



Metropolitan Airports Commission (MAC)

**Minneapolis-St. Paul International Airport (MSP)
Noise Oversight Committee (NOC)
MAC General Office Building
Lindbergh Conference Room
6040 28th Avenue South
Minneapolis, MN 55450**

NOC Committee Members

Jeffrey Hart – Co-Chair (Delta Air Lines)
Dianne Miller – Co-Chair, City of Eagan Representative (City of Eagan)
Ryan Barette – Minnesota Business Aviation Association Representative
Pam Dmytrenko – City of Richfield Representative (City of Richfield)
Chris Finlayson – At-Large Airport User Representative (Endeavor Air, Inc.)
Gordy Goss – Chief Pilot Representative (Delta Air Lines)
Andrew Johnson – City of Minneapolis Representative (Minneapolis City Council)
Tom Link – At-Large Community Representative (City of Inver Grove Heights)
Dwayne Lowman – City of Bloomington Representative (Bloomington City Council)
Jay Miller – City of Mendota Heights Representative (Mendota Heights City Council)
Angie Moos – Cargo Carrier Representative (United Parcel Service)
James Rokala – Charter/Scheduled Operator Representative (Sun Country Airlines)

MEETING AGENDA

July 18, 2018 at 1:30 pm
MAC General Office Building
Lindbergh Conference Room

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

***Note:** 1:00 to 1:30 – Committee Agenda Review Session
(NOC members only in the Coleman Conference Room)

1. 1:30 – 1:35 Review and Approval of the May 16, 2018 Meeting Minutes
2. 1:35 – 1:50 Review of Monthly Operations Reports: May and June, 2018
3. 1:50 – 2:10 NOC Bylaw Modifications to Facilitate Greater Citizen Input
4. 2:10 – 2:30 Review Residential Noise Mitigation Program Implementation Status – Pat Mosites, MAC Airport Development Project Manager
5. 2:30 – 3:00 MSP Noise Management Benchmarking Study Review – Mary Ellen Eagan (HMMH)
6. 3:00 – 3:15 Update on Converging Runway Operations at MSP – Kurt Mara, FAA Traffic Management Officer
7. 3:15 – 3:45 New FlightTracker Demo and Presentation on Improving Noise Office Data through Machine Learning
8. 3:45 – 4:00 Review of the Summer Listening Session
9. 4:00 Public Comment Period
10. Announcements
11. Adjourn



**DRAFT MSP NOISE OVERSIGHT COMMITTEE
MEETING MINUTES**

Wednesday, 16th of May 2018 at 1:30pm

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, 16th of May 2018, in the Lindbergh Conference Room at the MAC General Office. Chair Miller called the meeting to order at 1:31pm. The following were in attendance:

Representatives: D. Miller; J. Hart; R. Barette; P. Dmytrenko; L. Olson; J. Rokala; T. Link; D. Lowman; D. Sloan; A. Moos

Staff: D. Nelson; B. Juffer; A. Kolesar; C. Boyd

Others: M. Nolan – City of Edina; J. Winingar – FAA; S. Fortier – FAA; L. Moore – City of Bloomington; D. Sloan – Mendota Heights; B. Hoffman – City of Saint Louis Park; P. Martin – City of Bloomington; M. Sands – FAA; C. Carrino – MSP FairSkies; S. Devich – City of Richfield; Anette Petersen – Apple Valley; S. Heegaard – City of Saint Paul; S. Nienhaus – City of Burnsville; S. and G. Norling – Mendota Heights; L. Grotz – Edina; D. O’Leary – City of Sunfish Lake

Chair Miller, Eagan, started by welcoming a new representative for the City of Bloomington, Council Member Patrick Martin.

1. Review and Approval of the March 21, 2018 Meeting Minutes

Chair Miller, Eagan, asked if there were changes to the March Meeting Minutes, there were none and approval was moved by **Representative Goss, Delta**, seconded by **Representative Martin, Bloomington**, and passed unanimously.

2. Review of Monthly Operations Reports: March and April, 2018

Brad Juffer, Assistant Technical Advisor, stated that the MACNOMS system recorded 35,397 operations in March 2018 and 32,810 operations in April 2018. The March operations count is a 2.3% reduction from 2017 and April shows a steeper reduction of 3.4%.

Operations numbers were reduced specifically on March 5, April 13, 14 and 15 due to snow events. There were 242 operations on Saturday, April 14th this was the second lowest number of daily operations in 13 years; the first being on December 11, 2010, when only 110 flights

operated because 16.5" of snow fell in one day. Year to date, MSP operations through April 30 are at 128,910. This is just under a 3,000 flight reduction from 2017 or a 2.3% reduction.

In March 2018 there were 2,381 flights between 10:30 pm and 6:00 and 2,191 in April during the same timeframe. The March figure is a 60 flight reduction from March 2017 while the April number is a 48 operations increase from April 2017. Year to date night flights are up 4.6% which equates to 3 flights per night. **Juffer** noted that just under half of that increase can be directly attributable to Super Bowl traffic. A look at daily anomalies may provide more clarity as to how the overall operations are down but nighttime operations are up. The highest daily night totals for March and April were related to snow fall. The four time periods covering the night of March 5th into the 6th, April 2nd into April 3rd, April 3rd into 4th, April 13th into 14th, and April 15th into 16th accounted for 14% of night activity in the previous two months. The National Weather Service, Twin Cities, reported that the 26.1" of snow in April broke the April record for snowfall set in 1983. Outside of the snow events, March has higher activity overall for spring break which is also seen in the nighttime hours. These totals receded in the end of April when the weather cooperated.

The April snow storm brought an unusual runway configuration. **Juffer** noted that the 159 arrivals to Runway 4 were more than the total combined arrivals on that runway for the past seven years (133). The 575 departures from Runway 4 add to the 2018 total which is up to 748 as of the end of April. This amount is more than any full year at MSP since the parallel runways were closed in 2007 and 2009 for construction. 54% of arrivals used 30L/30R or 35 and 45% used 12L or 12R. 47% of all departures used Runways 30L/30R while nearly 51% used 12L/12R or 17. This dichotomy is made possible through the use of Mixed Flows. The year-to-date use of Mixed Flows are 14.5% compared to 7% during the same period last year.

For the fleet mix report, **Juffer** reported that the split of carrier jets for March and April was 42% Regional Jets, 55 % narrowbody aircraft and 3% widebody aircraft. The CRJ-200 was once again the most used aircraft type at MSP for the combined two months; however, the CRJ9 was slightly higher in March. As announced in March, Delta has removed the MD-80 from their MSP schedule. In April, American also temporarily stopped scheduling MD-80s at MSP. There were only 22 operations of that aircraft type during March. Additionally, in April a FedEx feeder aircraft was changed from a Falcon-20 to a CRJ-200; while bigger, the CRJ is quieter than the Falcon aircraft it is replacing.

Juffer then reported on aircraft noise complaints, noting that complaints were received from 228 locations in March and 268 locations in April. These are decreases from the same two months last year. Those locations filed 10,799 complaints in March and 8,607 complaints in April. These numbers show over a 2,400 or 18% complaint reduction from 2017 for March and 5,300 reduction in complaints, 38%, in April. Year to date complaints are down by over 15,000 total or 33% from 2017. During the report, **Juffer** displayed a density are map and relayed details about the unique areas registering noise complaints in March and April.

Aircraft sound events during March and April were reported to have a 19% reduction in the spent time above 65 decibels (dB) at the Remote Monitoring Towers (RMTs). There were 86,128 events above 65 dB in March and 76,429 in April, which represents a reduction of 14% and a year-to-date reduction of 17%. **Juffer** also noted that the duration of sound events are

decreasing as well. In the first 4 months of 2018 the average sound event was one second shorter than 2017.

Juffer then reported on MSP Noise Abatement Procedures, beginning with the Runway 17 Departure Procedure, which had a compliance rate of 99.2% in March and 99.6% in April. The Eagan-Mendota Heights Departure Corridor Procedure was used 89.6% in March and 87.4% in April. **Juffer** noted the seasonal northeast winds have a tendency to push aircraft south of the corridor and that is evidenced by the two month statistics. The Crossing-in-the-Corridor Procedure was used for 32% of daytime departures off Runways 12L and 12R and 37% in April. The Crossing Procedure was used for 29% of nighttime departures off Runways 12L and 12R in March and 32% in April.

Regarding the Runway Use System (RUS), **Juffer** reported the high priority runways in March receded from all-time highs in January and ended at 53% for both March and April.

Before opening for questions, **Juffer** addressed a question posed by **Representative Lowman, Bloomington**, at the NOC meeting in March related to climate change and the impact of weather and wind at the airport. **Juffer** reported that the airport planner analyzes wind coverage needed for runways as it relates to weather during the long-term comprehensive planning process for each MAC airport. Additionally, **Juffer** directed the NOC to a presentation given at the January 2015 meeting by Michael Griesinger of the National Weather Service, which is available at www.macnoise.com/pdf/noc_presentation_1-21-15.pdf. **Juffer** recounted a portion of that presentation that Mr. Griesinger stated that he couldn't imagine a scenario where the general circulation pattern would be so disruptive that the seasonal wind direction would change. The climatologist then stated that if that occurred, we would be facing a much bigger issue than airport noise abatement.

3. NOC Bylaw Subcommittee Recommendations

Dana Nelson, Technical Advisor, began by restating that the NOC Bylaw Review Subcommittee was established in response to one of the MSP FairSkies requests for increased citizen involvement at NOC meetings. The following NOC Members volunteered to participate: Alex Mason, Endeavor Air, Dwayne Lowman, Council Member – City of Bloomington, Capt. Gordy Goss, Delta Air Lines – Chief Pilot, and Loren Olson, City of Minneapolis. The group met twice since January and established the following objective: “Evaluate the Committee Meeting structure of the NOC Bylaws, identify opportunities for improved citizen input during meetings, and develop recommended changes for consideration by the full NOC”.

The Subcommittee focused on Article VIII, *Committee Meetings*, of the NOC Bylaws, and specifically subsections 4, 5, and 6. These subsections detailed NOC meeting times and locations, items added to future agendas, and the public comment period at NOC meetings. The subcommittee made suggestions to each of these subsections and came up with redline edits to the Bylaws were included in the full packet distributed to the NOC Members. The committee will deliberate and action will be taken on the edits at the July 18, 2018 NOC Meeting. Details on recommended changes may be found on the MAC Noise website, under Item 3 of the [May 16, 2018 NOC Meetings Presentation](#).

Chair Diane Miller, Eagan, asked if there were questions or comments by subsection. **Representative Sloan, Mendota Heights**, commented that in the past, some meetings were held in different cities, and asked if attendance changed as a result of that. **Nelson** responded that there didn't seem to be an increase in attendance when the meetings were held at a location other than the MAC General Office. **Miller** commented that it would be a helpful recommendation to allow the Chair the discretion to call on public speakers even if they hadn't signed up via the speaker card. **Co-Chair Hart, Delta**, agreed with this recommendation. **Representative Dmytrenko, Richfield**, asked for clarification behind allotting 20 minutes to the public comment period instead of the previous 15 minutes. **Representative Goss, Delta**, commented that the time increase was thought to allow for questions during the public comment period as well as if the Chair used their discretion and allowed for a speaker to use more than the allotted 3 minute/speaker time. **Representative Barette, MBAA**, asked if it was possible to allow public speakers to estimate the time they would need for their topic during the public comment period and add that to their comment card, thus allotting the time in the agenda. **Representative Lowman, Bloomington**, commented that thus far that hasn't been an issue but mentioned it would be helpful for the Chair to use their discretion on extending the Public Comment period on a case by case basis. **Goss** responded that the Subcommittee thought that if a community member had a topic to discuss at such length, that they would open up an agenda item versus leaving that item in the Public Comment period.

The Committee members agreed to take the recommendations under consideration and be prepared to take action at the July 18, 2018 NOC meeting.

4. Evaluate Mendota Heights Airport Relations Commission Runway 12L Departure Proposal

Dana Nelson, Technical Advisor, stated that at the end of 2017 she had a meeting with residents of Mendota Heights, Scott and Gina Norling. They brought a proposal related to 12L departures that would strive to keep departures towards the middle of the corridor for a longer period of time to prevent overflights of residential areas. **Nelson** suggested the Norlings put together a proposal and bring it before the NOC for consideration. As a member of the Mendota Heights Airports Relation Commission (ARC), Gina brought the proposal to the ARC, who requested that it be added to the 2018 NOC Work Plan. **Nelson** noted that the complete proposal was included in today's meeting agenda packet. Early in 2018, **Nelson** sent the proposal to the FAA and held discussions around the feasibility. She noted Sean Fortier from the FAA is in attendance and is prepared to discuss the proposal.

Nelson provided background on the Mendota Heights Corridor, which has been in place since the mid-1980's. The Corridor is comprised of a 90 degree heading on 12L and a straight out heading on 12R. The corridor is 3 miles from departure end of both runways. The Noise Abatement Departure Procedure is for carrier jet departures off Runways 12L and 12R. Compliance of this procedure is reported every month by the MAC. There is about 90% compliance in the corridor each month. **Nelson** also reminded the Committee of the Crossing-in-the-Corridor Procedure meant to keep operations at the center of the corridor when possible.

The corridor procedures were defined and implemented in 1974 and the existing procedures were then published and officially established in the mid-1980's. In the 1990's the MAC made two proposals for altering Corridor, which were evaluated in the Part 150 Update. **Nelson** displayed a graph illustrating the 12L Operational Trends from 2001-2017 and then compared them to trends on Runways 12R and 17.

Sean Fortier, FAA, introduced himself said he oversees management of all facilities in the northern Midwest region. He reiterated Nelson's comments and stated that he and his team have been reviewing the proposal. He also stated that while efficiency is always a factor in procedures, safety is the number one priority. During periods of high demand, it is necessary to have different air traffic controllers handling traffic on each of the runways at MSP. **Fortier** went on to explain that in order to maintain proper safety between departing aircraft, there will be a minimum of 15 degrees of separation, but often a 20 degree separation will be implemented for added safety. This is because meteorological changes need to be considered and when an aircraft takes off. For example, the winds aloft may shift or not mimic the same wind pattern on the ground, blowing aircraft off their heading assigned by the control. The additional buffer to 20-degree heading divergence allows for this shift.

Fortier explained that the team looking at the proposal sent to the NOC and FAA would reduce the available headings off Runway 12L from three to one. This heading reduction leads to a reduction in capacity and moving aircraft off the runway in the most expeditious means possible. This reduction would also impact Runway 17 as the heading reduction on Runway 12L will reduce the heading opportunities on Runway 17 and thus reduce capacity on that runway as well. This will lead to longer taxi times and ultimately the shift in capacity will result in moving aircraft noise from one community to another, an act the FAA does not support. **Representative Sloan, Mendota Heights**, stated that the point of the proposal was to extend the point out another 0.6 of a mile before the planes turned north. It would only be extending the corridor further out from the airport. The suggestion wasn't to eliminate a departure path but that a later turn will give people within the corridor noise relief. **Fortier** responded that because it would be a committed turn point further out, that would become a committed heading which would thus reduce capacity because the controller would be required to utilize only one heading to maintain that path. **Co-Chair Hart, Delta**, expanded on Fortier's explanation that three headings are assigned off a runway and the pilot and controller are under the same understanding that this means an immediate turn to that particular heading. This proposal suggests that departures stay on one particular heading for 0.6 of a mile further and that reduces capacity because you can't depart another aircraft until the prior one has reached its heading and thus turned. **Representative Olson, Minneapolis**, asked if there was an FAA restriction that required an aircraft assigned to a heading to maintain that heading and not be redirected. **Fortier** responded that a redirection can be applied but at a later point. This requires further controller action to be taken to ensure adequate spacing before the subsequent aircraft departs. This action also causes a delay. **Nelson** commented that ATC is going to either ensure 3 miles of separation, nose to tail, or they're going to require 15 degrees of divergence. The proposal would eliminate the 15 degree divergence option and require every aircraft to have a 3 mile separation, nose to tail.

Sloan stated that regardless of if this proposal is accepted, that a few meetings ago when MSP FairSkies was presenting that they wanted more community impact on the NOC and that this is a great example of such an impact. The Norlings are residents of Mendota Heights, they put together this proposal and brought it to the City Council and then were able to bring it before the NOC and the FAA. Regardless of outcome, this is a good example of community involvement with the NOC. **Olson** said she understands the proposed corridor change impacts the speed at which aircraft are departing and then asked if MSP is always at such a capacity that ATC needs to always be considering expeditious departures. **Fortier** said that there are times when ATC implements the Crossing-in-the-Corridor Procedure and that meets the same need as the one in the proposal.

5. Review and Discuss Runway Use System Priorities

Dana Nelson, Technical Advisor, gave background on the current runway Use System (RUS) and explained that it was preceded by the Preferential Runway System (PRS). PRS was established in the 1980's and officially approved in 1990. It established the priority for arrival and departure runways. **Nelson** presented a graph to illustrate the four priority runways and their percentage of operations that utilized each priority during all hours of the day and then during nighttime hours.

2017 Departures:

- Priority 1, 12L/R 18.8% of operations during all hours in the day and 42.9% of operations during nighttime hours.
- Priority 2, 17, 31% of operations during all hours in the day and 6.3% of operations during nighttime hours.
- Priority 3, balanced 4/22, 0.1% of operations during all hours in the day and <0.1% of operations during nighttime hours.
- Priority 4, 30L/R, 50.1% of operations during all hours in the day and 50.7% of operations during nighttime hours.

2017 Arrivals:

- Priority 1, 30L/R 50.5% of operations during all hours in the day and 58.2% of operations during nighttime hours.
- Priority 2, 35, 6.4% of operations during all hours in the day and 3.3% of operations during nighttime hours.
- Priority 3, balanced 4/22, 0.1% of operations during all hours in the day and 0.1% of operations during nighttime hours.
- Priority 4, 12L/R, 43.0% of operations during all hours in the day and 38.4% of operations during nighttime hours.

Nelson added that the MAC Noise website provides tools and reports that illustrate RUS and how the system works in different flows. Each month, each runway's arrivals and departures are broken down and analyzed. **Nelson** reiterated that the FAA uses the RUS as a guide when traffic and wind allow. Air traffic demand is a significant consideration for air traffic control, and thus there are traffic demand periods per 15 minute segments. When there are less than 3 operations in a 15 minute period, that is considered a low demand period. During a low demand time segment, there is more opportunity to follow the RUS. A medium demand period is when there are 3.5-15 operations in a 15 minute segment and a high demand period is when there are more than 15 operations in that time segment. As the demand increases per 15 minute time segment, RUS opportunities decrease.

Nelson showed a graph of the average operations per hour in 2017, to show midnight-4am are low demand hours based on this context. High demand periods are at 7am, 9am-11am, 1pm-4pm, 6pm, and 8pm. The other hours of the day are in a medium demand time period.

Chair Miller, Eagan, commented that a communication challenge is in talking about flow by grouping usage of Runways 12L, 12R and 17 together and then grouping usage of Runways 30L, 30R and 35 together. The challenge lies in that priority is so rarely being used that when mashing the runway use together, the full story is not being told. **Miller** asked FAA if Runway

17 use will return to pre-CRO levels. **Sean Fortier, FAA**, commented that the FAA is always striving for increased efficiency and the most efficient would be the combination of Runways 30L, 30R and 35 grouping that resembled that prior to CRO. **Nelson** reminded the NOC that an update on CRO and its process is part of the NOC's 2018 Work Plan. Updates on FAA tools, tests, and timelines will be presented to the NOC as part of that item, as well as expectations for its impact on runway use. **Representative Olson, Minneapolis**, commented that it seems going back to pre-CRO means returning to a heavier runway use north of the airport. **Olson** then reminded the group that pre-CRO, there were more noise complaints coming from Minneapolis because the north flow was favored. She also stated that CRO has helped to achieve greater balance and the current noise complaint data supports the balance in runway use and thus noise. **Olson** then requested to be able to see runway use by operation percentage each month, expecting that it will provide more clarity on the regular use statistics of each runway.

6. Update on the FAA's Survey to Re-Evaluate Noise Measurement Methods

Dana Nelson, Technical Advisor, stated that in May 2015, FAA announced it would start to update the dose-response relationship between noise exposure and the percentage of people who are highly annoyed. This is part of a larger effort by the FAA which includes: studying the relationship between noise and sleep disturbance, cardiovascular health, and children's cognitive learning. The FAA indicated the survey results are planned to be released in Q2 2018, however they are still undergoing inter-agency review by the Department of Defense and Department of Housing and Urban Development. The results will be released in the form of a report, covering the purpose of the study, the scientific approach and the survey results. The FAA stated that the results will be released on their website and announced through the federal register to begin the process of taking stakeholder feedback. The release of the results will not include any discussion on implications to changing policy.

Nelson communicated details about the survey that FAA had shared, including that the survey was 12 questions long and was called the "Neighborhood Environmental Survey". This survey was sent to residents around 20 undisclosed airports throughout 2016 and early 2017. Airports were selected based on annual jet operations, number of households in the 65 DNL, and number of households in the 60-65 DNL; this included 95 airports. The final 20 airports were determined using Balanced Sampling, some of those factors include: geographic balance, number of operations, percentage of nighttime operations, and population in the vicinity of the airport.

The FAA's response goal was to have 500 resident responses per airport, totaling to 10,000 respondents. Residents were selected by running noise contours in 5 dB bands from DNL 50-70 using flight data for the 20 airports. The FAA plans to use the Federal Register to publish a link to an FAA website to view the detailed noise annoyance survey report. The FAA has also built a new section of its website with information on: fundamentals of noise and sound, community response to noise, and history of noise. The website is available here: https://www.faa.gov/regulations_policies/policy_guidance/noise/history/.

Representative Link, Inver Grove Heights, asked if the survey looks at the perception of noise as well as the scientific analysis of noise. **Nelson** responded that the survey is identifying respondents based on their aircraft noise level and then evaluating their aircraft noise

annoyance level. The annoyance level is what they will use to plot the dose-response curve. **Link** followed up by asking if the report will include scientific analysis on relationship between noise and sleep disturbance, cardiovascular health, and children's cognitive learning. **Nelson** responded that this report will only include the residents' perception of noise and the other studies are ongoing, either funded by FAA or cooperative research, and will all be included when a broader policy conversation occurs. **Representative Dmytrenko, Richfield**, asked what the timeline is for receiving the full report and related information. **Nelson** responded that the FAA said they will not wait for the other studies to be completed before starting policy discussions. **Nelson** also said she doesn't think that it will be years before the results of this particular study come out nor will it be years before a policy discussion starts; seems likely the former may even occur sometime in 2018. **Representative Olson, Minneapolis**, mentioned that Congress is working on the next update to the FAA bill and the House version includes the provisions that would require this study be reported on in the next year. **Representative Goss, Delta**, asked if the intent is to keep the 20 airports anonymous. **Nelson** responded that the FAA initially stated the airports would stay anonymous but that she's not sure if their position on that has changed. **Goss** asked if the questions themselves would stay anonymous and **Nelson** responded that the questions will be included in the report. **Representative Martin, Bloomington**, asked how the determination was made to have the survey distributed to residents in the 60-65 DNL and how many surveys of this nature have occurred in the past. **Nelson** responded that the threshold dates back to a congressional act in the early 1970's to establish a national noise threshold. Later there was an exercise done to establish a similar survey but it was on all transportation noise sources and did only focus on aviation noise. Nor did it have a defined time period. This process developed what is known as the Schultz Curve and it was determined that 13.6% of the population is highly annoyed at 65 dB DNL.

7. Review of the Spring Listening Session

Brad Juffer, Assistant Technical Advisor, reviewed the April 25th Spring Listening Session. Five residents attended the meeting from Minneapolis, Apple Valley, and Eagan. The meeting was also attended by representatives from FAA, MAC Commission, and City of Minneapolis. The conversation focused on the percentage of MD-80 and MD-90 aircraft, MSP nighttime and early morning cargo operations, overall trends, Area Navigation (RNAV), and the MAC Residential Noise Mitigation Program.

8. Public Comment Period

Chair Miller, Eagan, mentioned that two people requested to speak, **Scott Norling** from Mendota Heights and **Connie Carrino** from MSP FairSkies. **Miller** moved to allow them both to speak and the motion was seconded by **Co-Chair Hart, Delta**.

Scott Norling, Mendota Heights, thanked the group for considering the proposal and encouraged them all to look at the Q&A slides in the packet. **Norling** stated that he is a resident affected by aircraft noise and also works for Leidos in Eagan, formally of Lockheed Martin, where they work on air traffic control modernization programs. **Norling** stated that some of his neighborhoods experience 80-90 dB noise events and that's because the aircraft are only 1,200-1,300 feet over the neighborhoods in that area of Mendota Heights. Using his own observations as well as the MAC's FlightTracker, **Norling** stated that he has noticed patterns and has a few questions related to those observed patterns. Why during high demand periods are there departures every minute and on the same track? **Norling** observed that it took about

one minute for the aircraft to achieve the 3 mile separation standard. During non-high demand periods, the same track appears to be used and concentrated over the same neighborhoods. **Norling** had a few specific examples to present if anyone had questions. The 12L proposal that he created is a higher usage of an existing track, it is not a new track. **Norling** agrees that diverging of flights is important but stated that since Runway 12L is used double to triple as often he was hoping that a larger bulk of the traffic could be moved slightly south; slightly meaning a couple thousand feet laterally in distance. **Norling** stated that during lower demand times, this delayed divergence would be easier to utilize, since it only takes one minute for the 3 mile separation standard to be achieved. **Norling** referenced the last NOC minutes where Co-Chair Hart, Delta, mentioned he would like to see runway use and operational tactics to reduce noise; he stated that his proposal does just that. **Norling** referenced the January 2018 NOC minutes where Chad Leqve, MAC, stated that his team is always looking for ways to reduce the noise contour and that his proposed tactic does just that. **Norling** quoted parts of the description of the Eagan/Mendota Heights Corridor and said he would like to see some flexibility exercised, thinks that turning aircraft further south will reduce the areas of sensitive land use areas impacted, and that implementation of this procedure will help achieve the NOC's noise reduction goal.

Connie Carrino, MSP FairSkies, asked to clarify that out of all requests made by MSP FairSkies to the NOC, the only one considered and acted on is the most recent, to change the public comment period and to make meetings more approachable. **Carrino** mentioned that she lives in Edina and her city is represented by an At-Large member. She continued that concerns in her city are not the same as those of the other cities represented by the same At-Large member and thus makes outreach a challenge. **Carrino** applauded the Mendota Heights residents and the support from their representative. As such, it would make more sense to align cities from similar areas, for example, having a representative for St. Louis Park and Edina, specifically. A number of MSP FairSkies members are residents of Minneapolis, and would like the option of having the Minneapolis representation expanded to other cities of impact, like Edina. **Carrino** asked if the entire packet for the meeting is available to the public or if the meeting presentations are all that is available. **Dana Nelson, Technical Advisor**, stated that she will make sure to send the meeting packet to Connie. **Carrino** asked if the NOC has ever considered offering an audio recording or video recording of the meeting.

Representative Olson, Minneapolis, said the topic of video recording the meetings has come up and that she wants the group to explore that option. **Amie Kolesar, NOC Secretary**, stated that audio recordings of each meeting are made and the recording is retained for a year from the date it was made. **Olson** suggested making the audio recordings easier to access by the public. **Representative Goss, Delta**, mentioned that the sub-committee brought up the possibility of video recording the meetings and while majority of the sub-committee members are in favor of a recording, it's less of a NOC Bylaw issue and more of an available technology restraint. **Nelson** said that if that becomes a request from the NOC that she will assist in its navigation through MAC's internal resources. **Miller** asked where the MAC Commission meetings were live streamed. **Nelson** responded www.metroairports.org, and that she would send the direct link to the members. This link is available at: metroairports.org/Airport-Authority/Metropolitan-Airports-Commission/Public-Meetings/Public-Meetings.aspx.

9. Announcements

Dana Nelson, Technical Advisor, informed the group that the MAC has welcomed a new member of leadership onboard, Vice President of Strategy and Stakeholder Engagement, Naomi Pesky.

Summer Listening Session is on Tuesday, July 17, 2018 at the Richfield City Hall.
The next NOC Meeting on July 18th, 2018 at the MAC General Office.

Representative Goss, Delta, requested that while NOC will be contacting MSP FairSkies when action is taken on their items, that other organized groups that express aircraft noise concern should be notified as well.

10. Adjourn

A motion to adjourn was requested by **Chair Hart, Delta**, moved by **Representative Olson, Minneapolis**, and seconded by **Co-Chair Miller, Eagan**.

The meeting adjourned at 3:31 p.m.

The next meeting of the NOC is scheduled for Wednesday, 18th July, 2018

Respectfully Submitted,

Amie Kolesar, Recording Secretary

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Bradley Juffer, Assistant Manager—Noise, Environment & Planning

SUBJECT: **REVIEW OF MONTHLY OPERATIONS REPORTS: MAY AND JUNE, 2018**

DATE: July 3, 2018

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 July 18, 2018 NOC meeting, MAC staff will provide a summary of this information for the months of May and June. To view these summary reports prior to the meeting, visit the Archives section at the link above.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Dana Nelson, Manager—Noise, Environment & Planning

SUBJECT: **NOC BYLAW MODIFICATIONS TO FACILITATE GREATER CITIZEN INPUT**

DATE: July 3, 2018

At the May 16, 2018 NOC meeting, the Committee reviewed a list of recommendations from the NOC Bylaw Review Subcommittee. The Subcommittee was developed as a result of requests made by the MSP FairSkies Coalition to “Enhance the NOC with greater stakeholder (citizen) representation”. During the January 24, 2018 NOC meeting, Committee members recognized the importance of a balanced forum for discussing aircraft noise issues at MSP and agreed that the membership of the NOC should contain six industry representatives and six community representatives. The Committee did, however, recognize the opportunity to review past practices and its Bylaws in an effort to facilitate greater citizen input during meetings and thus established the NOC Bylaw Review Subcommittee.

The NOC Bylaw Review Subcommittee was created in January 2018 and met on two occasions in 2018. During these meetings, the Subcommittee discussed NOC Bylaws ARTICLE VIII, Committee Meetings and developed the following list of recommended changes. Draft redline edits to the NOC Bylaws consistent with these recommendations are provided in Attachment 1.

Subsection 4 - time and location of NOC meetings. The following ideas were discussed and received support from the Subcommittee:

- NOC members are strongly suggested to attend Listening Sessions when able.
- Hold one evening meeting by the NOC each year (suggested November for approval of the Work Plan).
- Changing the time and location of the NOC meetings should be further evaluated in the future

The Subcommittee members recommend that ARTICLE VIII, Sections 1 and 4 of the Bylaws be amended, as shown in Attachment 1, to allow the ability to have NOC meetings during the evening.

Subsection 5 – Items added to future agendas. The following ideas were discussed and received support from the Subcommittee:

- Due to the rigid and lengthy process for adding agenda items to NOC meeting agendas, the Subcommittee would like to allow some flexibility for the Co-Chairs to add items to upcoming meetings at their discretion.

The Subcommittee members recommend that ARTICLE VIII, Section 5 of the Bylaws be amended, as shown in Attachment 1, to allow for items to be added to future NOC agendas by mutual consent of the NOC Co-Chairpersons.

Subsection 6 – Public comment period at NOC meetings. The following ideas were discussed and received support from the Subcommittee:

- Remove the requirement in the Bylaws to have speakers sponsored by two (2) members of the Committee.
- Model the public comment period after “Citizens to be Heard” at city meetings using “I wish to speak” cards for individuals wishing to make a comment, then the acting Chairperson can make a final request for those wishing to speak who did not fill out a card.
- Move the comment period on the agenda to after the monthly operations update report, however keep this specificity out of the Bylaws to allow flexibility on the agenda structure.
- The time for the public comment period should be extended from the current fifteen (15) minutes to twenty (20) minutes with the ability to change it at the meeting by majority vote.
- The time limit for individual speakers should continue to be three (3) minutes, but there are some situations where the acting chairperson may need to allow additional time and that ability should be reflected in the Bylaws.
- The NOC members should have the ability to ask clarifying questions of the speaker, if necessary. (This would not be specified in a change to the Bylaws).
- MAC Staff should provide the Co-Chairs with a prepared script to open up the public comment period of the meeting. The script would cover the public comment guidelines, such as speaking into the microphone, stating name and address, the speaker’s comment time, and what the Committee does with comments. (This would not be specified in a change to the Bylaws).
- A section on the macnoise.com website should be created to provide public comment period guidelines at NOC meetings so individuals wishing to speak know what to expect. This would include the steps individuals wishing to speak should go through to provide comment, what they can expect at the meeting, and what the Committee does with comments. (This would not be specified in a change to the Bylaws).

The Subcommittee members recommend that ARTICLE VIII, Section 6 of the Bylaws be amended, as shown in Attachment 1, to reflect the first five bullet points above for public comment during NOC meetings. The last three bullet points would not need a change to the Bylaws.

At the July 18, 2018 NOC meeting, the following requested action will be before the Committee.

COMMITTEE ACTION REQUESTED

CONSIDER APPROVAL OF THE MODIFICATIONS TO THE NOC BYLAWS CONSISTENT WITH THE NOC BYLAW SUBCOMMITTEE RECOMMENDATIONS, AS SHOWN IN ATTACHMENT 1.

Attachment 1



BYLAWS **MSP Noise Oversight Committee (NOC)**

ARTICLE I Committee Mission

Provide a balanced forum for the discussion and evaluation of noise impacts around Minneapolis-St. Paul International Airport through the following functions:

- Identify, study, and analyze airport noise issues and solutions
- Provide policy recommendations or options to the MAC Planning, Development and Environment Committee and full Commission regarding airport noise issues
- Monitor compliance with established noise policy at MSP
- Ensure the collection of information and dissemination to the public.

The above functions will be conducted in a manner that considers public and airport user concerns, taking into consideration public input/information from the following channels of communication:

- MAC Noise Program Office
- MAC Noise Program Office Website
- MSP Noise News newsletter
- MAC noise complaint and information hotline
- Governmental body official policy development processes
- MAC public hearings
- MAC informational meetings
- Individual NOC members
- MAC Planning, Development and Environment Committee
- Metropolitan Airports Commission meetings.

ARTICLE II Membership

1. The Committee membership shall consist of twelve officially designated representatives or, in the absence of designated representatives, the alternative representatives, with authority to act upon all matters within the purview of the Bylaws.

Attachment 1

2. The airport users and communities shall have an equal number of members and votes on the Committee.
3. The MSP Airport and Airline Affairs Committee (AAAC) shall make airline and pilot appointments, except for the Minnesota Business Aviation Association (MBAA).
4. (a) Community representation will be defined as those communities within or touched by the most recently developed and submitted Part 150 DNL 65 contour. The following communities shall be entitled to one seat each on the Committee: Bloomington, Eagan, Mendota Heights, Minneapolis, and Richfield and shall each appoint one primary representative and one alternate representative. Such communities shall be referred to as the “Designated Communities.”

(b) The following communities shall be entitled to share as a group one seat on the Committee: Burnsville, Inver Grove Heights, St. Louis Park, St. Paul, Sunfish Lake, Apple Valley, and Edina. Such communities shall be referred to as the “At-Large Communities.” The At-Large Communities as a group shall be the appointing authority for the At-Large Communities seat. Each At-Large Community shall have one vote in the selection of the At-Large Communities’ primary and alternate representative.

(c) Taken together, Designated Communities or their primary and/or alternate representatives and At-Large Communities or their primary and/or alternate representative shall be referred to as “communities” or “community representatives.”
5. The respective appointing authority shall file with the MAC the designated representative and alternate, setting forth their names and mailing address. Thereupon, representation on the Committee will be confirmed by issuance of a certificate of membership to each such representative and/or alternate representative.
6. Primary representatives and alternate representatives of Designated Communities, Users, and At-Large Communities shall be appointed to serve for two (2) years. Alternate representatives will only be allowed to represent their respective organization in the absence of a primary representative.
7. The composition of the Committee is as follows:

USER REPRESENTATION

- 1 – Scheduled airline representative
- 1 – Cargo carrier representative
- 1 – Charter/scheduled airline representative

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- 1 – Chief Pilot representative
- 1 – Minnesota Business Aviation Association (MBAA) representative
- 1 – At-Large Airport User representative, as selected by the MSP AAAC

CITY REPRESENTATION

- 1 – City of Minneapolis representative
 - 1 – City of Richfield representative
 - 1 – City of Mendota Heights representative
 - 1 – City of Bloomington representative
 - 1 – City of Eagan representative
 - 1 – At-Large Communities representative, as selected by the At-Large Communities
8. The total Committee membership will never exceed twelve (12) members. Modification of total membership numbers must be by a unanimous vote of the Committee.
9. Input may be sought from organizations or agencies that deal directly with aircraft noise abatement programs to include: Airlines for America (A4A), Federal Aviation Administration (FAA), Minnesota Air National Guard, U.S. Air Force Reserve, MAC, Metropolitan Council and any other organization or agency with majority approval by the Committee.

ARTICLE III **Powers and Duties of Membership**

Subject to the voting provisions herein set forth, the membership shall have the following powers and duties:

- 1. Both airport user and community appointed members must be vested to represent their constituency and vote accordingly.

ARTICLE IV **Voting Rights of Membership**

- 1. At all meetings of the Committee, attendance by four (4) airport user representatives and four (4) community representatives shall constitute a quorum for voting/action purposes. For the purpose of conducting meetings, at least half, six (6), of the Committee members must be in attendance. Attendance includes meeting participation via conference call.
- 2. There shall be equal representation of airport user and community membership on the Committee and, to that end, for purposes of voting on all matters requiring a

Attachment 1

vote of the Committee, each representative, both user and community, shall have one (1) vote, which in the absence of a representative may be his or her duly designated alternate representative.

3. These Bylaws may be amended or altered by the vote of a super majority of the membership present at any meeting, provided that notice of such proposed amendments shall have been given fourteen (14) days prior to a general membership meeting.

ARTICLE V **Co-Chairpersons**

The airport user and community segments of the Committee shall each select a Co-Chairperson who will serve at the pleasure of the appointing group. Each Co-Chairperson will serve for a two-(2) year term or until his/her representation on the Committee terminates, or until replaced by the appointing group, whichever occurs first.

The powers and duties of the Co-Chairpersons are as follows:

1. To review agendas.
2. To preside over meetings - the presiding Chairperson will alternate every other meeting.
3. By the mutual consent of the Co-Chairpersons, special meetings may be called, or upon request of a majority of the Committee, four (4) users and four (4) community representatives.
4. To sign as Co-Chairpersons of this Committee, all instruments in writing that may require such signature, unless the membership shall otherwise direct, and to perform such other duties and tasks as these Bylaws or as the membership shall from time to time prescribe.
5. Each segment of the Committee, by a majority vote, shall elect their respective Co-Chairperson.

ARTICLE VI **Technical Advisor**

The Manager of the MAC Noise Program Office will act as the Technical Advisor to the Committee. The Technical Advisor shall perform the following functions:

Attachment 1

1. To prepare the agenda for meetings of the Committee which shall include any items for consideration proposed to him/her by any airport user or community representative with the consent of at least one Co-Chairperson.
2. To keep a full and complete record of the proceedings of the Committee and of the meetings of the members.
3. To maintain an up-to-date roster of Committee membership and of the representatives of each member corporation, association, governmental body and unit including the date of appointment and time of service of each representative. He/she shall inform each member as to the termination of the term of service of each representative, no less than sixty (60) days prior to such termination.
4. To make service and publication of all notices that may be necessary or proper. In the case of absence of the Technical Advisor or the Committee's Designee to make service or publication of any notice then such notice may be signed, served and published by the Co-Chairpersons or, in the absence of one of the Co-Chairs, by one of the Co-Chairpersons, or by any person thereunto authorized by any of them or by the Committee.

ARTICLE VII **Technical Studies**

1. The Committee at its own determination, by a majority vote, or at the request of the Technical Advisor, may retain the services of independent technical experts and consultants as deemed necessary in the performance of the Committee's functions.
2. All services that are retained for the purpose of supporting Committee initiatives will be conducted within the budgetary limits of the MAC Noise Program Office.
3. In aid of the Committee's mission, the Committee may ask agencies, corporations, associations, and governmental bodies to make available to the Committee technical advice, and the services of their technical personnel reasonably required for the purpose of studies instituted by the Committee.
4. Studies and reports of technical personnel retained by the Committee for such purpose shall be available to the Committee in aid of its performance of its functions but shall not constitute studies or reports of the Committee unless duly adopted by it.

Attachment 1

**ARTICLE VIII
Committee Meetings**

1. Meetings will be scheduled every other month (odd numbered months) – day and time to be determined by the Committee. Meetings will be held if workload/business necessitates as mutually determined by the Co-Chairpersons. If any regular meeting day falls on a Saturday, Sunday or holiday, then the meeting shall occur on the next business day thereafter. Special meetings of the Committee shall be established through the mutual consent of the Co-Chairpersons or by a majority vote of the Committee.
2. Prior to every meeting, a Committee agenda review session will be conducted for Committee members and/or Alternates only. Committee meetings will be open to the public. All decisions, staff direction, and votes will be made during the public Committee meeting.
3. The Technical Advisor or the Committee’s designee shall distribute notice of general or special meetings of the Committee at least two (2) weeks prior to the meeting to each representative at his/her email or mailing address currently on file with the MAC. Such notice shall set forth the agenda of the meetings and no matters requiring Committee action may be considered which are not on the agenda unless the Committee, by a super majority vote of representatives in attendance, elects to consider such matters. Each Committee agenda will include a review of any comment trends, topics or issues raised via the Committee’s recognized channels of communication.
4. All meetings shall be held at the general offices of the MAC or at such other place or places from time to time as the Committee, by majority vote of representation in attendance at a meeting, determines. The place of meeting or alternative place of meeting shall be set forth in notices of meetings.
5. Committee members can propose an item that is not included on the work plan for Committee consideration to either co-chair for approval and inclusion on the agenda. Through mutual consent of the Co-Chairpersons, agenda items proposed by Committee representatives will either be:
 - (a) Approved and added to the agenda of a future NOC meeting; or
 - (b) Proposed to the Committee at a future meeting at which time the representative proposing the item, and any individuals designated by the member to speak to the topic, will be given a specific amount of time, agreed to by both Co-Chairs, to present the item to the Committee. The Committee will consider the agenda item and make a determination whether the item should be added as a future agenda item, for more in-depth discussion and consideration, or dismissed from further discussion. This determination shall be made by a vote of at least four members of either the user representative group or city representative group.
6. A public comment period of no more than twenty (20) minutes will be added to

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each agenda unless amended by majority vote during the meeting. Individuals choosing to speak during the public comment period should either fill out a speaker card prior to the meeting or contact their NOC representative. After all individuals who completed speaker cards have spoken, the chairperson will ask if there are additional individuals who would like to speak. Each speaker will be limited to three (3) minutes, unless the acting chairperson for the meeting provides additional time. The Committee may add items raised during the public comment period to future meeting agendas by majority vote.

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ARTICLE IX Sub-Committees

Sub-Committees will be established on an as needed basis as determined by the organization as a whole, and will be comprised of people with the expertise or a vested interest in the area of discussion, with a date certain completion time. Sub-Committees shall be provided a defined task to accomplish and a timeframe within which to complete the task. The composition of Sub-Committees will always be an equal balance of airport user and community representatives.

ARTICLE X Procedures and Rules of Order

Robert's Rules of Order will be the governing doctrine for conduct of business and membership participation/behavior. The Committee may also adopt other rules necessary for the governance of the Committee's conduct of business. A rule can only be amended or suspended by a vote of two-thirds of the full Committee.

ARTICLE XI Reporting Relationship and Responsibility in MAC's Process

1. Annual work plans will be developed in consultation with the MAC Planning, Development and Environment Committee and reviewed and approved annually by the MAC full Commission.
2. Actions by the Committee will be forwarded to the MAC Planning, Development and Environment Committee for review, and forwarded to the full Commission.
3. The Co-Chairs will provide a report to the MAC Planning, Development and Environment Committee on an annual basis.
4. Each member will be responsible for reporting to his or her respective appointing authority.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Dana Nelson, Manager—Noise, Environment & Planning
Pat Mosites, Project Manager—Airport Development

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

DATE: July 3, 2018

The NOC 2018 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 at Minneapolis-St. Paul International Airport (MSP). Since 1992, the MAC has spent approximately \$482.9 million on noise mitigation programs at MSP. This includes insulating over 15,100 single-family homes, 3,300 multi-family units, 18 schools and acquiring over 400 residential properties. The MAC is committed to continue mitigating homes based on an amended Consent Decree until the year 2024.

Amended Noise Mitigation Program

Under the provisions of the First Amendment to the Consent Decree, filed in September 2013 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

The 2017 Noise Mitigation Program eligibility was established by the 2013/2014/2015 annual noise contours. These noise contours qualified 138 single-family homes, a 6-unit separate living complex and an 82-unit apartment building to receive mitigation in 2017. All of these units are located in Minneapolis and within the 60-62 DNL noise contour and therefore eligible for the "Partial Noise Reduction Package", which is the installation of central air conditioning plus up to \$5,395¹ of noise mitigation products and services or up to \$18,884¹ of noise mitigation products and services where air conditioning already exists, or when the homeowner chooses not to receive a new air conditioner.

To-date, 103 homes have been completed, 23 homes have begun the construction or pre-construction phases, and 12 homes declined participation. Two multi-family structures were also eligible to participate in the Multi-Family Mitigation Program in 2017; one property is in pre-construction, and one property declined to participate. To-date, the MAC has spent close to \$2.1 million on the 2017 Mitigation Program.

2018 Noise Mitigation

The 2018 Noise Mitigation Program eligibility was established by the 2014/2015/2016 annual noise contours. These noise contours qualified 283 single-family homes in Minneapolis for the 2018 Noise Mitigation Program. Of these homes, 165 are located within the 60-62 DNL noise contour and therefore eligible for the "Partial Noise Reduction Package". An additional 118 single-

¹Dollar allocations will be adjusted consistent with changes in the Consumer Price Index.

family homes are eligible for the “Full 5-decibel Reduction Package”. Previous mitigation given to these homes will be considered when doing the design for the 5-decibel reduction package.

There are no multi-family units within the 2018 Mitigation Program.

To-date, 40 homes have been completed, 237 homes have begun the construction or pre-construction phases, and 6 homes declined participation. To-date, the MAC has spent over \$1 million on the 2018 Mitigation Program

2019 Noise Mitigation

The 2019 Noise Mitigation Program eligibility was established by the 2015/2016/2017 annual noise contours. These contours qualified 430 single-family homes in Minneapolis for the 2019 Noise Mitigation Program. It is important to note that a reduction in aircraft noise exposure in 2017 compared to 2016 resulted in the 2017 actual noise contour shrinking in Minneapolis along the arrival lobe for Runway 12R. Based on the 2017 annual noise contour analysis, 53 homes that met the Second-Year Candidate Eligibility criteria in the 2016 analysis no longer meet the noise level criteria required for Third-Year Candidate Eligibility.

Of the 430 homes, 249 are eligible for the “Partial Noise Reduction Package”. Of those, 177 homes were previously located outside the eligibility area and 72 homes were previously eligible for homeowner reimbursements. The remaining 181 single-family homes are eligible for the “Full 5-decibel Reduction Package”.

There were no multi-family units within the 2019 Mitigation Program.

The MAC coordinated letter and questionnaire mailings with the City of Minneapolis beginning in March 2018. The letters also included an invitation to one of nine monthly homeowner Orientation Meetings, which began in April 2018.

At the July 18, 2018 NOC meeting, Mr. Pat Mosites, MAC Airport Development Project Manager, will provide a progress update on the implementation of the 2017, 2018 and 2019 Residential Noise Mitigation Programs.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Dana Nelson, Manager—Noise, Environment & Planning

SUBJECT: **BENCHMARKING STUDY RESULTS AND DRAFT REPORT REVIEW**

DATE: July 3, 2018

In May 2018 the NOC approved the plan for a Noise Management Benchmarking study that was presented by Mary Ellen Eagan, President/CEO of HMMH Corporation. The objectives of this study are to:

- (1) detail the constraints imposed on U.S. airport noise programs due to the highly-regulated environment in contrast with airports in other countries;
- (2) provide an independent and transparent review of the MAC Noise Program Office and related noise abatement activities as compared with peer airports; and
- (3) identify improvement opportunities for the MAC Noise Program Office and the NOC

The desire to conduct such a study stems from recent conversations at the NOC about thinking creatively about goal-setting and finding realistic solutions to aircraft noise issues at MSP. The NOC members wanted to learn more about how other airports are discussing and achieving noise reductions and find creative opportunities to apply them to address noise issues at MSP.

In order to gather information from various airports, HMMH conducted a survey of the top 72 airports in the U.S. and Canada. The survey was completed in early June with a 75% response rate. The survey was broken down into the following topical areas:

- Required Airport Information
- Program Management and Innovative Use of Technology Measures
- Stakeholder Engagement Measures
- Operational Measures
- Mitigation and Land Use Measures
- Policy and Research Measures

HMMH has prepared a draft report summarizing the motivation for the study, study methodology, and survey results. Mary Ellen Eagan will present the draft report at the July 18, 2018 NOC meeting.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Dana Nelson, Manager—Noise, Environment & Planning

SUBJECT: **UPDATE ON CONVERGING RUNWAY OPERATIONS AT MSP**

DATE: July 3, 2018

At the July 18, 2018 NOC meeting, Federal Aviation Administration (FAA) Traffic Management Officer, Kurt Mara will provide an update on the agency's ongoing efforts to mitigate the effects of Converging Runway Operations (CRO) at MSP.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Assistant Manager—Noise, Environment & Planning

SUBJECT: **NEW FLIGHTTRACKER DEMO AND PRESENTATION ON IMPROVING NOISE OFFICE DATA THROUGH MACHINE LEARNING**

DATE: July 3, 2018

The 2018 NOC Work Plan has an item titled “Improve MAC Noise and Operations Monitoring System (MACNOMS) for Better User Experience”. The description of this item explains, “MACNOMS provides MAC with the tools and data to communicate effectively with its community, FAA, local government, users and the Noise Oversight Committee by facilitating a conversation based on factual information. MAC staff will continue to improve upon existing components, and develop new tools, for better public experience.”

In 2016, MAC Noise Office staff developed a roadmap to identify key components of MACNOMS that could be improved or augmented with new tools that would both facilitate conversations with factual information and enhance public experience. Two of these improvements will be highlighted at the July 18, 2018 NOC meeting.

FlightTracker

FlightTracker is one of the Noise Office’s most popular public tools. Over the previous year, FlightTracker has had over 19,000 visitors from over 60 countries located on 6 continents. Most importantly, staff strives to meet the needs of our customers closest to us. Approximately 12,000 of the visitors were from Minnesota.

Because of its extensive use, ideas submitted from frequent users, and time elapsed since its launch, staff determined it was time for an overhaul. The new FlightTracker launched on June 20th with an official rollout on June 27th. Staff will provide a demonstration of the new FlightTracker during the Summer Listening Session, at the July 18 NOC meeting, and at the August Planning, Development & Environment Committee meeting of the MAC.

Machine Learning

MAC staff is committed to a process of continual improvement of our data. The quality of our data is crucial to provide a foundation for effective dialogues and accurate analyses. One integral element of our data is the sound monitoring data. MACNOMS equipment records sound data at 39 sites located in the communities that surround MSP. When event thresholds are reached the data is saved. This event data is then correlated to MSP flight tracks using both time and space parameters. This process is used to determine if the source of the event was likely an aircraft or generated from the community (such as a garbage truck or lawn mower). MAC staff manually validates the sound event matches to further determine if the source was indeed an aircraft. To do this, staff listens to a large volume of sound events each month. This task is time-intensive and due to limited staffing and resources, not all noise events go through this manual validation process.

In 2017, staff sought to find a solution to improve the matching process to increase the efficiency of the manual validation and to further enhance the quality of the dataset. Utilizing the Machine Learning expertise of Nick Heller, a PhD student from the University of Minnesota Department of Computer Science and Engineering, staff completed the first phase of a pilot program that creates an image of each sound event which is fed into a convolutional neural network. The output is a level of confidence that the sound event was produced by an aircraft. Due to the success of the first phase, MAC will build on this project in 2018 to further improve the process and get to a point where the events requiring manual validation will be reduced to only those with low confidence levels.

Staff will provide a presentation on this effort at the July 18, 2018 NOC meeting.

MEMORANDUM

TO: MSP Noise Oversight Committee (NOC)

FROM: Brad Juffer, Assistant Manager—Noise, Environment & Planning

SUBJECT: **REVIEW OF THE SUMMER LISTENING SESSION**

DATE: July 3, 2018

One of the elements of the framework for the NOC includes convening a quarterly meeting with the public. The primary goal of the meeting 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 around MSP. The NOC may review the topics discussed and add them to future meeting agendas at their sole discretion.

On July 17, 2018 at 7:00 P.M., the Summer Listening Session was held at the Richfield City Hall. MAC staff will provide a review of the attendees and topics discussed during the Summer Listening Session at the July 18 NOC meeting.

The next Listening Session will be on August 17, 2018 at 7:00 P.M. at the Eagan Community Center, located at 1501 Central Parkway, Eagan, MN 55121.