



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
Paul Borgstrom	Chief Pilot Representative (Delta Air Lines)
Mary Brindle	At-Large Community Representative (Edina City Council)
Pam Dmytrenko	City of Richfield Representative (City of Richfield)
Chris Finlayson	At-Large Airport User Representative (Endeavor Air, Inc.)
Christine Koppen	Cargo Carrier Representative (United Parcel Service)
Todd Lawrence	Charter/Scheduled Operator Representative (Sun Country Airlines)
Patrick Martin	City of Bloomington Representative (Bloomington City Council)
Jay Miller	City of Mendota Heights Representative (Mendota Heights City Council)
Linea Palmisano	City of Minneapolis Representative (Minneapolis City Council)

MEETING AGENDA

November 20, 2019 at 6:30 PM

**MAC General Office Building, Lindbergh Conference Room
6040 28th Avenue South, Minneapolis, MN 55450**

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

***Note:** 6:00 to 6:30 PM – Committee Agenda Review Session

(NOC members, alternates, and at-large contacts only in the Coleman Conference Room)

1. 6:30 Review and Approval of September 18, 2019 Meeting Minutes
2. 6:30 Review of Monthly Operations Reports: September and October 2019
3. 6:40 Public Comment Period
4. 7:00 Eagan City Council Request
5. 7:30 Review of Fall MSP Listening Session
6. 7:35 Summary of Aviation-Related Research Update
7. 7:40 Review and Approval of 2020 NOC Work Plan, 2020 Meeting Dates, 2019 NOC Accomplishments
8. 7:50 Update on the FAA's Survey to Re-Evaluate Noise Measurement Methods
9. 7:55 Airline Policies and Procedures
10. 8:10 Review Residential Noise Mitigation Program Implementation Status
11. 8:20 Announcements
12. 8:30 Adjourn

Public Comment Notice: A public comment period of no more than 20 minutes will be added to each agenda. Members of the public wishing to address the NOC during this period are allotted 3 minutes to speak. Please complete and submit a speaker card prior to the start of the meeting or have arrangements made with your NOC representative prior to the meeting date.



MSP NOISE OVERSIGHT COMMITTEE

DRAFT MEETING MINUTES

Wednesday, 18th of September 2019 at 1:30 PM

MAC General Office
Lindbergh Conference Room

Call to Order

A regularly scheduled meeting of the MSP Noise Oversight Committee, having been duly called, was held Wednesday, 18th of September 2019, in the Lindbergh Conference Room at the MAC General Office building. Chair Miller called the meeting to order at 1:30 PM. The following were in attendance:

Representatives: D. Miller; B. Whalen; M. Brindle; L. Moore; L. Petschel; A. Moos; T. Cossalter; L. Palmisano; D. Lowman, L. Olson, P. Borgstrom, J. Malin,

Staff: D. Nelson; B. Juffer; A. Kolesar; J. Lewis; B. Rief; N. Ralston; R. Fuhrmann; B. Ryks; C. Leqve; M. Ross

Others: J. Spensley – SMAAC; A. Gladhill – Eagan; P. Lostetter – Eagan; C. Carrino – Edina; R. Goldser – Eagan; C. Diaz – Rep. Angie Craig; S. Henry – Eagan; R. Owen – Met. Council; L. Grotz – Edina; T. Mitchell – Eagan; H. Leslie – Eagan; T. Gladhill – Eagan; H. Rand – Inver Grove Heights; M. Doll – Burnsville; S. Fortier – FAA; R. MacPherson – FAA; D. Hughes – Eagan; D. O’Leary – Sunfish Lake; C. Jacobson – Mendota Heights; B. Hoffman – St. Louis Park; F. Lorenz – Edina

1) Review and Approval of July 17, 2019 Meeting Minutes

Chair Miller, Eagan, asked for approval of the July 2019 NOC minutes. The motion was moved by **Representative Palmisano, Minneapolis**, and seconded by **Representative Moos, UPS**. The motion passed unanimously, the minutes were approved.

2) Review of Monthly Operations Reports: July and August 2019

Brad Juffer, Technical Advisor, reviewed and presented the July and August 2019 MSP operations report.

July

- Total Operations: 37,132
- Nighttime Operations: 2,980
- North/South/Mixed: 27%/49%/17%
- Complaints: 16,082
- Complaint locations: 522
- Hours of aircraft sound events: 476
- R17 procedure: 99.6%
- EMH procedure: 97.1%
- Crossing procedure day: 33%
- Crossing procedure night: 49%
- RUS High-Priority Runway Use: 54.7%

August

- Total Operations: 37,757
- Nighttime Operations: 2,774
- North/South/Mixed: 35%/45%/14%
- Complaints: 19,592
- Complaint locations: 583
- Hours of aircraft sound events: 506
- R17 procedure: 99.8%
- EMH procedure: 97.3%
- Crossing procedure day: 34%
- Crossing procedure night: 38%
- RUS High-Priority Runway Use: 54.2%

3) Public Comment Period

Chair Miller, Eagan, introduced the public comment period protocol and announced there were six speakers who submitted comment cards.

Jim Spensley, South Metro Airport Action Council, submitted and commented on an email previously sent to the Noise Oversight Committee. **Spensley** made comments regarding the MSP Long-Term Comprehensive Plan, categorical exemptions to environmental reviews, and process.

Ron Goldser, City of Eagan, submitted comments regarding aircraft elevation and turns when taking off and landing. **Goldser** referenced the Eagan City Council request to be later addressed at this meeting.

Paul Lostetter, City of Eagan, submitted comments regarding his strong support of the letter the city of Eagan submitted to the NOC. **Lostetter** also made comments regarding noise pollution and Runway 17.

Steve Henry, City of Eagan, submitted comments regarding frequency of aircraft flights over his home. **Henry** made comments regarding the noise impacts on daily life and adjustments to flight patterns. **Henry** also voiced his support for the letter the Eagan City Council submitted to the NOC.

Ted Gladhill, City of Eagan, submitted comments regarding the creation of Runway 17 and flight patterns as a result. **Gladhill** expressed concerns with noise pollution and its impact on the lives of city residents. **Gladhill** mentioned the letter the Eagan City Council submitted to the NOC.

David Hughes, City Eagan, purchased his home in 2009; and with CRO, the flight patterns repeatedly go over his home. **Hughes** strongly supports the Eagan City Council letter submitted to the NOC.

4) Guest Speaker: MAC/MSP Update

Brian Ryks, MAC Executive Director and CEO, gave an overview of the MAC, when it was created as a public corporation, the legislative purpose, and its funding coming from rents and fees-not taxpayer dollars. A map of the seven-county metro area was shown with locations of the seven airports MAC owns and operates. **Ryks** went on to review the Board of Commission and introduce the new Chair as well as new Commissioners.

Ryks presented the MAC strategic plan as well as the focus areas and how it connects to the mission and vision of the MAC. This leads directly into the goal of the “one-journey” MSP experience and the elements of that model. Currently, parking at MSP is full on multiple days of the week and there will be a new parking and reservation process with a soft open in October 2019. The new silver parking ramp will open in March 2020. There are changes occurring to the front of house in the Terminal Buildings and at concessions that work with data driven elements to enhance the customer experience. Delta is implementing facial recognition technology to ease and quicken the boarding process and is an optional service.

Ryks reviewed MSP passenger levels; in 2018 there were over 38 million passengers served. In conjunction with that, aircraft operations are decreasing. In 2018 there were just over 407,000 operations; this number is comparable to numbers of the 1990s. Eleven airlines have been added since January 2017 and that led to 45 additional routes.

Ryks went on to discuss sustainability measures and highlighted that to date, the MAC has invested nearly \$500 million in mitigating more than 15,000 homes. The MAC and MSP are making efforts to reduce their carbon footprint and has achieved level 2 accreditation through the Airport Carbon Accreditation program.

MSP reimagined has led to the development of a hotel on-site with a skyway directly leading to Terminal 1-Lindbergh (T1). Ticketing and baggage claim areas of T1 are being remodeled, and 80 new restaurants and shops will be introduced. Major improvements are occurring at Concourse G, including new restrooms, a Delta Sky Club, and a sky-lit rotunda.

Ryks reviewed the economic impacts of MSP airport and mentioned several awards MSP received for excellence, one being voted best airport in North America for three years in a row: 2016-2018.

5) Eagan City Council Request

Brad Juffer, Technical Advisor, reviewed the request from the Eagan City Council. The Eagan Airport Relations Commission has monitored runway use changes as a result of Converging Runway Operations (CRO), specifically MSP departure activity from Runway 17 and Runway 12R. As a result the City requested the NOC add an evaluation of Runway 17 Departure activity to the 2019 NOC Work Plan.

The request is broken in to 3 main concerns expressed in the Eagan letter and includes requested adjustments to address each concern:

1. Use of Runway 17 has increased as South Flow is utilized at a higher rate now than in pre-CRO times. Additionally, the Runway Use System (RUS) would prioritize departures on 12R/12L above Runway 17.
 - Consider the feasibility to direct departures from MSP with initial fixes of COULT or ZMBRO to use Runway 12R instead of Runway 17
 - Vary the use of Runway 17 departure headings to limit the frequency of overflights in neighborhoods
2. More frequent use of the 120, 144, and 155-degree departure headings caused an increase in noise in residential Eagan.
 - Implement an eastbound turn restriction off Runway 17 similar to the westbound 2.5-mile river departure procedure
 - Review the feasibility of a new southerly fix located approximately 6.6 miles at the intersection of 35E and Cedar Avenue to which all or a portion of Runway 17 departures could be directed to prior to making their eastbound turn
 - Better fan aircraft by increasing the use of the 180-degree heading to more equitably distribute operations currently using the 120, 140, and 155-degree headings
 - Runway 17 departures use the 2.5-mile river departure procedure to gain altitude before making an easterly turn to their destination
3. Departures on Runway 12R that are traveling to westbound destinations overfly Eagan after departing the corridor.
 - Move Runway 12R and 12L westbound departures to Runway 17 to take advantage of the 2.5-mile river departure procedure. In particular, consider this change during the nighttime given this practice already occurs during the daytime.
 - Could westbound departures from Runway 12R turn immediately after departure and follow the river valley to the southwest without impacting residents living in northern Eagan?
 - Could departures in the corridor be required to reach a certain altitude (e.g. 5000 feet) before initiating their westbound turn?

At this point Juffer invited Rebecca MacPherson, FAA, to present to the NOC regarding FAA framework for this type of request.

Rebecca MacPherson, FAA, introduced the FAA's process approach for "Amending Instrument Departure Procedures Through Collaboration." In a series of six steps, MacPherson explained the process for a community to create a proposal with the airport operator, obtain endorsement, and potentially determine new procedures with the FAA after an appropriate feasibility and safety assessment. The full process is in the meeting presentation notes.

Juffer introduced the action requested:

DIRECT MAC STAFF TO REVIEW PROPOSALS CONTAINED IN THE LETTER FROM THE CITY OF EAGAN AND REPORT BACK TO THE NOISE OVERSIGHT COMMITTEE AT THE NOVEMBER MEETING

Representative Petschel, Mendota Heights, made the requested action, and offered a reminder that the NOC has been successful in making procedure changes in the past because of resident input and the NOC.

Representative Lowman, City of Bloomington, asked if this was a new process. **MacPherson** responded that it's not new but maybe publicizing the process has not been effective. **Lowman** asked how many requests the FAA receives annually like this one and **MacPherson** responded that data was tracked locally. **Lowman** followed up with what have they learned from going through this process and **MacPherson** stated that early analysis of proposals is crucial. She then referenced a 2014 proposal at O'Hare that was rejected after approval due to carriers reporting flight patterns in the new proposal to be illegal. With a motion and a second, the request was passed unanimously.

6) Converging Runway Operations

Brad Juffer, Technical Advisor, reminded the group that at the last meeting, the NOC directed a letter to FAA for an update on the 2016 resolution to evaluate CRO. The FAA responded and made the letter available, it's also available on the MACnoise website. Juffer introduced Rebecca MacPherson, FAA, and she provided an update.

MacPherson stated that a few days prior to this meeting she received a copy of the draft screening report. This report indicated which level of environmental review was appropriate and determined that since the changes in operations occurred throughout the airport. As a result of CRO, based on a preliminary noise screen, the expected level of environmental review would be a categorical exclusion (CATEX). Categorical exclusions (CATEX) do not require community input, however the FAA decided to use a CATEX draft that will be subject to public input.

Juffer clarified the items that the FAA wasn't including in the draft CATEX, but requested in the NOC resolution, will be components of the on-going efforts related to the MSP Long-Term Comprehensive plan. This includes forecast runway use projections and an airport capacity study.

Representative Olson asked if the draft screening report would be available to the NOC for review and MacPherson stated it would be. **Olson** then asked if the 1.5 decibel increase was being evaluated and MacPherson responded that increases and decreases were evaluated.

7) Fort Snelling Upper Post Redevelopment

Dana Nelson, Director-Stakeholder Engagement, stated there is a site owned by the MN Department of Natural Resources (DNR) and for 50 years it has been a local and national historic landmark. In 2018 redevelopment of the area was defined as a strategic priority and financial pathways were created for a project to proceed. The DNR negotiated a 99-year lease with

Dominium to develop up to 215 units of moderate-income housing with a preference to military veterans. About 20 proposed units are in the 70-75 DNL noise level and the MAC is involved to share concerns about aircraft noise impacts. The MAC will be submitting comment on the DNR-prepared Environmental Assessment Worksheet (EAW), which may be found here: <https://www.dnr.state.mn.us/input/environmentalreview/upperpost/index.html>

8) MSP Long-Term Plan Forecast, Neil Ralston, Airport Planner, reviewed the aviation activity forecast process and included the objective, goals, and insight into forecast development. The forecast uses 2018 as a baseline and the forecast extends to 2040, utilizing both high and low scenarios. **Ralston** reviewed enplaned passenger forecast and the ways to accommodate new passenger growth. He then discussed other forecast elements: cargo, military activity, and MSP general aviation-this all leads to total operations forecasts. **Ralston** reviewed the current fleet mix and the number of seats on the aircraft included in the operations calculations. Utilizing that data, he was able to project a future fleet mix with average seat capacity.

9) ~~Airline Policies and Procedures~~ (delayed until November meeting)

10) Review of the Summer Listening Session

Brad Juffer, Technical Advisor, reviewed that the Summer MSP Listening Session was in the City of Edina on Wednesday, July 24, 2019. 20 residents were in attendance as well as MAC staff, FAA staff. Additionally NOC Members, Mary Brindle and Loren Olson attended as well as Edina City Manager, Scott Neal, and MAC Commissioner, Katie Clark Sieben. Items at the meeting focused on Runway 30L departures, nighttime operations, the DNL metric, the MAC's system of RMTs, and Delta's aircraft fleet.

As a result of resident feedback received at this meeting, **Juffer** requested to add an evaluation of parallel runway use at night to the 2020 NOC work plan. **Representative Petschel, Mendota Heights,** made the motion and it was seconded by **Representative Lowman, City of Bloomington,** and it was passed unanimously.

11) 2020 NOC Work Plan

Brad Juffer, Technical Advisor, stated this item was informational only and is available for review in the agenda packet.

Juffer mentioned the Fall MSP Listening Session is scheduled for October and intended to solicit potential items to add to the 2020 work plan as it's a working session with neighbors.

12) Announcements

Fall listening Session

Wednesday, October 23, 2019

Mac General Office-Lindbergh Conference Room

Experience MSP Fair & Forum

Wednesday, October 2, 2019 4-8pm

Mall of America Executive Center

Level 4-East

13) Adjourn

A motion to adjourn was requested by **Chair Miller, Eagan**, moved by **Representative, Petschel, Mendota Heights** and seconded by **Representative Olson, Minneapolis**. The meeting adjourned at 3:57 pm.

The next meeting of the NOC is scheduled for **Wednesday, 20th of November 2019 at 6:30 PM**.

****Please note the time, this is a NIGHT meeting.**

Respectfully Submitted,
Amie Kolesar, Recording Secretary

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Michele Ross, Assistant Manager, Community Relations

SUBJECT: **REVIEW OF MSP MONTHLY OPERATIONS REPORTS: SEPTEMBER AND OCTOBER 2019**

DATE: November 6, 2019

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://www.macenvironment.org/reports/>.

At the November NOC meeting, MAC staff will provide a summary of this information for September and October 2019. To view these summary reports prior to the meeting, visit the "Archive" section at the link above.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **PUBLIC COMMENT PERIOD**

DATE: November 6, 2019

Members of the public are welcome to attend NOC meetings. During each meeting, a public comment period of no more than 20 minutes is added to each agenda. Individuals choosing to speak during the public comment period may do so by submitting a speaker card prior to the meeting start time or by contacting their NOC representative prior to the meeting date. Speaker cards will be made available at the sign-in table before each meeting. Submit completed speaker cards to the NOC Secretary or to any NOC member before the meeting begins.

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.
- When called upon to speak, speak clearly into the microphone, 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 calling 612-726-8100, or send an email to nocsecretary@mspmac.org.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **EAGAN CITY COUNCIL REQUEST**

DATE: November 6, 2019

In September 2019, the Eagan City Council sent a letter to the Noise Oversight Committee requesting the NOC endorse recommendations crafted 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. A copy of the letter is attached to this memo.



September 3, 2019

Metropolitan Airports Committee
Attn: Noise Oversight Committee (NOC)
6040 S. 28th Avenue
Minneapolis, MN 55450

Dear Members of the Noise Oversight Committee:

As you are well aware, the noise environment in the City of Eagan has changed dramatically since the implementation of Converging Runway Operations (CRO) at MSP Airport in 2015. The airport more routinely operates in a south flow, resulting in thousands of additional flights over residential areas of Eagan.

Over the past several months, the Eagan Airport Relations Commission (ARC), a volunteer advisory commission to the City Council, has been working in partnership with Metropolitan Airports Commission (MAC) staff to review the outcomes of the NOC-initiated Runway 17 Departure Study. The study clearly demonstrated the increased noise impact to Eagan since CRO went into effect. In response to the data and with input from MAC staff and Eagan residents, the ARC has developed a series of requests and inquiries of the FAA pertaining to operational changes at MSP Airport. The ARC is mindful of not moving noise from one community or neighborhood to another, and thus the suggestions attempt to keep planes over more compatible land uses and within the City of Eagan, when appropriate.

The City of Eagan respectfully asks the NOC to consider and forward the following recommendations and inquiries to the MAC Commission of the whole. Pending NOC and MAC review, the City asks that the request be forwarded to the FAA for their consideration. The requests are being made at this time to coincide with the recent commitment of the FAA to conduct environmental analysis of the impacts of CRO. The City of Eagan is grateful for the FAA's renewed presence and communication efforts with the NOC. As such, the City of Eagan requests that the FAA respond both in writing and engage in a dialogue with the NOC when responding to the City's requests.

Operational Requests and Inquiries of the FAA

Issue #1: Use of Runway 17 for departures has increased dramatically since the implementation of CRO, including more frequent use of the south flow configuration. The Runway Use System (RUS) calls for Runway 12R and 12L as the first priority for departures. However, Runway 17 is the most frequently used runway for southerly departures in contradiction to the RUS.

Requests/Inquiries:

- Consider the feasibility to direct departures from MSP with initial fixes of COULT or ZMBRO to use Runway 12R instead of Runway 17.
- Vary the use of Runway 17 departure headings to limit the frequency of overflights in neighborhoods

Issue #2: More frequent use of the 120, 140, and 155-degree departure headings off Runway 17 has caused a significant increase in the noise burden over residential areas of Eagan.

Requests/Inquiries:

- Implement an eastbound turn restriction off Runway 17 similar to the westbound 2.5-mile river departure procedure.
- Review the feasibility of a new southerly fix located approximately 6.6 miles at the intersection of 35E and Cedar Avenue to which all or a portion of Runway 17 departures could be directed to prior to making their eastbound turn.
- Better fan aircraft by increasing the use of the 180-degree heading to more equitably distribute operations currently using the 120, 140, and 155-degree headings.
- Could all Runway 17 departures use the 2.5-mile river departure procedure to gain altitude before making an easterly turn to their destination?

Issue #3: Westbound departures on Runway 12R are making sweeping, westerly turns over predominantly residential areas.

Requests/Inquiries:

- Move Runway 12R and 12L westbound departures to Runway 17 to take advantage of the 2.5-mile river departure procedure. In particular, consider this change during the nighttime given this practice already occurs during the daytime.
 - Or, as an alternative, could westbound departures from Runway 12R turn immediately after departure and follow the river valley to the southwest without impacting residents living in northern Eagan?
- Could departures in the corridor be required to reach a certain altitude (e.g. 5000 feet) before initiating their westbound turn?

As the FAA reviews the above requests and inquires, we ask that they consider not only whether these changes could be made 24-hours a day, but also look at opportunities for improvements during certain times of the day when demand allows (i.e. daytime-only, nighttime-only, low demand periods, etc.).

On behalf of the City of Eagan, we thank the NOC, along with the MAC and FAA in advance, for considering the City's requests and inquiries. We appreciate the spirit of collaboration. Eagan greatly values from being a neighbor to MSP Airport and we are hopeful that the suggested modifications will be seriously considered by the FAA to reduce the noise burden on our community.

Sincerely,

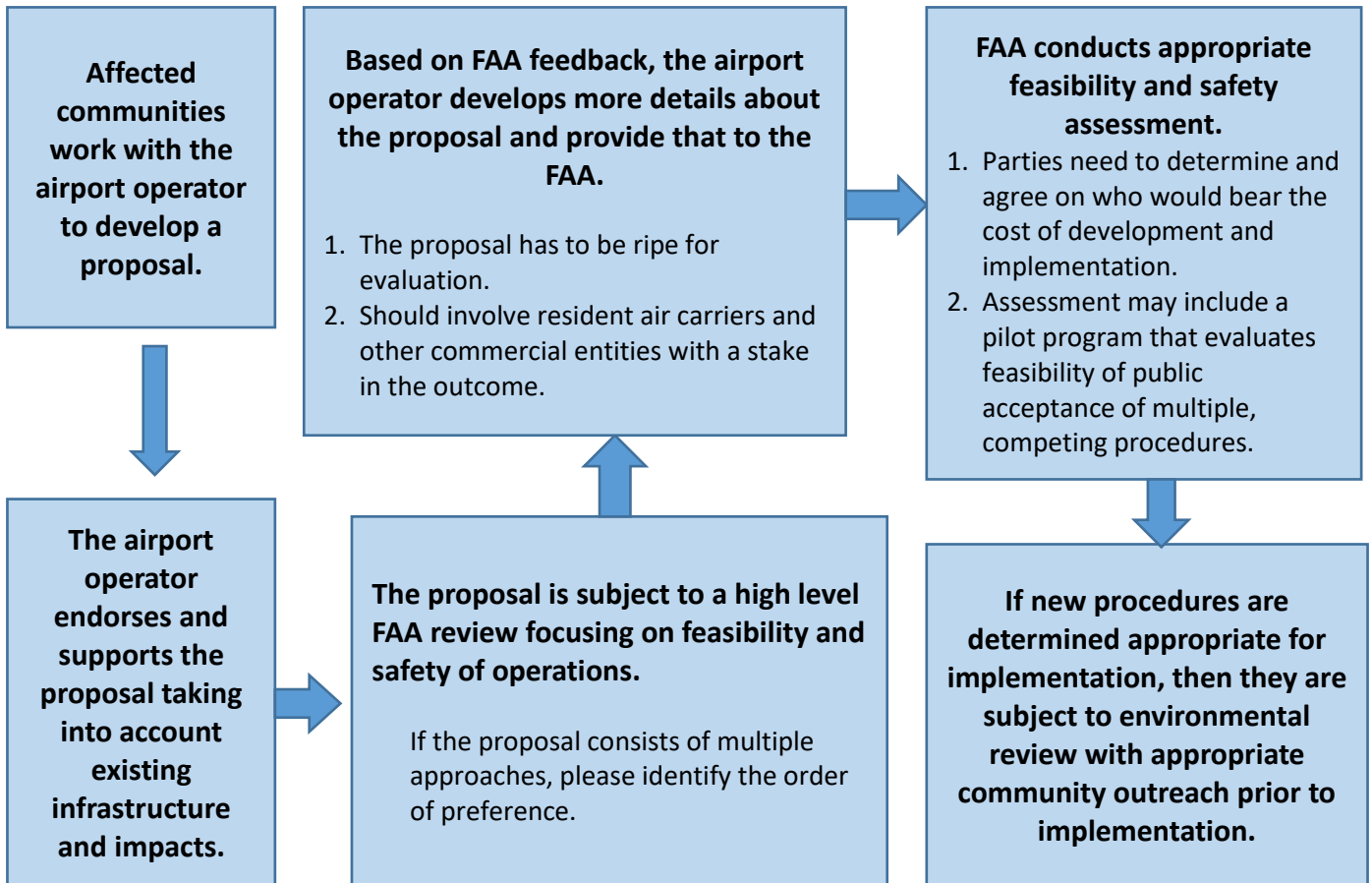
A handwritten signature in black ink that reads "Mike Maguire". The signature is written in a cursive, slightly slanted style.

Mike Maguire
Mayor

cc: U.S. Congresswoman Angie Craig
U.S. Senator Amy Klobuchar
U.S. Senator Tina Smith
Eagan Airport Relations Commission
Brad Juffer, MAC Manager of Community Relations

As outlined by Federal Aviation Administration (FAA) staff at the NOC meeting in September, the process for amending departure procedures has many steps. A representation of that process as presented by the FAA is included below.

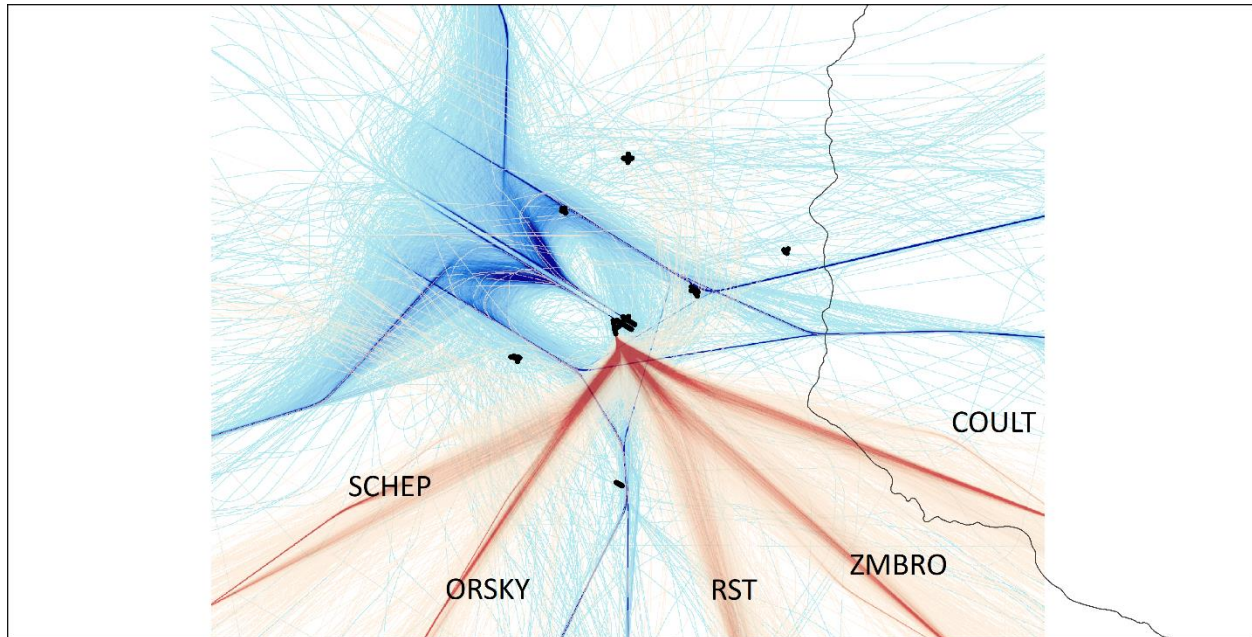
Amending Instrument Departure Procedures Through Collaboration – A Process Approach



The letter is organized into 3 issues with recommendations and inquiries, listed below.

1A – Direct departures with initial fixes of COULT or ZMBRO to use Runway 12R instead of Runway 17

Aircraft with initial fixes of COULT and ZMBRO that depart Runway 17 typically fly over central Eagan. These fixes are located southeast of MSP. Aircraft that have this routing are often outbound to easterly destinations from New York to Atlanta. The Runway Use System (RUS) prioritizes departures to Runways 12L and 12R before above Runway 17. This request has been made to review the feasibility of directing departures to a RUS Priority 1 runway before a RUS Priority 2 Runway.



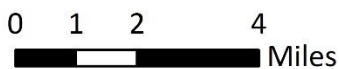
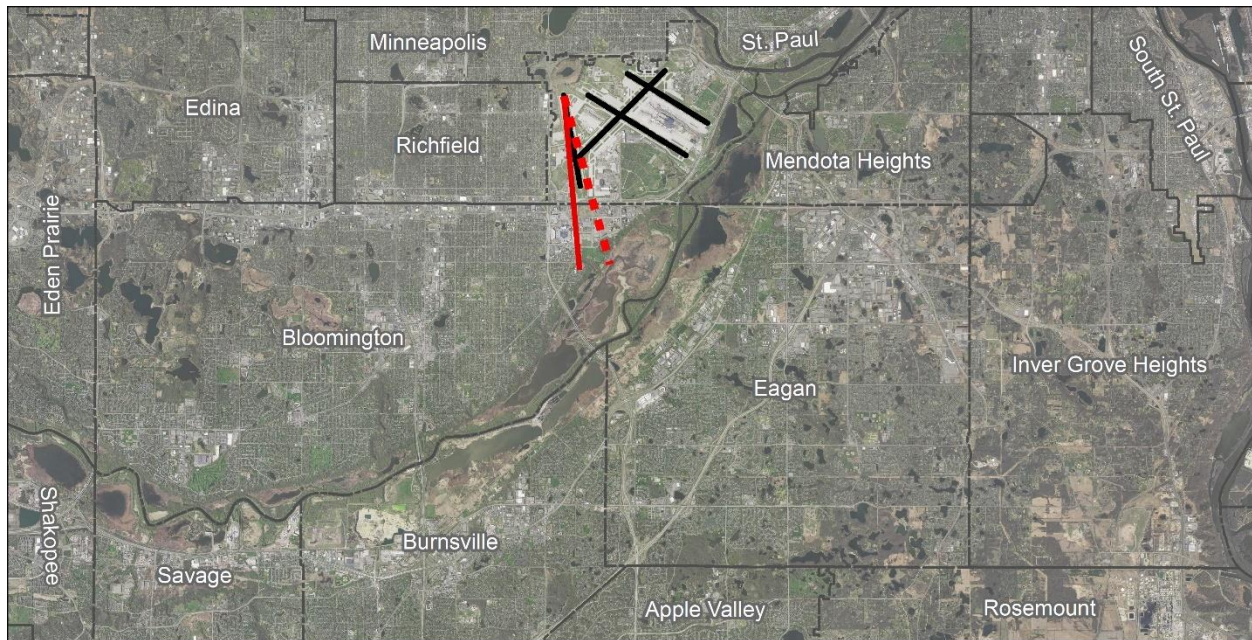
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Miles

1B – Vary the use of Runway 17 departure headings to limit the frequency of overflights in neighborhoods

Aircraft that depart MSP are assigned headings that will direct an aircraft to their initial fix and ultimately to their final destination. The MSP airspace has a number of imaginary departure gates that Air Traffic Controllers (ATC) uses to separate departure streams of traffic from incoming arrival streams of traffic. Aircraft departing Runway 17 normally have one of five fixes that serve as a waypoint on their departure route. While weather, aircraft performance, pilot control and ATC direction naturally disperse aircraft, there are neighborhoods that receive more overflights than others. The Runway 17 Departure Operations Report found that the aircraft flying a path denoted by a 210° heading was the most frequent departure track from Runway 17. The 140°, 120° and 155° were next in order of use and collectively accounted for 50% of the departures from Runway 17 in 2018.

2A – Implement an eastbound turn restriction off Runway 17 similar to the westbound 2.5-mile river departure procedure

From the time Runway 17-35 was opened in 2005, MSP has maintained a Runway 17 Departure Procedure. This noise abatement procedure directs aircraft with westbound routings to fly runway heading until reaching the Minnesota River. This procedure design limits overflights of residential neighborhoods in Bloomington. The procedure was evaluated in the 2003 *Environmental Assessment of the Implementation of a Departure Procedure off of Runway 17 (EA)*. Subsequently, the FAA issued a finding of no significant impact and record of decision for the procedure. The EA also states, “The Proposed Action is to direct aircraft that have initial departure headings east of runway heading (headings ranging from 95° to 170°) to initiate their turns as soon as possible when departing Runway. This recommendation was made due to the fact that there is no one flight path considered ‘better’ than another when departing to the southeast over the existing residentially developed areas. This is consistent with the FEIS documentation for Runway 17.”

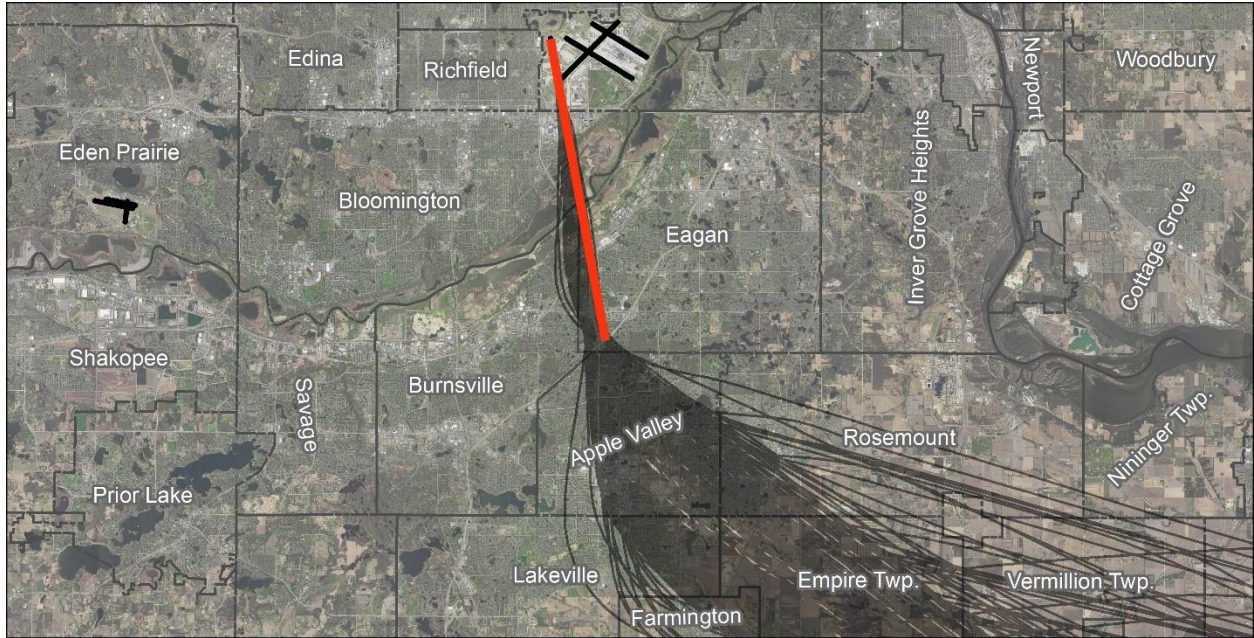


- Hypothetical Runway 17 Eastbound Gate
- Runway 17 Westbound Gate

2B – Review the feasibility of a new fix at the intersection of 35E and Cedar Avenue to which all or a portion of Runway 17 departures be directed prior to making their eastbound turn

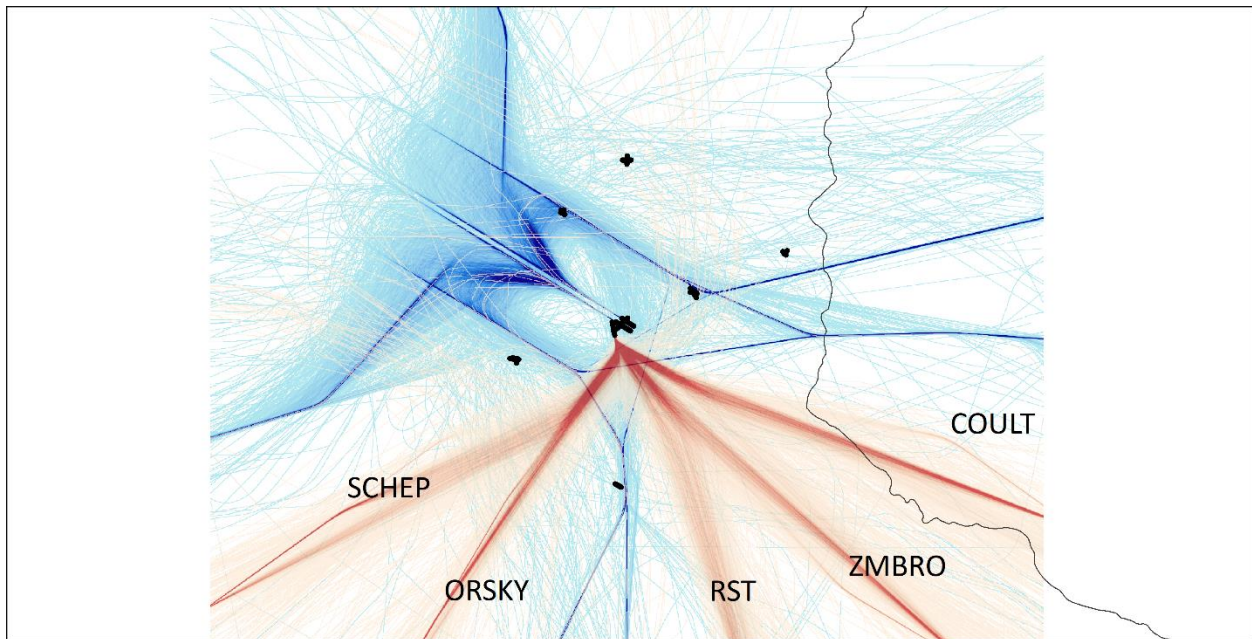
The 2003 EA evaluated several alternatives and determined that aircraft with eastbound destinations do not fly runway heading after departure. Instead, those departures are directed to turn left as assigned by ATC after the aircraft has enough altitude to do so.

The FAA does not direct aircraft that depart from any runway at MSP to fly directly to a point or a fix on the ground. Rather, aircraft are assigned a heading that points the aircraft in a direction that aligns the flight with their initial fix. This departure vector system naturally disperses flight tracks due to variables identified in Request 1B.



2C – Better fan aircraft by increasing the use of the 180° heading currently using the 120, 140, and 155-degree headings

A number of headings are used for departures from Runway 17 that take advantage of airspace south of MSP. There are five imaginary departure gates to the south of the airport that departures are directed to use. Three of these gates are east of the extended runway centerline, while the remaining two are west of centerline. These departures gates are utilized by the FAA to separate aircraft departing MSP airspace from aircraft entering into MSP airspace. There are six imaginary arrival gates that aircraft use to enter the MSP airspace. Two from the east, one from the north, one for the southwest and two from the south. Due to this layout, departures from Runway 17 directed to fly runway heading or slightly west of that of 180° will eventually need to be turned on course to avoid the arrival traffic entering the airspace. These traffic routes are displayed in the image below with the red tracks showing Runway 17 departures and the blue tracks displaying arrivals to Runways 12L and 12R.



2D – Could all 17 departures use the 2.5-mile river departure procedure before making an easterly turn?

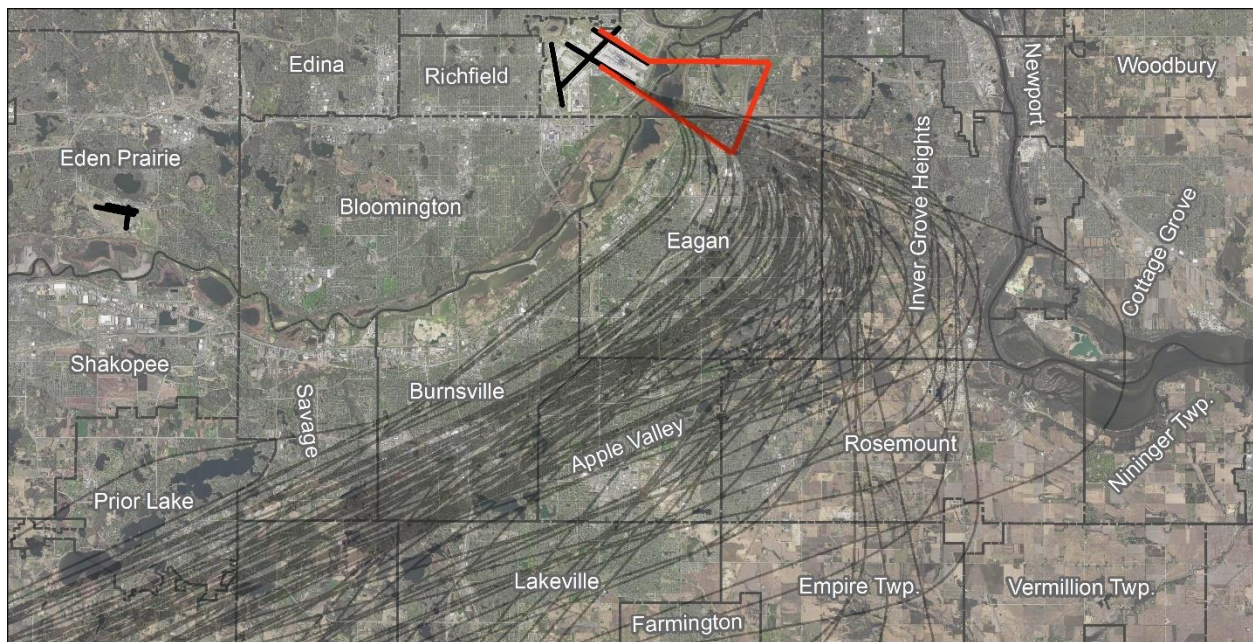
The current Runway 17 2.5 Nautical Mile Turnpoint Departure Procedure is in place for westbound departures to help flights from overflying residential areas of Bloomington immediately after departure from Runway 17. As discussed in request 2A, when aircraft fly runway heading before initiating a westbound turn it ensures that aircraft do not turn until they reach the Minnesota River Valley. After this turn point, aircraft are vectored by ATC to direct them to their initial fix. The route of these flights often takes aircraft over the City of Burnsville because aircraft typically do not follow the river specifically since they are not navigating using ground-based references.

ATC personnel are required to separate MSP aircraft departures using nose-to-tail distance requirements or by using divergent headings. If two flights are assigned the same heading, there needs to be a minimum of three nautical miles of nose-to-tail separation. Alternately, if two flights are assigned a divergent heading (required to be separated by at least 15-degrees), the first departure needs to be 6,000 feet down the runway and airborne before the second flight can depart. ATC employs the use of divergent headings effectively from Runway 17 to allow for an efficient utilization of the runway. As found in the Runway 17 Departure Operations Reports, aircraft departing Runway 17 utilize a number of headings after departure, with five general headings being used the majority of the time.

3A – Move Runway 12R and 12L westbound departures to Runway 17 to take advantage of the 2.5-mile river departure procedure

The RUS at MSP prioritizes departures to use Runways 12L and 12R ahead of Runway 17. ATC has more ability to employ the RUS when airfield demand subsides, which is the case during the nighttime hours. This is apparent when reviewing runway use. In 2018, Runway 17 was used for 36% of all MSP departures between 7:00 AM and 10:00 PM, but only 12% of departures used Runway 17 between 10:00 PM and 7:00 AM. Conversely, Runway 12R was used for only 4% of daytime departures and by 25% of nighttime departures.

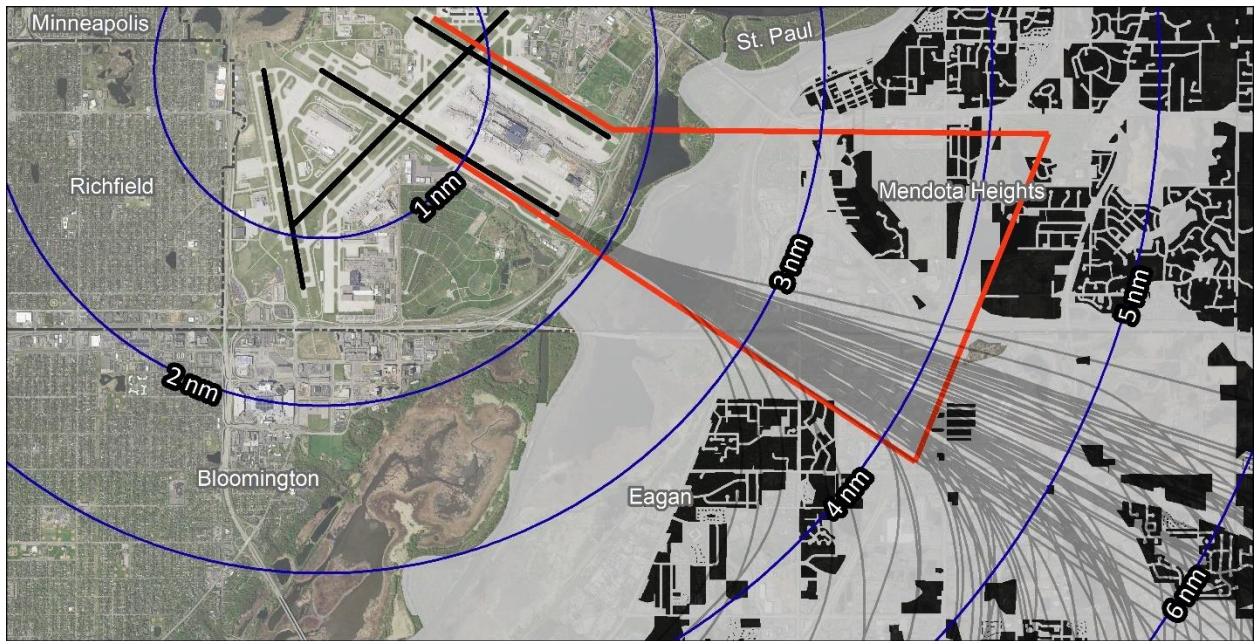
More than 90% of Runway 12R departures adhere to the Eagan-Mendota Heights Departure Corridor procedure. After exiting the Corridor, aircraft with westbound destinations are directed to turn to southerly headings. The track of these operations often takes them over Inver Grove Heights and Eagan.



0 1.5 3 6
Miles

3B – Could westbound departures from Runway 12R turn immediately after departure and follow the river valley?

Runway 12R and 12L departures utilize the Eagan-Mendota Heights Corridor to take advantage of land zoned by those cities to be compatible with aircraft overflights. Further, the Corridor exists to limit overflights of residential land uses directly north and south of the Corridor. The City’s inquiry is whether aircraft could make a turn immediately after departing Runway 12R that would keep the aircraft over the Minnesota River Valley.

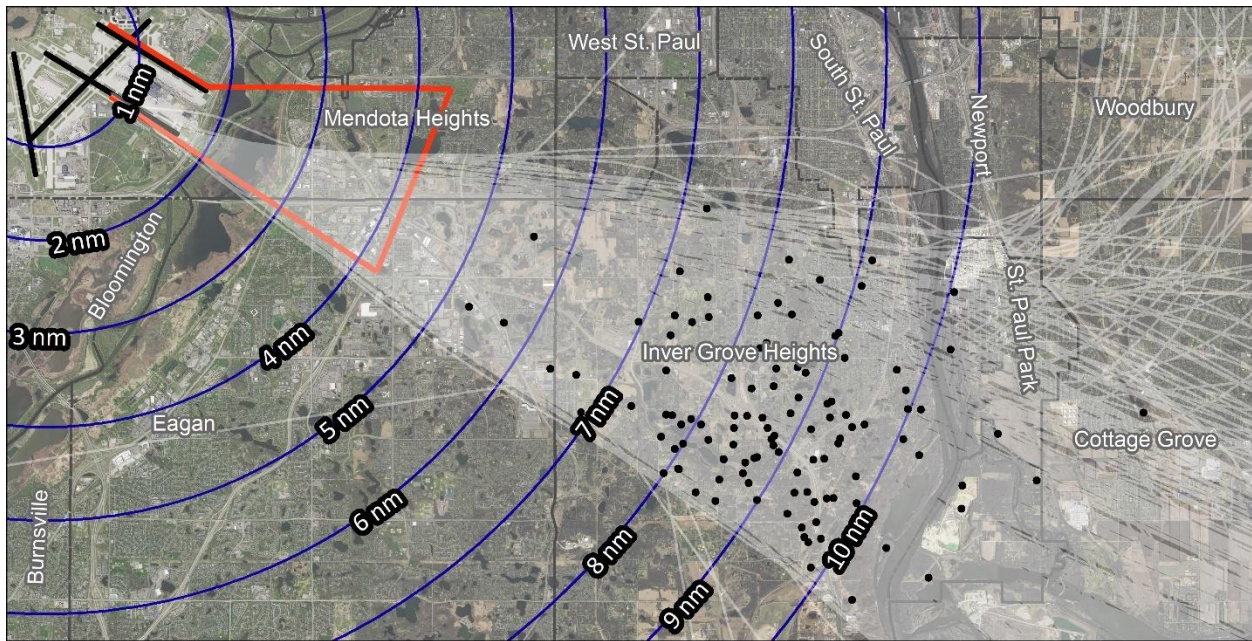


0 0.5 1 2
 Miles

3C – Could departures in the corridor reach a certain altitude (e.g. 5000 feet) before initiating their westbound turn?

All departing aircraft climb at different rates as a result of engine performance, weather conditions, aircraft weight, aircraft type, and airline standard operating procedures in addition to other variables. A departing flight needs to maintain separation from arriving flights. ATC personnel are required to keep at least 1,000 feet of altitude separation when flights are sharing airspace.

Additionally, there are very few departure headings available to ATC for Runway 12L and 12R departures. The Eagan-Mendota Heights Corridor is a confined airspace that does not allow for many divergent headings to be used. Aircraft that fly runway heading to a prescribed altitude would further limit the use of divergent headings to provide the required separation.



- Point Aircraft Reached 5,000 Feet Runway 12R Departure Tracks



At the November NOC meeting, MAC Staff will provide an overview of these requests to the Committee.

REQUESTED ACTION

REQUEST THAT THE MAC PLANNING, DEVELOPMENT AND ENVIRONMENT COMMITTEE FORWARD THE PROPOSAL FOR FAA TO CONDUCT A HIGH-LEVEL EVALUATION OF THE FEASIBILITY AND SAFETY OF THE CITY OF EAGAN’S RECOMMENDATIONS SUPPORTED BY THE NOC. FURTHER, REQUEST THE MAC FORWARD TO THE FAA A LETTER FROM NOC REQUESTING THE FAA’S FINDINGS BE PROVIDED IN WRITING AND PRESENTED AT A FUTURE NOC MEETING.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Michele Ross, Assistant Manager, Community Relations

SUBJECT: **REVIEW OF FALL LISTENING SESSION**

DATE: November 6, 2019

One of the elements of the framework for the MSP Noise Oversight Committee (NOC) includes convening a quarterly meeting with the public. This report reviews the recently held Fall Listening Session.

The primary goal of Listening Session meetings is to ensure residents' concerns are heard and considered as part of the ongoing effort by the MAC and the NOC to address noise and other topics related to MSP.

On October 23, 2019 at 7:00 P.M., the Fall Listening Session was held at the MAC General Offices. 9 residents from Eagan, 1 resident from Edina, 6 residents from Minneapolis, 3 residents from St. Louis Park, 1 resident from Sunfish Lake and 1 resident from Richfield attended the meeting. Also in attendance were MAC District C Commissioner Katie Clark Sieben, NOC co-chair Jeff Hart, NOC members Loren Olson, John Bergman and Paul Borgstrom, and MAC staff.

MAC staff opened the meeting and asked each of the audience members to introduce themselves and where they were from. Staff then provided a brief overview of the mission of the NOC and past, current, and draft future NOC workplans. The presentation slides are available on the MSP Quarterly Listening Sessions webpage:

<http://www.macnoise.com/our-neighbors/msp-quarterly-listening-sessions>

After the presentation, staff opened the floor to discussion. The topics raised during the conversation included:

- Aircraft activity over South Minneapolis, east of Hiawatha Avenue
- Aircraft activity over Eagan
- Ground noise and vibration noted by residents of South Minneapolis, Eagan, and Richfield with concern during nighttime hours
- Development of a land use restriction corridor by the City of Eagan, south of Runway 17, to reduce development of non-compatible uses
- How operational change factors (RNAV arrivals, CRO, etc.) have an impact on noise
- Development of a smartphone app to allow for aircraft complaints when not located at one's home
- Chicago O'Hare Quiet Skies Program
- How departures from Runway 17 could be redistributed to other runways
- Implementation of ground-based noise mitigation measures such as landscaping or walls

- Review of the MSP LTP at future NOC meetings
- The use of the parallel runways for arrivals

The next Listening Session will be on January 22, 2020 at 7:00 P.M. This Listening Session will be held at the MAC General Offices. Further details will be made available on the www.macnoise.com website.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Jennifer Lewis, Community Relations Coordinator

SUBJECT: **SUMMARY OF AVIATION-RELATED RESEARCH**

DATE: November 6, 2019

In accordance with the 2019 NOC Work Plan, MAC staff have enclosed an updated listing of aviation-related research initiatives pertaining to aircraft noise, technology, human health, and environmental topics .

A summary of the research projects that were completed, active, initiated, or anticipated in 2019 or 2020 is provided in the attached report, and includes work by the Transportation Research Board (TRB), the FAA's Centers of Excellence (ASCENT), and other researchers.



Aviation-Related Research Update

Summary of Research Related to Aircraft Noise, Technology,
Human Health, and Environmental Topics

November 2019

Introduction

Research is ongoing by various agencies in the U.S. and abroad to evaluate the effects of aviation noise and other environmental impacts associated with aircraft operations. Much of these research projects explore potential technological solutions to challenges affecting humans and environmental health.

Many research projects involve years of study. This summary provides a description of research efforts in 2019 that are most applicable to passenger service airports like Minneapolis-St. Paul International Airport (MSP).

Most research collaborations summarized in this update are conducted by agencies described below. More information about each research agency or the referenced projects is accessible through the website links provided for each organization and project on the following pages.

Research Agency Overview

Transportation Research Board

The mission of the Transportation Research Board (TRB) promotes innovation and progress in transportation through research. According to the TRB website, the organization facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encouraged their implementation.

The Airports Cooperative Research Program (ACRP) is sponsored by the Federal Aviation Administration (FAA) and managed by the National Academies through TRB. ACRP research topics are selected by an independent governing board appointed by the U.S. Secretary of Transportation that includes individuals from airports, universities, FAA, and the aviation industry.

For more information: <http://www.trb.org/AboutTRB/AboutTRB.aspx>

ASCENT

The Aviation Sustainability Center, called ASCENT—previously referred to as the FAA’s Center of Excellence program—conducts aviation-related research to develop science-based solutions to

challenges posed by aircraft operations. Projects undertaken by ASCENT are funded by the FAA, NASA, DOD, Transport Canada, and the US EPA.

For more information: <https://ascent.aero/>

Aircraft Noise-Related Research

Research has been conducted for decades to understand various aspects of aircraft noise. The table below summarizes recent research efforts that relate to further examination of aircraft noise and methods to lessen its effects.

Agency	Project #	Project Title	Project URL	Status
ASCENT	43	Noise Power Distance Re-Evaluation	https://ascent.aero/project/noise-power-distance-re-evaluation/	Annual Report 2018
ASCENT	40	Quantifying Uncertainties in Predicting Aircraft Noise in Real-world Situations	https://ascent.aero/project/quantifying-uncertainties-in-predicting-aircraft-noise-in-real-world-situations/	Annual Report 2018
ASCENT	23	Analytical Approach for Quantifying Noise from Advanced Operational Procedures	https://ascent.aero/project/analytical-approach-for-quantifying-noise-from-advanced-operational-procedures/	Published
TRB ACRP	11-08	Forum on Challenges to Implementing Successful Land Use Strategies at Airports	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4094	Published
Independent Research		Aircraft noise generation and assessment: executive summary	https://doi.org/10.1007/s13272-019-00384-3	Published

Technology-Related Research

Advancements in technology over time have afforded greater opportunities to develop tools for understanding and reducing aircraft noise and emissions. The research efforts summarized below continue to explore other technological opportunities for progress.

Agency	Project #	Project Title	Project URL	Status
ASCENT	45	<i>Takeoff/Climb Analysis to Support AEDT APM Development</i>	https://ascent.aero/project/takeoffclimb-analysis-to-support-aedt-apm-development/	Published
ASCENT	37	<i>CLEEN II Technology Modeling and Assessment</i>	https://ascent.aero/project/cleen-ii-technology-modeling-and-assessment/	Annual Report 2018
TRB	02-79	<i>Improving AEDT Modeling for Aircraft Noise Reflection and Diffraction from Terrain and Manmade Structures</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4237	Under Review
TRB	02-84	<i>Evaluating the Use of Spatially Precise Diurnal Population Data in Aviation Noise Studies</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4421	Under Review
TRB	02-89	<i>Industry Survey--Benefits and Costs for Airport Noise and Operations Monitoring Systems</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4839	Anticipated 2020
TRB	03-51	<i>Electric Aircraft on the Horizon -- An Airport Planning Perspective</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4625	Underway

Health-Related Research

Internet searches for aviation-related health effects topics revealed that research is ongoing in this field of study in an effort to understand how aviation affects human health. The table below lists the status of research conducted 2019.

Agency	Project #	Project Title	Project URL	Status
ASCENT	3	<i>Cardiovascular Disease and Aircraft Noise Exposure</i>	https://ascent.aero/project/noise-impact-health-research/	Annual Report 2018
ASCENT	18	<i>Health Impacts Quantification for Aviation Air Quality Tools</i>	https://ascent.aero/project/health-impacts-quantification-for-aviation-air-quality-tools/	Annual Report 2018
ASCENT	17	<i>Pilot Study on Aircraft Noise and Sleep Disturbance</i>	https://ascent.aero/project/noise-exposure-response-sleep-disturbance/	Published
TRB	02-83	<i>Measuring Quality of Life in Communities Surrounding Airports</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4420	Underway

Environment and Emissions-Related Research

Aviation activity is largely dependent upon use of pollution-emitting fuels. Research efforts are ongoing to evaluate the effects of aviation on the environment, particularly air quality, and opportunities to power aircraft using alternative sources of energy. A summary of recent research projects is provided below.

Agency	Project #	Project Title	Project URL	Status
ASCENT	48	<i>Analysis to Support the Development of an Engine nvPM Emissions Standards</i>	https://ascent.aero/project/analysis-to-support-the-development-of-an-engine-nvpm-emissions-standards/	Annual Report 2018
ASCENT	39	<i>Naphthalene Removal Assessment</i>	https://ascent.aero/project/naphthalene-removal-assessment/	Annual Report 2018
ASCENT	24	<i>Emissions Data Analysis for CLEEN, ACCESS, and Other Recent Tests</i>	https://ascent.aero/project/emissions-data-analysis-for-clean-access-and-other-recent-tests/	Annual Report 2018
ASCENT	22	<i>Evaluation of FAA Climate Tools</i>	https://ascent.aero/project/evaluation-of-faa-climate-tools/	Annual Report 2018
ASCENT	34	<i>National Jet Fuels Combustion Program – Area #7: Overall Program Integration and Analysis</i>	https://ascent.aero/project/overall-program-integration-and-analysis-area-7-2/	Annual Report 2018
TRB	02-80	<i>Quantifying Emissions Reductions at Airports from the Use of Alternative Jet Fuels</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4238	Published
TRB	02-82	<i>Developing a Roadmap to Achieve Zero Emissions at Airports</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4419	Underway
TRB	02-78	<i>Climate Resilience and Benefit Cost Analysis--A Handbook for Airports</i>	http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4236	Published

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **REVIEW AND APPROVAL OF 2020 NOC WORK PLAN, 2020 MEETING DATES, 2019 NOC ACCOMPLISHMENTS**

DATE: November 6, 2019

At the September 18, 2019 NOC meeting, members reviewed a proposed 2020 Work Plan Draft. The Draft 2020 NOC Work Plan is attached. Subsequently, the NOC's Fall Listening Session was held on October 23, 2019 to solicit ideas for what citizens also would like the NOC to consider in 2020.

The pages following the Draft 2020 NOC Work Plan includes the Draft 2019 NOC Accomplishments and the Draft 2020 NOC Meeting Dates.

Following NOC approval, the 2020 Work Plan will be presented to the MAC Planning, Development and Environment (PD&E) Committee by the NOC Co-Chairs on December 2, 2019 at 10:30 AM in the Commission Chambers at Terminal 1-Lindbergh.

REQUESTED ACTION

APPROVE AND RECOMMEND TO THE MAC PLANNING, DEVELOPMENT AND ENVIRONMENT COMMITTEE THE FINAL 2020 MSP NOC WORK PLAN AND APPROVE THE LIST OF 2019 ACCOMPLISHMENTS AND 2020 MEETING DATES.



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

DRAFT 2020 NOC WORK PLAN

1. RESIDENTIAL NOISE MITIGATION PROGRAM
 - a. Review Residential Noise Mitigation Program Implementation Status

2. MSP NOISE PROGRAM SPECIFIC EFFORTS
 - a. 2019 Annual Noise Contour Report, and First and Second Amendments to the Consent Decree Noise Mitigation Program Eligibility
 - b. MSP Fleet Mix and Nighttime Operations Assessment
 - c. Status of Aviation-Related Research Initiatives
 - d. Update on Converging Runway Operations at MSP
 - e. Update on the MSP Long Term Plan Update and Associated Stakeholder Engagement
 - f. Update on the FAA's Survey to Re-Evaluate Noise Measurement Methods
 - g. Runway 30L and 30R Departure Study
 - h. Runway 12L and 12R Nighttime Arrivals Balancing Study
 - i. MSP Complaint Data Assessment
 - j. Conduct a mobile noise monitoring study in the City of Minnetonka

3. CONTINUE REVIEW OF PUBLIC INPUT
 - a. Continue to Review Input Received from quarterly Listening Sessions for Possible Agenda Items



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

DRAFT 2019 NOC Accomplishments

1. Completed a [Fleet Mix and Nighttime Operations Assessment](#) which, in addition to evaluating fleet mix and nighttime operations, included certificated noise levels for aircraft operating at MSP and aircraft altitude trends.
2. Pursuant to the Second Amendment to the Consent Decree, reviewed the [MSP 2018 Annual Noise Contour Report](#) published on February 28, 2019. The report noted that based on the 406,913 total operations at MSP in 2018, the actual 60 dB DNL contour is 28% smaller than the 2007 forecast contour, and the 65 dB DNL contour is 39% smaller. The report also explained that there are areas of the contour, near the arrival areas for Runway 12R/30L, where additional homes are achieving candidate eligibility in the MAC's Residential Noise Mitigation Program.
3. Received regular updates from the FAA on Converging Runway Operations (CRO). Communicated to FAA the full intent of resolution #02-2016 and encouraged the FAA to provide an inclusive public process for CRO environmental evaluation.
4. Received an update on the FAA's efforts to re-evaluate noise measurement methods at U.S. airports.
5. Heard from the MAC Executive Director and CEO, Bryan Ryks on updates on the organization, recent accolades, trends in passengers and operations, and future development at MSP.
6. Heard from NOC Chief Pilots regarding standard departure procedures, noise abatement training and missed approach procedures.
7. Conducted a mobile noise monitoring request from the Eagan Airport Relations Commission to evaluate the location of two existing RMTs to ensure their respective current locations are optimal for collecting noise events from aircraft arriving to and departing from MSP.

8. Developed and executed a communication plan for increased flight traffic associated with the NCAA Final Four.
9. Reviewed aviation-related research initiatives from FAA Center of Excellence/ASCENT, TRB, and other researchers.
10. Received ongoing review of MSP monthly operations reports which include aircraft noise complaints, operations, runway use, noise events, and compliance with noise abatement procedures.
11. Evaluated considerations from the Airport Noise Management Benchmarking Study
 - Opened the Aircraft Noise Complaint Policy to accept noise complaints from non-residential addresses
 - Developed a tool to provide real-time alerts to Air Traffic Control for non-compliant flights to further enhance noise abatement procedure awareness and compliance
12. Developed a Runway 17 Departure Operations Report through a collaborative process with Eagan residents.
13. Reviewed Eagan City Council requests in collaboration with the Eagan ARC, City Council, FAA, NOC and MAC board.
14. Provided input for integrating the MACnoise.com website into the redesign of the metroairports.org site, using input provided by the NOC.
15. Received updates from MAC on on-going development of the MSP Long-Term Plan and associated Stakeholder Engagement Program
16. Evaluated citizen input received during quarterly Listening Sessions as possible discussion topics at future NOC meetings. Ideas collected during the Fall Listening Session were documented from citizens who expressed what they would like the NOC to consider specifically for its 2020 Work Plan.



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

DRAFT 2020 MSP NOC Meeting Dates

NOC meetings are held six times each year on the third Wednesday of January, March, May, July, September, and November (odd-numbered calendar months). Staff recommends the following 2020 NOC meeting dates:

January 29 - This proposed meeting date is delayed allowing for a packet distribution schedule after New Year's Day*

March 18

May 20

July 15

September 16

November 18 (This meeting will be held during the evening)

The agenda packet for each meeting will be distributed and published two weeks prior to each meeting. An agenda review session will begin at 1:00 PM for the NOC members, alternates and at-large contacts and each NOC meeting will begin at 1:30 PM in the Lindbergh Conference Room in the MAC General Office building, unless otherwise noted.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **UPDATE ON THE FAA’S SURVEY TO RE-EVALUATE NOISE MEASUREMENT METHODS**

DATE: November 6, 2019

In May 2015, the FAA announced it would begin evaluating its methods for measuring aircraft noise. For decades federal regulations prescribed a process under 14 CFR Part 150 for calculating aircraft noise impacts using the Day-Night Average Sound Level (DNL) metric. In the early 1970s the FAA established 65 dB DNL as the threshold at which federal funding could be available for soundproofing structures or other mitigation.

The DNL metric is an average of all aircraft noise during a 24-hour period, with a 10-decibel (dB) penalty for each aircraft operation occurring between 10 p.m. and 7 a.m. This penalty accounts for the higher human sensitivity to noise during the nighttime hours.

The MAC assesses aircraft noise impacts, for each of its airports, using DNL noise contours. Communities across the nation, including communities represented on the NOC, have requested the FAA consider other federally-accepted metrics to express and represent the effects of aircraft noise exposure.

The FAA has said its evaluation will be a multi-year process and began with a survey of public perceptions of aircraft noise in communities situated around 20 airports nationwide. The FAA is not disclosing the airport communities in which it surveyed.

In 2018, the FAA Reauthorization Act of 2018 was passed into law. Multiple sections of this legislation addressed noise concerns around the country. The provisions of Section 173 – Alternative airplane noise metric evaluation deadline, Section 188 – Study regarding day-night average sound levels and Section 187 – Aircraft noise exposure all require the FAA to provide reports to Congress regarding DNL or alternative metrics.

At the November 20, 2019 NOC meeting, MAC staff will provide the Committee an update on this topic.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: AIRLINE POLICIES AND PROCEDURES

DATE: November 6, 2019

Several variables impact the flight of an aircraft. Environmental factors, such as wind, weather and temperature, will influence the performance of an aircraft. Operator decisions, for example aircraft type, load, destination and routing, will vary the flight track and climb rate of a departure. Procedural factors, including air traffic instruction and airline standard operating procedures, have the potential to alter where and how aircraft fly.

The MAC has received comments at recent community meetings that aircraft have been lower on departure in recent months and years. It has been suggested that this is the result of airline decisions to change standard procedures in climb rates.

Additionally, it has been suggested that pilots can request any flight path they wish when departing from MSP. While contextually accurate, this condition rarely occurs at busy commercial-service international airports.

To allow for insight into these two topics, MAC staff made a request to Delta Chief Pilot and NOC Member, Paul Borgstrom, Sun Country Chief Pilot and NOC Member, Jonathan Malin and Endeavor Chief Pilot and NOC Member, Chris Finlayson to attend the November NOC meeting and offer their companies' standard operating procedures and personal expertise on these topics.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Manager, Community Relations

SUBJECT: **REVIEW RESIDENTIAL NOISE MITIGATION PROGRAM IMPLEMENTATION STATUS**

DATE: November 6, 2019

The NOC 2019 Work Plan includes a review of the residential noise mitigation program implementation.

For over two decades the MAC has administered one of the most aggressive noise mitigation programs in the world for communities surrounding Minneapolis-St. Paul International Airport (MSP). Since 1992, the MAC has spent approximately \$482.9 million on noise mitigation programs. This includes insulating over 15,100 single-family homes, 3,300 multi-family units, 18 schools and acquiring over 400 residential properties affected by MSP aircraft activity. The MAC is committed to continue mitigating homes impacted by MSP activity based on an amended Consent Decree until the year 2024.

Amended Noise Mitigation Program

Under the provisions of the First and Second Amendments to the Consent Decree, filed in September 2013 and November 2016 respectively by the MAC, the cities of Minneapolis, Richfield, Eagan, and the Minneapolis Public Housing Authority, properties must meet certain criteria to be considered eligible for participation in the MAC noise mitigation program.

First, as stated in the Amendment:

“The community in which the home is located has adopted local land use controls and building performance standards applicable to the home for which mitigation is sought that prohibit new residential construction, unless the construction materials and practices are consistent with the local land use controls and heightened building performance standards for homes within the 60 DNL Contour within the community in which the home is located.”

Second, as stated in the Amendment:

“The home is located, for a period of three consecutive years, with the first of the three years beginning no later than calendar year 2020 (i) in the actual 60-64 DNL noise contour prepared by the MAC under Section 8.1(d) of this Consent Decree and (ii) within a higher noise impact mitigation area when compared to the Single-Family home's status under the noise mitigation programs for Single-Family homes provided in Sections 5.1 through 5.3 of this Consent Decree or when compared to the Multi-Family home's status under the noise mitigation programs for Multi-Family homes provided in Section 5.4 of this Consent Decree. The noise contour boundary will be based on the block intersect methodology. The MAC will offer noise mitigation under Section IX of this Consent Decree

to owners of eligible Single-Family homes and Multi-Family homes in the year following the MAC's determination that a Single-Family or Multi-Family home is eligible for noise mitigation under this Section."

In cases where homes have received previous reimbursements or mitigation from the MAC, those improvements will be deducted from the efforts required to increase the homes' mitigation relative to the actual noise level, per the amended Consent Decree.

A second amendment was made to the Consent Decree in 2017. This amendment allows the use of the Aviation Environmental Design Tool (AEDT) to run the actual noise contours each year, beginning with the 2016 actual noise contour. In 2015, AEDT became the federally-approved computer model for determining and analyzing noise exposure and land use compatibility issues around United States airports. The second amendment also provided clarity on the opt-out eligibility criteria. Specifically, single-family homes that previously opted out of the Partial Noise Reduction Package may participate in the Full 5-decibel Reduction Package, provided the home meets the eligibility requirements.

2017 Noise Mitigation

In 2017 the MAC began the project to provide mitigation to 138 single-family homes that became eligible by virtue of the 2015 actual noise contour. As of June 24, 2019, 117 homes have been completed and 15 homes declined to participate while 6 homes were moved to the 2019 program as a result of homeowner actions.

Two multi-family structures were also eligible to participate in the Multi-Family Mitigation Program in 2017; one property is completed, and one property declined to participate. The total cost for the completed 2017 Mitigation Program was \$2,442,685.

2018 Noise Mitigation

In 2017 the MAC began the project to provide mitigation to 283 single-family homes that became eligible by virtue of the 2016 actual noise contour. As of October 28, 2019, 221 homes have been completed, 9 homes are in the construction or pre-construction phase, 27 homes declined to participate while 26 homes were moved to the 2019 program. The 2018 Mitigation Program does not include any multi-family properties. The total cost for the 2018 Mitigation Program to date is \$6,767,579.

2019 Noise Mitigation

In 2018 the MAC began the project to provide mitigation to 429 single-family homes that became eligible by virtue of the 2017 actual noise contour. As of October 28, 2019, including the homes transitioned from the 2017 and 2018 programs, 143 homes have been completed, 255 homes are in the construction or pre-construction phase and 63 homes declined to participate. The 2019 Mitigation Program does not include any multi-family properties. The total cost for the 2019 Mitigation Program to date is \$3,954,654.

2020 Noise Mitigation Program

In 2019, the MAC began the project to provide mitigation to 243 single-family homes that became eligible by virtue of the 2018 actual noise contour. To date, the MAC has begun homeowner orientations and design visits. Actual construction activities will commence in 2020.

At the November 20, 2019 NOC meeting, Mr. Pat Mosites, MAC Airport Development Project Manager, will provide a progress update on the implementation of the 2017 – 2020 Residential Noise Mitigation Programs.