



**METROPLITAN AIRPORTS COMMISSION  
MSP NOISE OVERSIGHT COMMITTEE  
MEETING MINUTES**



Thursday, 8 May 2014, 1:30pm  
MAC General Offices Building – Lindbergh Conference Room

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**Call to Order**

A regularly-scheduled meeting of the MSP Noise Oversight Committee, having been duly called, was held Thursday, 8 May 2014, in the Lindbergh Conference Room at the Metropolitan Airports Commission General Offices. Chair Petschel called the meeting to order at 1:40pm. The following were in attendance:

**Representatives:** K. Erazo, J. Oleson, J. Quincy, D. Miller, T. Christiansen, B. Underwood, J. Hart, E. Petschel, J. Carlson, T. Fitzhenry, J. Bergman

**Staff:** L. Peilen, J. Hamiel, J. Lewis, J. Giesen, G. Warren, T. Anderson

**Others:** D. Sloan – Mendota Heights Airport Relations Commission; L. Grotz – Edina; A. Such – Edina; S. Nienhaus – City of Burnsville; M. Doran – Richfield; D. Boberg – Bloomington; C. Carrino – Edina; J. Lindahl – City of Rosemount; K. Hagerman – City of St. Paul; J. Miller – City of Mendota Heights; S. Neal – City of Edina; K. Aacker – City of Edina; L. Kinney – Minneapolis; L. Kaczke – Sun Newspapers; J. Bennett – City of Edina; P. Dmytrenko – City of Richfield; B. Hoffman – City of St. Louis Park; S. Devich – City of Richfield; L. Olson – City of Minneapolis

**1. Review and Approval of the 19 March 2014 Meeting Minutes**

**Representative Miller, Eagan,** noted that a correction should be made to Item 7, paragraph 6, line 2 of the 19 March 2014 meeting minutes; the word “Eagan” should be changed to “Edina”.

**Ms. Joni Bennett, City of Edina,** noted that a correction should be made to Item 7, paragraph 6, line 9 of the 19 March 2014 meeting minutes; the word “just” should be inserted between “capture” and “the”. She also noted that corrections should be made

to Item 7, paragraph 6, line 10 of the 19 March 2014 meeting minutes; the words “there aren’t” should be struck and replaced with “all”, and the words “completely encircling” should be struck and replaced with “don’t simply encircle”.

**IT WAS MOVED BY REPRESENTATIVE HART AND SECONDED BY REPRESENTATIVE FITZHENRY TO APPROVE THE MINUTES OF THE 19 MARCH 2014 COMMITTEE MEETING AS AMENDED.**

**The motion carried by unanimous vote.**

## **2. Operations Summary Report**

**Jennifer Lewis, MAC Environment – Noise Program Office**, said complaints in March 2014 were nearly double the number of complaints for March 2013. She said complaints about departures off of Runway 30L, departures off of Runway 17 and arrivals over Minneapolis to Runway 12R helped drive the increase in complaints.

**J. Lewis** said that total aircraft operations were down approximately 2% in March 2014 compared to March 2013. She said there were 34,051 total air carrier jet operations in March 2014, which is an increase of approximately 2% over March 2013. She said 50% of air carrier jet operations were conducted by regional jets in March 2013.

**J. Lewis** said there was an increase of approximately 9% in major air carrier passengers in March 2014 compared to March 2013, and an increase of approximately 2% in regional air carrier passengers in March 2014 compared to March 2013.

**J. Lewis** said total nighttime (10:30pm – 6:00am) operations in March 2014 increased approximately 4% compared to March 2013, and carrier jet nighttime (10:30pm – 6:00am) operations in March 2014 increased approximately 10% compared to March 2013. She said that, in March 2014, Runway 30L had the highest percentage of use for nighttime (10:30pm-6:00am) arrival operations, with 41.4%, and Runway 12R had the second highest percentage of use with 25.2%. She said that, in March 2014, Runway 12R had the highest percentage of use for nighttime (10:30pm-6:00am) departure operations, with 31.2%, and Runway 30L had the second highest percentage of use with 30.1%.

**J. Lewis** said there was 99.8% compliance with the Runway 17 Carrier Jet Departure Procedure in March 2014.

**J. Lewis** said that 94.5% of the Runways 12L and 12R carrier jet departures remained in the Eagan-Mendota Heights Departure Corridor in March 2014.

**J. Lewis** said that 53% of nighttime (11:00pm-6:00am) carrier jet departures complied with the Crossing-in-the-Corridor Procedure, and that 28% of daytime (6:00am-11:00pm) carrier jet departures complied with the Crossing-in-the-Corridor Procedure in March 2014.

**3. Presentation: Sound Level Meter Measurement, Mr. Ken Cox, Product Manager, Larson Davis**

**Ken Cox, Product Manager for Larson Davis**, gave an overview presentation of sound level meter measurement. The Metropolitan Airports Commission's noise monitoring equipment is comprised of Larson Davis products. Highlights of the presentation included:

- Noise is any unwanted sound that we experience; noise sources vary
- Sound propagates in a wave form, and the fundamental principles that apply to other waves apply to sound
- Wavelength is the distance between peaks in a sound wave
- Frequency is related to the wavelength and speed of a sound wave
- Sound is composed of different frequencies; how a frequency interacts with the human ear and the environment is an important part of how sound and noise are perceived
- Air has an effect on sound waves by bending them and focusing their energy/pressure in different ways; temperature (high and low), wind, clouds and shielding provided by structures affect how sound is perceived on the ground
- Wind speed is not the same at all altitudes; generally, wind is slower the closer it is to the ground
- Wind speed and attenuation of air have effects on how sound propagates
- Temperature decreases bend sound down, temperature inversions bend sound upwards
- Entities monitor noise for many reasons, including improving community relationships, demonstrating organizational commitment and to collect data to support conclusions
- Standards establish quality thresholds, promote safety and reliability, support government policies and promote interoperability
- In the US, sound measurement industry standards are overseen by ANSI and administered by the Acoustical Society of America
- IEC international standards have recently been adopted by ANSI
- In a process known as pattern approval, sound level meter equipment is submitted to an independent laboratory for evaluation and certification to demonstrate compliance
- The equipment used by the MAC has been pattern approved by the French national lab, the German national lab and the Austrian national lab

- Larson Davis follows the process of legal metrology – the application of legal requirements to measurements and measuring instruments – for its products

**Representative Quincy, Minneapolis**, asked if there is a way to measure or discern the loudness of a noise event. **Cox** said that is not necessarily his area of expertise, but that there are different algorithms for measuring loudness, each with their pros and cons. He said that individuals each experience and discern sound and noise differently, which complicates how loudness is discerned. He said he would be happy to send Quincy information for contacting people who are experts in the algorithms for measuring loudness. **Quincy** noted that others have said that loudness is difficult to measure. He asked what the effect is of distance on aircraft noise. **Cox** said that, generally, noise is quieter the further away the point source is. **Representative Oleson, Bloomington**, said it was his understanding that the MAC's noise monitoring equipment is rated to pick up sound the human ear could detect up to two miles distant. **Cox** said he is not sure what the two mile reference is, but that Larson Davis equipment is designed to measure sound pressure down to 20 dB, which is typically well below ambient community noise. He said a sound meter's ability to detect that depends on what other sound sources are present and what the atmospheric effects are at the time. **Chair Petschel, Mendota Heights**, said the majority of complaints received a few winters ago concerned backwash sound off the ends of runways at MSP. She noted that there was very little snow cover that winter, and she asked if snow cover has anything to do with how sound is propagated over land. **Cox** said it does, that snow tends to absorb sound and reflect less sound than a hard surface.

#### 4. Noise Monitoring Study West and Northwest of MSP: Fall 2014

**John Nelson, Technical Advisor**, presented a proposal for conducting a noise monitoring study west and northwest of MSP in fall 2014. He noted that the recommended study elements are:

- The noise monitoring will be focused on assessing existing aircraft noise levels
- The noise monitoring will be conducted for a period of two weeks in the fall of 2014
- The monitoring will be limited to three locations in the area bound by I-494 on the south, Xerxes Avenue on the east from the intersection of I-494 and Xerxes Avenue extending in a straight line north to I-394, I-394 on the north, and Trunk Highway 169 on the west
- Two of the monitoring locations will be in the City of Edina and one will be located in the City of St. Louis Park
- The specific location of the monitors shall be determined by the respective cities, in consultation with MAC staff
- No monitor may be located within two miles of another permanent noise monitor
- The final report is due by December 1, 2014

**Representative Hart, Delta Air Lines**, asked what the cost would be for the study. **Nelson** estimated it would be \$3,000 – \$10,000 in staff labor and time to conduct the study and complete the report. He noted the cost would be incurred by the MAC. **Chair Petschel, Mendota Heights**, noted that the Committee has not considered such an action previously and asked if doing such a study was unusual for the MAC. **Nelson** said it is not, that a noise monitoring study is conducted each year for the St. Paul Downtown Airport. **Hart** asked if a noise study would need to be conducted periodically in Edina and St. Louis Park to show trends. **Nelson** said that the purpose of the study proposed today is to establish current conditions, or baseline, conditions. He said that if warranted, it may be possible to conduct the study again in the future. **Representative Fitzhenry, Richfield**, said he is confident the noise monitors used for such a study will provide measurements consistent with measurements that would be provided by permanent RMTs. He said he is interested in seeing the ambient community noise levels that will be measured in the study, and asked if it is possible to measure ambient noise levels for each community. **Petschel** said the Mendota Heights City Administrator visited RMT 23 and the ambient noise recorded was between 40-50 dB, without any aircraft noise present.

**Representative Quincy, Minneapolis**, said he is supportive of the proposed study and appreciates MAC staff's willingness to conduct it. He asked if there is predictable noise that is expected to be shown in the study; if placing mobile monitors within two miles of an existing RMT would provide the ability to extrapolate noise measurements at other locations in the communities around the airport. **Chad Leqve, MAC Director of Environment**, said the two-mile area refers, in some cases, to an area of influence around an RMT, which is not a definitive monitoring area around an RMT. He said the two-mile area represents an assessment area – the system of an RMT will "look" within two miles of the RMT for an aircraft overflight to correlate to a recorded noise event. **Leqve** said it is not safe to assume that mobile noise monitor data at one location can be extrapolated to other locations.

**Representative Oleson, Bloomington**, commented that today's discussion demonstrates that determining noise is not just a scientific endeavor but that doing so takes into account an "irritation factor". **Petschel** agreed, saying noise is also personal and emotional for many people.

**IT WAS MOVED BY REPRESENTATIVE BERGMAN, AND SECONDED BY REPRESENTATIVE CARLSON, TO DIRECT THE MAC NOISE PROGRAM OFFICE STAFF TO CONDUCT THE NOISE MONITORING STUDY DETAILED ABOVE AND AMENDED TO REMOVE THE SIXTH BULLET POINT, "NO MONITOR MAY BE LOCATED WITHIN TWO MILES OF ANOTHER PERMANENT NOISE MONITOR", IN THE CITIES OF ST. LOUIS PARK AND EDINA. THE NOISE MONITORING REPORT SHALL BE COMPLETED BY DECEMBER 1, 2014 AND PROVIDED TO THE NOISE OVERSIGHT COMMITTEE AND THE PARTICIPATING CITIES.**

## 5. Runway Use System Study

**John Nelson, Technical Advisor**, noted that the Runway Use System (RUS) for MSP is intended to reduce noise impacts in densely-developed areas to the west and northwest of the airport. He said the RUS gives first priority to departure and arrival operations over open space, the Minnesota River, wetlands and noise-compatible commercial and industrial areas located to the south and southeast of MSP. He noted that air traffic control at MSP is solely the responsibility of the FAA, and that the MAC does not control aircraft.

**Nelson** said that during a north flow configuration at MSP Air Traffic Control uses Runways 30R and 30L for departures, and uses Runways 30R, 30L and 35 for arrivals. He said that during a south flow configuration, Runways 12R, 12L and 17 are used for departures and Runways 12R and 12L are used for arrivals.

**Nelson** said the existing RUS has been in place since 2005. Departure preferences under the RUS, in order of preference, are: Runways 12L and 12R, Runway 17, either Runway 22 or 04, and Runways 30L and 30R. He said arrival preferences, in order of preference, are: Runways 30L and 30R, Runway 35, either Runway 22 or 04, and Runways 12L and 12R.

**Nelson** noted that there are low-, medium-, and high-air traffic demand periods, with arrival and departure banks or “pushes”, at MSP which have an impact on when the RUS can be utilized. He said wind pattern data for MSP for the past four decades correlate to the northwest-southeast layout of the airport’s parallel runways. He noted that winds can vary significantly, however, by month. In April 2012 prevailing winds at MSP were out of the southeast, but in April 2013 the prevailing winds were out of the northwest.

**Nelson** said that for the period 2012-2013, Runway 30R was used for approximately 30% of total nighttime departures, Runway 30L was used for 22%, Runway 12L was used for 19%, and Runway 30R was used for 14%. He said that, for the same period, Runway 30L was used for approximately 38% of total nighttime arrivals, Runway 12R was used for 30%, Runway 30R was used for 17%, and Runway 12L was used for 13%.

**Representative Quincy, Minneapolis**, asked why operating in a north flow is more efficient. **Nelson** said efficiency has to do with the safe and orderly movement of aircraft on the ground and in the airspace. During periods of high-traffic demand, the north flow works best because three runways can be used for arrival operations and priority is given to landing aircraft over departing aircraft. **Quincy** asked if it’s possible to quantify the difference in efficiency between the north and south flow. He noted that, on page 11 of the RUS Study May 2014, it says other runway configurations may be selected when tail wind speed is greater than 7 knots, but that the 7 knots is not a hard limit; **Quincy** asked what would be a hard limit. **Nelson** said Air Traffic Control Tower personnel indicated there is a range of conditions that compromise safety, including aircraft type, performance, load weight, wind direction,

etc., which is why 7 knots is not a hard limit. **Representative Hart, Delta Air Lines**, said that, in effect, the airport is “arranged” for use by the most conservative pilot, because the pilot must be comfortable with the conditions; some may use a 7 knot tail wind, some may not. **Representative Underwood, Delta Air Lines**, noted that the 7 knot restriction at MSP is predominantly for arrival operations on Runway 35.

**Representative Miller, Eagan**, noted that Figure 13 of the RUS Study May 2014 depicts the issue Eagan experiences, which is not the hours when the RUS is utilized but the daytime hours when it is not. She said residents see the RUS listing Runways 12R and 12L as preferred, but that the figure in the study shows Runway 17 being utilized 25% of the time for departures, as compared to Runway 12R being utilized 7%. **Chair Petschel, Mendota Heights**, said Mendota Heights is taking many more daytime operations than the Runway 17 EIS indicated. **Miller** said she would like feedback from the FAA on the issue, and **Quincy** and **Petschel** supported that request. **Representative Bergman, At-large Representative**, said he would like the FAA to look into whether or not Runway 17/35 will be used more if/when Terminal 2-Humphrey is expanded. **Nelson** said he will seek clarification on the issues from the Air Traffic Control Tower. **Bergman** noted that the arrival and departure banks at MSP are much tighter than they used to be.

## 6. Review of Runway 35 River Visual Approach Procedure

**John Nelson, Technical Advisor**, reminded Committee members that review of a Runway 35 River Visual Approach Procedure is an item on the 2014 Work Plan. He noted that the Performance-Based Navigation Standard Terminal Arrival Routes by the FAA for implementation at MSP do not include the Runway 35 River Visual Approach Procedure. Chair Petschel, Mendota Heights, asked if the procedure will be in the Committee's 2015 Work Plan. Nelson said that would be at the Committee's pleasure.

## 7. Second Quarter 2014 Public Input Meeting Summary

**John Nelson, Technical Advisor**, said there were 11 attendees at the second quarter 2014 Public Input Meeting, and that three people spoke on the record at the meeting. He said questions and concerns raised at the meeting included:

- Routing aircraft arrivals over non-residential land uses (Highway 77)
- Increased use of Runway 30L for departures to the northwest and west of MSP
- Concern that the Remote Monitoring Towers located to the northwest and west of MSP do not measure noise in communities further west of MSP

The next Public Input Meeting will be held at 7:00pm on Tuesday, 29 July 2014 at the Mendota Heights City Hall.

#### **8. Public Comment Period**

There were no public comments.

#### **9. Item Not on the Agenda**

**Chair Petschel, Mendota Heights**, requested MAC staff look into the possible reasons for the increase in noise contour lobe adjacent to lakes in Minneapolis. The Committee expressed consensus on that request. **John Nelson, Technical Advisor**, said staff will prepare a response.

The next meeting of the NOC is scheduled for Wednesday, 16 July 2014.

The meeting adjourned at 3:14pm.

Respectfully Submitted,  
Christene Sirois Kron, Recording Secretary