAA is retaining a limited network of VORs, called the VOR Minimal Operational Network (MON), to provide a basic conventional navigation service, within the contiguous United States, for operators to use if Global Navigation Satellite Systems (GNSS) becomes unavailable. In the

event that GNSS is unavailable, the VOR MON ensures that an aircraft at 5,000 feet will be able to navigate to an airport with ground-based procedures within 100 miles of their location. The MON will ensure that an aircraft will always be within 100 NM of an airport with an instrument approach that is not dependent on GPS. The FAA developed a national working group to identify a candidate list of VORs for discontinuance using relevant operational, safety, cost, and economic criteria. The VOR decommissioning work is part of the FAA's NextGen program where Global Positioning System (GPS) based Area Navigation (RNAV) and Performance Based Navigation (PBN) will replace the legacy ground-based system.

Decommissioning superfluous VORs will direct efforts for future investments in the National Airspace System (NAS) by reducing costs while increasing reliability and maintainability of the existing VOR-based airway navigation system. VORs are costly to maintain with many past their useful life. The maintenance cost for each one is over \$100,000. Given the proliferation of GPS equipment in aircraft and the wide use of this technology during flight procedures, much of the existing ground-based navigation network is redundant and unused during normal operations.

The projected timeline for the MSP VOR discontinuation will begin with the procedure kick-off meeting January 24-26, 2023, with the project expected to take between 24-36 months. Coordination and synchronization will be required between the FAA, MAC, NOC, Airlines, and the public throughout the project. The initial RNAV designs will take approximately 6-9 months with a goal to present preliminary designs to the NOC, for feedback, in Autumn, 2023.

MSP VOR procedure impacts may include the following: Standard Instrument Departure Procedures (SIDS) may be cancelled or amended. Standard Terminal Arrival Routes (STARs) may be cancelled or amended. Instrument Approach Procedures may be amended. Existing PBN procedures may be cancelled or amended.

It is early in the MSP VOR decommissioning process, but the FAA believes they will be able to develop vector-based RNAV departure procedures. The goals are to replicate current departure procedures to the north and to develop RNAV vector departures off the ground to the south to allow for more use of noise abatement departure procedures utilizing 12L, 12R over the industrial park as well as Runway 17 departure procedures over the Minnesota River.

**Mr. Rao** then offered to take questions.

**Member Olson** thanked Mr. Rao for his informative presentation and remarked that she was encouraged by it. She then referred to the last time MSP underwent an RNAV project (2010-2012) which largely resulted in negative experiences for the MSP communities. Based on the past negative experience there is a trust issue that needs to be kept front of mind though out this process. She emphasized that the public needs to be involved early and kept informed on a consistent basis. She requested a schedule of public engagements be made available and also requested a sixty-day comment period rather than the standard forty-five-day period.

**Member Olson** also requested that the project working group provide the public examples of comparable airports/communities that have successfully undergone VOR decommissioning and associated RNAV procedure changes.

**Member Olson** remarked that the project has been referred to as a VOR MON project, which may be confusing to the public, and recommended the project be titled in a way that is easily understood by the public and includes the planned RNAV procedure development.

**Mr. Rao** thanked Member Olson for her feedback and mentioned that the FAA would not know the size and scope of the project until technical staff have had a chance to come together to evaluate the project. He went on to offer his assurances that the FAA, working with the MAC, NOC and other stakeholders will ensure a robust communication plan with plenty of public comment opportunities.

**Member Jacobson** inquired as to who the stakeholders are and if there are plans for public presentations.

**Mr. Rao** defined the stakeholders as the MAC, the NOC, communities, and the airlines. He went on to say that the plan is to bring the preliminary findings to the NOC first to gather feedback, then revise the design based on the feedback. Once the design has been refined, it will be presented to the public. He mentioned that the MAC has indicated a desire to conduct community workshops, one to the north and one to the south.

**Member Alig** encouraged the workshop plans and said she would like to see good, digestible information to present to the public. She went on to ask if it is possible to vary the approach from the north to the south, using one runway.

**Eric Johnson, FAA Central Service Area Performance Navigation Based Co-lead for the National Air Traffic Controllers Association**, noted the goal is to try to maintain current MSP flight dispersion using various different vector headings off the ground. He mentioned that there is some discussion about looking into an RNAV departure over the river.

**Member Olson** brought forward a motion for MAC staff to reach out to our federal delegation to let them know that we are beginning the VOR decommissioning process and that we are looking forward to an effective, successful collaboration with the FAA. She requested that MAC staff draft something for the NOC to consider at a future meeting or another appropriate forum.

**Chair Hart** acknowledged the motion and asked for a second. **Member Alig** seconded the motion and the motion passed unanimously.

**Chair Hart** asked if the VOR is a current radio navigation function. He mentioned that the decommissioning of the VOR itself might not require any reengineering of the airspace around it because every current fix can be spotted with a GPS coordinate. He went on to say that it seems that are two different things, a redesign of airspace when it may not be necessary, could rename the fixes based on a GPS coordinate rather than a radio coordinate.

**Wayne Eckenrode, FAA Central Service Center Technical Advisor**, stated that the efforts are to replicate MSP departures to the north as much as possible. He said that they can place a GPS fix on a map in the same location as existing fixes; however, those are at the boundary. Currently, MSP departures have a radial and a Distance Measuring Equipment (DME) fix in an arc design. There are multiple facets and fixing just one piece of that would not achieve the desired results. There will be a lot of effort to replicate what MSP currently has, but it may not match exactly, so

FAA will look at also developing other procedures, like RNAV off the ground. Such changes may require portions of the airspace to slightly shift to keep aircraft safely protected.

**Mr. Eckenrode** continued by saying that the FAA believes there are some possibilities but until those are processed through and worked by criteria and development, tested in simulators and validated that they are flyable, safe, and contained in the airspace, FAA cannot commit to an outcome. FAA must acknowledge the possibility, not that it will, but there is potential. FAA does not want to rule something out prematurely and then end up having to do it. That would build further mistrust between the community and the FAA. Our goal is to develop as much as is capable to replicate what MSP has but also introduce new technology and ways to get there. That may cause, in many cases, unperceived differences but in other cases there may be some perceived difference, so FAA does not want to close the door on any possibilities.

**Member Jacobson** asked about procedures to the south.

**Mr. Johnson** stated that the FAA is planning to keep the departures to the south dispersed as they are currently. Air Traffic Control can vector departures off the ground then that aircraft can join an RNAV procedure later in flight. FAA will try to mimic departures with RNAV procedures.

**Member Alig** inquired about departure dispersals.

**Mr. Eckenrode** replied that to the north, the FAA is looking at dispersing flights. The headings to the south, FAA is currently evaluating RNAV off the ground with a procedure off Runway 17 to track over the Minnesota River to help with the existing noise abatement procedure. The FAA will look at RNAV routes off of Runway 12L and 12R to keep aircraft over the industrial area with some course divergence that will satisfy FAA safety requirements and still place aircraft where the communities would prefer them. There is a delicate balance between efficiency, safety, and aircraft capabilities, all of those elements play a role in the design phase. FAA understands that the industrial area to the south and over the riverbed is the goal and FAA will be designing as best they can within those parameters.

**Member Olson** asked if there are challenges with RNAV off the ground versus vectoring to RNAV off the same runway end.

**Mr. Eckenrode** responded that there is difficulty in going back and forth. The added separation that would be required would cause a loss of efficiency. There is also an increased risk in human failure for the controller in doing one operation and then a totally different operation with different requirements. It is very difficult to go back and forth on the same runway.

**Member Olson** asked if it's possible to vector to RNAV to the north and while using RNAV off the ground to the south, if desired.

**Mr. Johnson** replied that it is up to the controllers to decide in the work group meetings. It is too early to tell.

**Mr. Eckenrode** added that he believes that it may be possible to vector to the north and do RNAV off the ground to the south, but all of the considerations would need to be explored in order to validate that possibility.

**Member Olson** asked if departure tracks are separated by 20 degrees is there a chance that the tracks could be separated by 15 degrees.

**Mr. Eckenrode** said that there is an FAA standard which is much less than what MSP currently has, but just because it is possible to go closer does not mean that they should. The intent is to not reduce separation, but that doesn't mean that it may not happen through the design effort.

**Member Olson** remarked that this is an example of how communicating with the community early on can be helpful. When it comes to the lateral movement, she said she is not sure that a 15-degree separation would be a bad thing, and it is worth asking the question.

**Mr. Eckenrode** replied that FAA is open to all ideas and will work through them.

**Chair Hart** asked that the FAA please tread lightly and over communicate everything. He mentioned that last time RNAV procedures were attempted at MSP, communities were very upset and meetings were full of protesters. We don't want to see that again.

#### **4.2. 2022 Fleet Mix and Nighttime Operations Assessment**

**Michele Ross, Technical Advisor**, shared that MSP experienced stable growth in total operations from 1990 – 2004 when the airport peaked at more than 540,000 total takeoffs and landings. Airline mergers and economic disruptions in the following years reduced total operations. The airlines began the process of up gauging aircraft, flying more people on fewer flights using bigger aircraft. From 2014 – 2020, the airport had a period of stability in terms of total operations, while more and more passengers continued to use the facility each year. In late March 2020, when the pandemic began to impact the aviation sector, the airport was ahead of 2019 passenger and operations levels. The pandemic caused operations to decline about 40%, to just under 245,000 landings and takeoffs. The airport has slowly been recovering. When the final FAA Operations Network (OPSNET) data for 2022 becomes available, we expect final 2022 MSP operation totals be near to 309,000 operations, which would put the airport at 76% of 2019 levels and 2% above 2021.

While the number of operations remain below operation levels prior to the pandemic, the dynamically changing fleet has resulted in airlines being able to increase the number of passengers per flight.

Narrowbody aircraft have increased as percentage of total aircraft flown at MSP and can move around 100 more passengers per flight than the smaller regional jet aircraft depending on specific aircraft type. This upsized fleet is evident when looking at average passengers per flight in 2022. Average passengers per flight since March have exceeded every other month show – these levels have come a long way since the low of 14 average passengers per flight in April 2020.

In 2022, MSP continued to be dominated by airline carrier jet aircraft operations. 93% of all movements at MSP were in this category of aircraft. The remaining categories include 3.8% in general aviation jet aircraft, 2% in turboprop aircraft, 1% in piston driven aircraft.

In 2022, the split between regional jets, narrowbody jets and widebody jets was 35%/62%/3%. 2022 saw an increase in the number of narrowbody jet operations. The use of narrowbody aircraft has continued to increase since Fall of 2021.

In 2022, the most flown aircraft was the Boeing 737-800. That aircraft was followed by the Airbus A-321 and then the CRJ-900. This was a large swing as regional jet aircraft were consistently the most flown aircraft at MSP since 2004.

The amount of aircraft activity happening at night at MSP climbed last year. Operations during the federal definition of night, (10:00 PM and 7:00 AM) as well as activity during MSP nighttime (10:30 PM – 6:00 AM), were fairly stable from 2016 – 2019. Last year there were 54 total arrivals or departures on average every day between 10:30 PM and 6:00 AM, an increase from the previous year.

Those 54 average daily nighttime operations were split roughly 70%/30% between arrivals and departures. 76% of the arrivals used the south parallel runway 30L or 12R for arrival while 59% of the departures also used one of those runways.

Delta Air Lines had the highest contribution to the total nighttime traffic at MSP. While they contributed the most, a full 95% of their schedule was flown during the daytime hours in 2022. UPS flew 34% of its flights at night and FedEx flew 23% of its flights at night. The majority of night flights in 2022 happened in the 11:00 PM hour, 10:30 PM half-hour and 5:00 AM hour.

There were no questions or comments.

#### **4.3. 2022 Complaint Data Assessment**

**Michele Ross, Technical Advisor**, shared the total number of aircraft noise complaints and the total number of households filing complaints for the past three years. In 2021 there was a 21% increase in the number of households filing complaints and a 28% increase in the number of complaints filed compared to 2020. In 2022 there was a 12% decrease in the number of households filing complaints with 882 households filing complaints and a 19% decrease in the number of complaints received with 103,356 complaints.

Most of the new households that filed complaints in 2022 were in the City of Minneapolis. Of the total households, there were 293 new households that filed complaints last year which is about 33% of all households filing complaints. These households filed 5,702 complaints, which is about 6% of all complaints for the year.

Many cities had a decrease in the number of complaints filed in 2022 compared to 2021, with some exceptions. St. Paul had 63 more complaints, Burnsville had 2,523 more, and Bloomington had 1,000 more complaints filed compared to 2021. Most surrounding cities had a decrease in the number of households filing complaints with the exception of Edina (+7 households), Inver Grove Heights (+1 household) and St. Paul (+1 household).

While there is a visible concentration of complaints around the airport, proximity to the airport is not necessarily the primary factor contributing to the number of complaints submitted. Everyone's experience of aircraft noise and activity varies and how someone experiences noise can vary greatly from person to person.

The total number of operations for each complaint filed in 2021 was 2.35 and 2022 it was 3.0.

For most hours other than the 6 AM hour, the 2022 operations:complaints ratio is higher than in 2021 – meaning that in 2022 there were more operations for every complaint filed than in 2021.

In terms of when complaints were filed, the 7 AM hour had the most complaints with other peaks during the day and in the 9 PM hour.

Complaints can be filed either online or through our complaint hotline. Online, customers select the date, time, airport, and has the option of choosing one or all of the nine complaint descriptors provided (describe/name each one). When filing a complaint, one must select at least one of these nine reasons for the complaint.

When looking at aircraft categories, military operations generated the most complaints per number of operations with helicopters generating the second highest number of complaints per operations.

The CRJ-900, CRJ-200 and CRJ-700 are all quieter aircraft and have higher than average operation to complaint ratios – the CRJ-900 and the CRJ-700 had ratios of 4 operations per complaint and the CRJ-200 had a ratio of over 7 operations per complaint. Since the B737-800 and the A321 had the greatest number of operations – those each had over 2 operations per complaint last year.

In general, smaller, regional aircraft had higher than average ratios, so more operations with fewer complaints, narrowbody aircraft are typically at or just below the annual average and large, widebody aircraft were below average, with fewer operations generating more complaints.

In the top ten list of MSP flights that generated complaints from the most households, the top flight was a military fighter jet (F-35) aircraft that was onsite for an event – this type of aircraft does not typically operate at MSP.

The largest percentage of complaints were received while MSP operated in south and straight south flow – the airport operated in this configuration about 40% of 2022 but 47% of all complaints were received during this configuration.

There were no questions or comments.

#### **4.4. MSP Air Service Updates**

**Brian Peters, Director Air Service Development**, shared that MSP active routes are currently where they were at this time last year with 193 active and 21 suspended routes. The forecast for March is 195 then comfortably over 200 as we get into the Spring and Summer months. As for average daily departures, the first half of 2023 is about the same as 2022 with 358 average daily departures. Spring of this year will show slight growth. The larger aircraft will continue to grow with 10% above where we were in 2022 and about 90% recovered from 2019 levels.

Average daily departures by aircraft type show in 2019 we averaged 295 mainline aircraft and 206 regional jets, which decreased to 238 mainline in 2022 and 143 regional jets. In the first half of 2023 mainline will grow to 289, essentially the same as 2019, but continued reduction in regional jets will be down to 105 by the first half of 2023.

As for aircraft type, the B737-800 was the most common in 2022 which will likely change to A321 aircraft in 2023. There is significant reduction occurring in the CRJ-900 and CRJ-200 aircraft as they are replaced mostly by B717 aircraft and some A320 aircraft. The growth is occurring primarily with mainline aircraft and further reduction in regional jet aircraft, primarily in airlines such as American, Delta, United at MSP who typically operate those aircraft.



**Greg Davis, Delta Airlines**, started off by saying that Delta MSP Average daily departures forecast for 2023 tracks fairly close to 2021. By peak Summer Delta will be back to 80% of the pre-pandemic level in terms of departures.

The Haneda route will be restored by the end of March on an A330-900 which was previously flown on a B777 pre-pandemic. In the Atlantic we will bring back a daily flight for Amsterdam. Delta is taking on a Paris second flight that was previously flown by Air France. In Canada we are adding frequencies in Vancouver, Calgary, and Winnipeg. Domestically, new service is being added to Charleston, Jacksonville, Asheville, Burlington, Colorado Springs, Jackson Hole, Reno with increased frequencies to Auston, San Francisco, San Jose, Boston, Pittsburgh, San Antonio, Philadelphia, Chicago, Denver, Miami, Fort Lauderdale.

Delta's MSP scheduled operations show total seats mid-Summer of this year will be recovered about 95% even though our total operations are only at about 80% of pre-Covid due to about a 17% growth in the average gauge. This is a pretty significant increase over where Delta has been the past 5 years in MSP. That is the theme going forward, as we get new larger aircraft delivered into the fleet which are more fuel efficient, Delta will start phasing out more of the regional jets and some of the smaller and medium mainline aircraft in favor of the larger mainline aircraft.

Regarding the evolution of fleet mix, B757s are down 43%, CRJ-200s are down 27%, conversely, B737-800 and B737-900 departures will be up about 72%. The long-term plan is to eliminate all CRJ-200, though we don't have a timeline yet and B757s will be retired over the next several years. The A321NEO will be introduced in MSP in 2024.

**Chair Hart** remarked that it's good to see that the B757s, noisier aircraft, decreasing by 43% and the B737s, quieter aircraft, increasing by 72%.

**Casey Potter, Chief Pilot Sun Country Airlines**, stated that 2023 projections, through August, show Sun Country's spring schedule will be slightly below 2022. There will be 39 average daily departures in March, where there were 42 last year. The decrease is partially due to pilot staffing and training throughput for qualified First Officers.

Summer 2023 has a planned growth of 15 new destination: Atlantic City, Charlotte, Columbus, Colorado Springs, Detroit, Wilmington, JFK, Kansas City, Milwaukee, Omaha, Rapid City, Richmond, Louisville, St. Louis, Traverse City.

There were no questions or comments.

**Chair Hart** thanked everyone for their informative reports.

## 5. Announcements

### **NOC Winter Listening Session**

Wednesday, January 25, 2023 @ 6:00 pm

Location: MAC General Offices + Teams

### **March NOC Meeting**

Wednesday, March 15, 2023 @ 1:30 pm

Location: MAC General Offices + Teams

**6. Adjourn**

**Chair Hart** thanked the members of the Committee, NOC staff and residents in attendance. The meeting was adjourned at 3:16 pm.