



**MSP NOISE OVERSIGHT COMMITTEE
MEETING MINUTES**
Wednesday, 21st of March 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, 21st of March 2018, in the Lindbergh Conference Room at the MAC General Office. Chair Hart called the meeting to order at 1:31pm. The following were in attendance:

Representatives: D. Miller; J. Hart; R. Barette; M. Regan Gonzalez; L. Olson; J. Klinger; J. Rokala; T. Link; D. Lowman; J. Miller; A. Moos

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

Others: M. Nolan – City of Edina; A. Nemcek – City of Rosemount; J. Winnar – FAA; J. Heilmann - FAA; S. Fortier – FAA; L. Moore – City of Bloomington; M.E. Eagan – HMMH; D. Sloan – City of Mendota Heights; B. Hoffman – City of Saint Louis Park; D. Langer - FAA; P. Martin – City of Bloomington; M. Brindle – City of Edina; M. Sands – FAA; S. Kittleson – MSP FairSkies

1. Review and Approval of the January 24, 2018 Meeting Minutes

Chair Hart, Delta, asked if there were changes to the January Meeting Minutes, there were none and approval was moved by **Co-Chair Miller, Eagan**, seconded by **Representative Lowman, Bloomington**, and passed unanimously.

2. Review of Monthly Operations Reports: January and February, 2018

Brad Juffer, Assistant Technical Advisor, reported to the group that MACNOMS recorded 30,703 operations in January 2018 and 30,000 operations in February 2018. The January count is a 3.7% reduction from 2017 while the February count saw an increase of 0.6%. Much of the January reduction was tied to the 12.5" of snow recorded at MSP on 1/22/18. A typical Monday sees about 1,100 operations, on that day only 353 flights used the airport. February's count was buoyed by Super Bowl traffic. The Monday after the Super Bowl, for example saw 1,390 operations at MSP.

Juffer reported 1,865 nighttime flights during January and 2,072 in February. The January total was 2.3% lower than 2017 while the February total was 26% higher. While the Super Bowl traffic

has been well documented, there were also extra night flights on Feb 19 due to an extended round of freezing rain playing havoc on the schedule and pushing flights into the nighttime hours.

The snow storm on 1/22 caused for an unusual runway configuration. 171 of the 173 departures from Runway 4 in January were on Jan 22. This is 150 more than the total for all of 2017. All 21 departures from Runway 35 for January also happened on Jan 22.

Juffer then reported on runway use in January and February, noting that 67% of all arrivals used 30L/30R or 35 and 33% of arrivals used 12L or 12R. Departures did not see the same split between north and south runways. Only 54% of all departures used Runways 30L or 30R while nearly 46% used 12L/12R or 17.

The discrepancy between arrival and departure usage is explained by the flows in January and February. The flow for the past two months was roughly 40% in a North, 30% in a South and 20% in a Mixed. Mixed Flow use in January was 21% while February remained high at 18%. In terms of percentage, 21% in January was the highest use of Mixed Flow in the past 4 years. February's 18% was the 3rd highest monthly total. Mixed flow is used most frequently when the winds are out of the Southwest between 210° and 280° peaking when the wind is reported at 240°. Mixed flow configuration has been employed 60% of the time the winds are reported from that specific direction since the beginning of 2017. In summary, the 249 hours spent in Mixed Flows resulted in a high RUS number for February 2018 and a record breaking RUS number in January 2018.

Representative Olson, Minneapolis, asked if the Mixed Flow being referenced was Mixed Flow A or Mixed Flow B. **Juffer** responded that this particular flow is Mixed Flow A and he added that it is the flow used majority of the time. In addition to that, the 249 hours spent in Mixed Flow for January and February of 2018 was 100% Mixed Flow A. **Juffer** added that moving forward, Mixed Flow B flows will be noted.

Juffer reported the fleet mix, the split of carrier jets for January and February was 40% regional jets, 57% narrow body aircraft, and 3% widebody aircraft. The CRJ-200 remains the most used aircraft type at MSP and is also one of the quietest carrier jets at the airport. The MD-90 is the second highest used narrowbody aircraft and is also quiet relative to its certificated limit. Often confused with the MD-90 is the MD-80. The MD-80 is the loudest single aisle aircraft still operating at MSP and its use was down to 0.7% for January and February of 2018. For the first quarter of the year, Delta has removed the MD-80 from the MSP schedule. For reference, there were 385 MD-80 operations in January and February and 350 A320-NEO and B737MAX operations.

Regarding complaints, **Juffer** reported 186 locations filed complaints in January and in February they were from 176 locations. In 2017 those numbers were 209 for January and 318 in February. Those locations filed 5,834 complaints in January and an additional 6,018 complaints about MSP flights in February. The 11,852 complaints is a combined reduction of 7,617 complaints from the same months in 2017. There were 124 unique areas that filed a complaint in January; 95% of those areas had between 1 and 3 locations submit a complaint. In February we received a complaint from the city of Andover about a C-130 arrival. In addition to Andover, there were 112 additional areas that filed a complaint in February; 95% of those also were in the low density category of 1-3 locations per area. Combined for January and February, ten locations filed 2/3

or 68% of all complaints. Eight of those locations were also in the top 10 for **Juffer's** last briefing to the NOC. The remaining two locations were previously the 11th and 12th locations. Overall, 69% of all locations filed 10 or less complaints thus far in 2018.

Juffer reported on sound monitoring, aircraft events occurred for 291 hours in January and roughly 261 hours in February. This is a 26% reduction in the time above 65 attributable to aircraft thus far in 2018. A time reduction is naturally accompanied by an event reduction; the 61,100 events for January and 57,700 events in February are nearly 31,000 fewer events than the same months in 2017.

Regarding the noise abatement procedures, **Juffer** reported that the Runway 17 Departure Procedure compliance was consistent at 99.3% in January and 99.5% in February; a total of 57 jets turned westbound early. The Egan/Mendota Heights Corridor Procedure compliance was 91.0% in January increasing to 96.4% in February. The Crossing-in-the-Corridor Procedure was used during the day 28% of the time in January and 30% in February. This procedure was then used 37% (93 flights) of the time at night in January and 43% (52 flights) of the time in February.

The use of high priority runways, according to the Runway Use System, in January was an all-time high at 57.1% accomplished by placing 71% of all arrivals on 30L, 30R, or 35 coupled with 43% of all departures on 12L, 12R, or 17. February receded from that high, but still finished at 55.3%, the 4th highest total in the past four years.

Representative Lowman, Bloomington, asked about the impact of climate change on noise abatement and runway configuration and if the MAC staff is tracking that information. **Juffer** responded that when the Annual Long Term Comprehensive Plan is done, an analysis of the last 10 years of wind data is included. Beyond that, Juffer wasn't aware of other analyses that were completed but will check internally and report back at the May 2018 NOC meeting.

Chair Hart, Delta, thanked the FAA for their continued high compliance with RUS as well as compliance in the Mixed Flow A.

3. Response to MSP FairSkies Requests

Chair Hart, Delta, introduced the topic and asked if there was anyone from MSP FairSkies present that would like to first make a comment. Steve Kittleson, MSP FairSkies, announced he was present and had no comment.

Dana Nelson, Technical Advisor, recapped that at the September 2017 NOC meeting the Committee was presented with three requests from MSP FairSkies. At the January 2018 meeting, the first two items were discussed at great length and the third was tabled for the March 2018 meeting.

Nelson restated the requests and gave a summary of the discussion and decisions to-date.

- Enhance the NOC with greater stakeholder (citizen) representation

There was support from the NOC to keep the group membership the way it is today, six user group representatives and six community member representatives. The balance has served the Committee well and has led to industry-recognized accomplishments. The Committee did recognize the stringent bylaws and decided it was time to review the bylaws in consideration of encouraging greater participation from the public. At the January 2018 NOC meeting, the

Committee created a subcommittee to review and evaluate the bylaws. They would then offer recommendations to enhance community participation and involvement and change the long standing bylaws to reflect actions. **Nelson** reported that the NOC Bylaw Review Subcommittee met once in February and came out of the meeting with bylaw change ideas and potential work plan items. The group will meet again in the beginning of April, and bring final recommendations before the NOC at the May 2018 meeting.

- Establish a goal to reduce noise

This conversation took majority of the January NOC meeting and the Committee decided to take action to solidify the noise mitigation goal: *provide residential noise mitigation out to the 60 dB DNL noise contour by the year 2024*. **Nelson** discussed that in comparison to other US airports, this goal is no small feat and a large amount of staff time, resources and funding is spent on providing residential noise mitigation. There was also agreement that although the Committee made this goal, it does not preclude them from having this conversation again in the future. **Nelson** mentioned on that point that there is a MSP Noise Management Benchmarking Study on today's agenda. Among other things, the study would evaluate whether other airports and/or committees similar to the NOC are establishing noise reduction goals and if so, what the goals are and how they are achieved. The study would also look at best practices that would be beneficial for the MAC and/or the NOC with due regard to the constrained regulations for US airports.

- Publish the 55 dB DNL and N65 noise contours and NEMs

Nelson outlined two potential objectives that publishing such noise contours would perhaps achieve: (1) Help advance a more restrictive federal noise metric/threshold before FAA returns to MSP for Area Navigation (RNAV) departure implementation; or (2) Acknowledge and validate that residents who live beyond the 60 DNL noise contour experience aircraft overflights and noise.

Nelson reported on the last objective that the majority of MSP noise complaints come from areas outside the 55 dB DNL contour, so when discussing concerns from the community, consideration should be paid to the fact that even a larger contour would not encompass a majority of the recorded noise complaints.

When taking a look at the above objectives, **Nelson** presented a slide with some considerations for the Committee to discuss. First, are there relevant situational factors? On this point, **Nelson** mentioned the FAA's current evaluation of its 65 dB DNL noise metric and threshold. Second, are there any unintended consequences/risks that should be considered? During previous NOC discussions about this topic, concerns were expressed by the Committee members about setting expectations in the community for noise mitigation within the 55 dB DNL contour, something that the NOC nor the MAC would be able to accomplish. Lastly, do the proposed tactics provide the most effective means to achieve the objectives? **Nelson** mentioned on this point that the NOC consider the tools in our toolbox to best achieve the objectives in a responsible and smart manner. **Nelson** pledged to take ideas from the NOC, provide staff's technical expertise, data, and tools to communicate to residents that they are heard and we understand there are concerns from residents beyond the current mitigation area. **Nelson** ended the presentation with the specific request.

Dwayne Lowman, Bloomington, reiterated the question about the purpose of reporting the 55 dB DNL contour. **Lowman** recommended the Benchmarking Study be used to see what other airports are doing in the US, then bring it back to the Committee to ask whether the 55 dB DNL contour is the right number. **Tom Link, Inver Grove Heights** reported that the At-Large Communities generally support publishing the 55 dB DNL contours, with the thought that it would be used to provide more information and education to the public and to recognize that there are noise impacts beyond the current mitigation area.

Co-Chair Dianne Miller, Eagan, asked what the status is of the current FAA's study on the 65 dB DNL metric and threshold. **Nelson** reported that the FAA's effort to update the aircraft noise-annoyance data that they've used in the past to base the 65 dB DNL threshold. In 2015 the FAA started a survey around 20 US airports to assess the public's perception on aircraft noise. The survey has been completed, but the findings have not yet been released and there is no timeline for releasing the data. The FAA plans to report the findings, without discussion about potential policy changes, and open it up for public input. The report would explain the purpose of the survey, the scientific methodology and the results. Given the federal policies around aircraft noise impacting many stakeholders and agencies, **Nelson** estimates the policy discussion is likely to be several years long.

Loren Olson, Minneapolis, reported that the City of Minneapolis supports publishing the contours. There are many people who are requesting it, there is national dialog about 55 dB DNL and the Committee should not be afraid of looking at the maps. **Olson** acknowledged the real concerns that communities have about giving the wrong impression to residents or sending the wrong message to FAA about expanding our program in a way that makes them uncomfortable in what we're doing today. In this case, we have to err on the side of transparency and the NOC can control the narrative about looking at such maps.

Lowman said there is a real need to educate the public and we should continue to look into that. He then asked whether 55 dB DNL is the right contour to be looking at. The question is what is the purpose we are trying to achieve – if its education, is this the right means? It would be helpful to see where we fit in the whole scope of what other airports are doing.

Miller shared concerns about expectations from residents for mitigation in the 55 dB DNL contour. On the topic of transparency, she noted that the information is available to MSP FairSkies and the MAC nor the NOC would not stand in the way of them obtaining the data to make their own maps or for their own analyses. **Miller** also mentioned her concerns about getting out ahead of the FAA's process particularly because we have a mitigation program at MSP that no other airport has and we need to hold on to that because it's so important and something that we should celebrate. **Miller** explained that at this point she would not be in favor of the NOC publishing a 55 dB DNL contour, but if we could get the data to MSP FairSkies, that is a good step to take.

Olson requested that the Committee give Mr. Kittleson, MSP FairSkies and opportunity to speak on the topic.

Kittleson, MSP FairSkies, expressed his appreciation to speak. He said the information provided to MSP FairSkies in the past has been appreciated, but it was not a guarantee that they would receive it. **Kittleson** then brought up two points: (1) MSP FairSkies is not the NOC or the MAC and he is not quite sure why they have to do their job. That said, we appreciate getting the data, but there is no guarantee. If they could get the data, then they would

absolutely be sure to create their own maps; (2) residential noise mitigation has never been our goal. We are not trying to expand the mitigation program.

Kittleson stated that in the past the NOC and MAC have been leaders in the nation, and they can be again by updating the way noise is measured and tracked and lead the industry when it comes to best practices. He said he understands there is a benchmarking study, but he doesn't think the NOC should follow, it should lead.

Kittleson also mentioned that the residents he has spoken to within the mitigation area do not feel they have the right or ability to submit noise complaints and that may be why the majority of complaints come from outside the mitigation area. That doesn't mean the pain has gone away or that the noise has gone away. Where noise complaints are coming in are by residents who don't have noise mitigation, by offering the 55 dB DNL contour, the NOC is being transparent and looking at what their pain is.

Lowman asked that from a transparency perspective, is 55 dB DNL the right transparency? He recommended that the Committee should first look at what the benchmarking results would show. He also said that if we decide to provide the data to the public, we should do that on an ongoing basis.

Hart asked for verification from MAC staff that there is no reason why the 55 dB DNL contour data would cease to be available and sent to the public upon request in the future.

Nelson, responded that the data is public, so anyone who requests it would fill out a Data Disclaimer Form, then staff would transmit the data to them. This has been done with MSP FairSkies since 2013. **Nelson** explained the data transmitted last year went through the Minneapolis NOC representative, which may be causing consternation and the perception that we are not being as transparent. This was done as a matter of protocol since the request for the data went to the NOC rather than MAC staff. **Nelson** stated that she proactively sent the Data Disclaimer form to MSP FairSkies to transmit the data once the contour report was published. She said she will continue to provide that to them in the future.

Nelson also addressed the point raised about providing mitigation out to the 55 dB DNL contour and that a decision like that is not within the purview of the NOC nor the MAC. The FAA would have final authority on mitigating to that level, even if airport-generated revenue was used to fund the program. This was also the case for the Consent Decree mitigation program out to 60 dB DNL. **Nelson** also said that to-date the FAA has not approved residential mitigation programs out to the 55 dB DNL contour at other airports. **Lowman** said that is particularly the reason why he is concerned about publishing the data because of the expectation it will create in the community. He said he is in favor of being as transparent as possible, so we should get that data to those requesting it.

Ryan Barette, MBAA, agreed that incremental steps seems like the best way to go. The data could be provided to MSP FairSkies and then NOC can have the opportunity to evaluate the Benchmarking Study results.

Maria Regan Gonzalez, Richfield, expressed the City of Richfield's perspective is that publishing the noise contours would create confusion and raise expectations for additional mitigation for residents. Also, this is not the right timing with the FAA's current study as well as the Benchmarking Study currently underway which would provide more information before

this decision should be made. If part of the goal is to acknowledge that noise does go out further than the current contours, there are better ways this could be communicated.

Olson clarified that last year the data for the 55 dB DNL contour came from her because she filled out the Data Disclaimer Form immediately when she knew the report was completed because she wanted to provide it to MSP FairSkies. There may have been confusion, but it only came from her because she got the paper completed and submitted.

After no further discussion, **Hart** requested a motion to be made for Committee action.

IT WAS MOVED BY REPRESENTATIVE OLSON AND SECONDED BY REPRESENTATIVE LINK TO PUBLISH THE 55 DB DNL AND N65 CONTOURS AND NEMS.

The vote was 10-2 against; motion failed.

4. MSP Noise Management Benchmarking Study Scope

Dana Nelson, Technical Advisor, introduced the benchmarking study and noted that it came to be as a result of a NOC dialogue to assess noise management programs at comparably sized airports. Nelson introduced **Mary Ellen Eagan - President and CEO of HMMH**, the consulting company that will be doing the benchmarking study.

Mary Ellen Eagan, HMMH, described who HMMH is and the proposed approach for the benchmarking study. HMMH was formed in 1981, specifically to provide airport noise related consulting services. To this day, 2/3 of the work done by HMMH is related to aviation noise; this includes Part 150 studies at about 80 airports in the country, environmental assessments, environmental impact studies, Part 161 regulation studies, and noise monitoring studies. **Eagan** continued by elaborating on her 34 years with HMMH, she is the current Noise Working Group Industry Co-chair and the current US Representative to the ACI World Standing Committee on Noise. The most recent research study her consulting practice was a part of is the ACRP study on the impact of aircraft noise on children and learning.

Eagan said her group understands there are three basic objectives to the benchmarking study: to understand the constraints imposed on U.S. airport noise programs due to the highly-regulated environment in contrast with airports in other countries, to provide an independent and transparent review of the MAC Noise Program Office and related noise abatement activities as compared with peer airports in the U.S., and to identify improvement opportunities for the MAC Noise Program Office and MSP NOC.

The scope is broken into six tasks:

Task 1: Identify noise program components and activities to benchmark

Task 2: Develop data gathering strategy to include an airport survey and process for identifying a cohort of peer airports

Task 3: Data collection

Task 4: Data analysis

Task 5: Draft report

Task 6: Final report

Eagan addressed the NOC and said she would like feedback on which activities are the most important to include on the benchmark. Identifiable activities may include operational measures, mitigation and land use measures, program management and innovative use of technology, stakeholder engagement, and research and policy. These will be things to consider when developing the survey however sensitivity needs to be taken to its length, too long and people won't complete it. **Dwayne Lowman, Bloomington**, said he would like to know where the noise contours would fall. **Chair Jeff Hart, Delta**, said he would like to know about runway use systems and operational tactics to reduce noise. What other airports are doing and how stringent they are within their relationship with the FAA to meet compliance. **Maria Regan Gonzalez, Richfield**, asked if there was just a survey or if a policy review would be included. **Eagan** responded that the report will include contextual material on how the airport operates, the regulatory background, and the constraints. **Tom Link, Inver Grove Heights**, said that the two tasks that stood out to him were program management and stakeholder engagement because those seem to be the two things the NOC can control the most. **Loren Olson, Minneapolis**, said she would like to see a focus on what peer airports are doing with their operational measures and land use, then see what the NOC learn from them and explore better practices. **Co-Chair Dianne Miller, Eagan**, added that she would like to find airports with comparable residential properties as close as possible to the airport.

Eagan thanked the NOC for the feedback and said the next step will be to formulate an online survey utilizing industry association mailing lists from ACI and AAAE. The draft and final recipient list will be reviewed with MAC staff prior to execution. In an effort to create a higher level of response, HMMH will offer to assist each person in filling out the survey. Data collection will be fairly straight forward and will then be categorized based on responses. The draft report will include a summary on the background, study findings, methods, recommendations, and this report will be reviewed with the NOC. The tentative plan for that meeting is at the July 2018 NOC meeting. The final report would then be presented at the September 2018 meeting. **Gonzalez** added that the stakeholder engagement piece is really important and as such, knowing what demographics are taken in to account. It is important to know where residents live in proximity to the airport, their socio-economic status, race and ethnicity, and if the residents are home owners or renters. **Lowman** said he didn't know if the timeline would allow it but would be interested in seeing the survey before it goes out. **Dana Nelson, Technical Advisor**, said the survey could go out to NOC members but due to time restrictions, it would have to be via email. **Link** asked what the typical response rate is. **Eagan** responded that it depends on many factors but an incentive they're offering is to make sure airport participants know that they will receive a copy of the results for their participation. **Chair Hart, Delta**, presented the motion to approve the scope as designated by HMMH for the benchmarking study. It was seconded by Jay Miller, Mendota Heights, and passed unanimously.

5. 2017 Annual Noise Contour Report and Mitigation Study

Dana Nelson, Technical Advisor, announced the Annual Noise Contour Report for 2017 is complete and has been released. The Consent Decree requires that the MAC prepare this report annually and release it by March 1st, this year's report was released on February 28th, 2018. The 2017 actual noise contour was developed in partnership with HNTB and using Aviation Environmental Design Tool (AEDT), the FAA's noise monitoring tool.

Nelson continued by highlighting a few 2017 statistics and how they compared to the statistics of 2007. There has been a 28.6% reduction from the 2007 forecast operations. The 2007

forecast showed an average of 274.9 Hushkit flights per day; in reality one Hushkit Stage 3 operates every 10 days, on average. Nighttime operations in 2017 decreased by about 3.2 daily operations from the 2007 forecast number. The 2017 actual noise contour is smaller than the 2007 forecast by about 27% in the 60 DNL contour and by about 38% in the 65 DNL contour. Even with this contour reduction, there are two areas that the contour has extended beyond the 2007 forecast contour, **Nelson** provided a map to illustrate one area in southwest Minneapolis and the other in Eagan/Inver Grove Heights.

Nelson then showed a map illustrating the difference of noise exposure in 2017 compared to 2016 and noted 2017 had more balance between North Flow and South Flow operations compared to the previous two years, this is due to FAA's effort to refine traffic management during Converging Runway Operations (CRO).

Nelson went on to give an overview of the mitigation eligibility per the amended Consent Decree. The current program will provide mitigation to eligible homes until 2024 based on actual noise exposure of 60 dB DNL, 5 dB DNL further into the community than the federal threshold of 65 dB DNL. To qualify, homes must (a) be in a community that has adopted local land use controls and building performance standards to ensure the practices are consistent with the noise mitigation provided by the MAC and (b) be located for three consecutive years in the actual 60 DNL noise contour and within a higher mitigation area when compared to the original program.

The MAC will provide two different packages depending on the exposure area, one is the Full 5dB Reduction Package and the other is the Partial Noise Reduction Package. MAC will provide mitigation to homes the year following eligibility determination and at the time of this meeting, the only residential properties that meet criteria are located in Minneapolis. To illustrate the locations, **Nelson** showed a map of the contour and the blocks in Minneapolis that have received previous mitigation, blocks that are eligible in 2017, 2018, 2019, and blocks that have potential eligibility beyond 2019. **Nelson** reported that a total of 421 single-family homes are part of the 2017 and 2018 mitigation programs. The 2017 annual noise contour qualified an additional 430 homes for mitigation in 2019. For the first time, there are a few blocks in Eagan and Inver Grove Heights that have met year one of candidate mitigation eligibility. The MAC will reach out to homes that have met eligibility requirements. This report information is available on the MAC Noise website.

<http://www.macnoise.com/noise-mitigation-program>

6. Vortex Generator Noise Monitoring Study

Dana Nelson, Technical Advisor, reported that the 2017 study started on August 30, 2017 and ended on October 12, 2017 with a noise monitor in West Bloomington. There were a total of 9,181 total noise events recorded, 4,033 correlated to MSP aircraft operations and 3,527 were arrivals. There were 453 noise events correlated to Airbus A320 family arrivals, excluding United Airlines because they stated they are retro-fitting aircraft with the vortex generators and the timing for their retrofit program is not public. In total, 29 operations were determined to be equipped with vortex generators and 424 were non-equipped.

The vortex generator data had max noise level differences from -0.4 to +1.6 dBA, SEL noise level differences from -1.0 to +1.2 dBA and average duration from -1 to +5 seconds. When taking aircraft noise measurements from the ground during this phase of flight, staff found the measured aircraft noise events struggled to exceed the ambient noise level in the community.

Therefore, quantifying the noise reduction benefits provided by these devices from the ground becomes extremely difficult.

Nelson reported study limitations, including the low threshold settings required to collect aircraft arrival events between 5,000 and 9,000 feet in altitude, which resulted in noise level data that was impacted by louder community events; and the small sample of vortex generator-equipped aircraft operations that were available to analyze.

Chair Hart, Delta, clarified that even though the noise monitor was placed on top of the roof of a maintenance building, that it still had a hard time picking up noise beyond the ambient noise. **Nelson** confirmed that was correct and added that two noise monitors were deployed, one at the Como Golf Course in Saint Paul but that one was pulled because it was primarily picking up community noise events.

7. Super Bowl Activity Debrief

Brad Juffer, Assistant Technical Advisor, reported increases in airport operations above average levels from previous years during Super Bowl weekend. There were some increases on Friday and Saturday, not too many on Super Bowl Sunday, but the big increase was on Monday after Super Bowl. During the game there was a Temporary Flight Restriction (TFR) in place, which led to a drop in operations. Then a steep increase in operations occurred from 10PM-1AM Monday morning and picked up again at 7AM on Monday morning through the rest of the day. The increase in operations did not bring an increase in noise complaints. The Noise Office heard from residents that while it was a nuisance, they knew in advance that it was occurring and they knew it was temporary. There were 20 locations that filed complaints associated with MSP on Sunday and 26 locations that filed on Monday; 237 complaints were filed in those 2 days.

Loren Olson, Minneapolis, thanked MAC staff for their effort to communicate to the public in advance of the Super Bowl.

8. Review of the Winter Listening Session

Dana Nelson, Technical Advisor, reported that the Winter Listening Session was in January at the Mount Olivet Lutheran Church in Minneapolis. There were 40 residents in attendance and the majority of residents were from Minneapolis and Edina. The meeting was also attended by MAC staff, FAA, MAC Commission members, Minneapolis and Bloomington City Council Members, NOC members, Minneapolis Staff members, and people from Metropolitan Council. The conversation revolved around a number of topics including MSP nighttime operations, runway arrivals and departures, noise monitoring, DNL contours and metrics, RNAV, and the MSP FairSkies request of the NOC.

9. Public Comment Period– None

10. Announcements - **Dana Nelson, Technical Advisor**, made note of the Spring Listening Session on Wednesday, April 25, 2018 at the MAC General Office and the next NOC Meeting will be Wednesday, May 16, 2018 at 1:30pm.

John Klinger, Delta, announced that some of the MD-80 series aircraft will be retiring from Delta's fleet and those that aren't, are mostly moving south to the Atlanta, GA area.

11. 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 3:11 p.m.

The next meeting of the NOC is scheduled for Wednesday, 16th May, 2018.

Respectfully Submitted,
Amie Kolesar, Recording Secretary