



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 (Assistant City Administrator)
John Bergman – At-Large Community Representative (Apple Valley City Council)
Pam Dmytrenko – City of Richfield Representative (Assistant City Manager)
Karen Erazo – Charter/Scheduled Operator Representative (Sun Country Airlines)
Gordon Goss – Chief Pilot Representative (Delta Air Lines)
Jay Miller – City of Mendota Heights Representative (Mendota Heights City Council)
Angie Moos – Cargo Carrier Representative (United Parcel Service)
Doug Nelson – Minnesota Business Aviation Association Representative
Jon Oleson – City of Bloomington Representative (Bloomington City Council)
John Quincy – City of Minneapolis Representative (Minneapolis City Council)
Paulajeane Vick – At-large Airport User Representative (Delta Global Services)

MEETING AGENDA

May 17, 2017 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 March 15, 2017 Meeting Minutes
2. 1:35 – 2:00 MSP Optimized Profile Descent Results
3. 2:00 – 2:30 Guest Speaker: MSP Update by Executive Director/CEO, Brian Ryks
4. 2:30 – 2:40 Review of Monthly Operations Reports: March and April, 2017
5. 2:40 – 2:50 Update on Converging Runway Operations – Kurt Mara, FAA
6. 2:50 – 3:10 Delta Air Lines Fleet Mix Update
7. 3:10 – 3:30 MSP Interactive Reports Demonstration and Approval
8. 3:30 – 3:45 New Aircraft Noise Basics Videos
9. 3:45 – 3:55 Review of January 27 and April 19 Listening Sessions
10. 3:55 Public Comment Period
11. Announcements
12. Adjourn



MSP NOISE OVERSIGHT COMMITTEE MEETING MINUTES

Wednesday, 15th of March 2017 at 1:30pm

MAC General Office Building
Lindbergh Conference Room

Call to Order

A regularly-scheduled meeting of the MSP Noise Oversight Committee, having been duly called, was held Wednesday, 15th of March 2017, in the Lindbergh Conference Room at the MAC General Office Building. Chair Miller called the meeting to order at 1:30pm. The following were in attendance:

Representatives: P. Dmytrenko; K. Erazo; A. Moos; J. Miller; L. Olson; D. Miller; J. Hart; G. Goss; J. Oleson; J. Bergman

Staff: D. Nelson; B. Juffer; A. Kolesar; B. Ryks; P. Hogan; N. Ralston; J. Kedrowski; D. Probst;

Others: J. Aul-City of Bloomington; D. Sloan- Mendota Heights; M. Olson-FAA; M. Dunan-City of Richfield; A. Nemcek-City of Rosemount; B. Hoffman-City of St. Louis Park; D. O'Leary-City of Sunfish Lake; T. Link-City of Inver Grove Heights; D. Lange-FAA; K. Mara-FAA; M. McNeill-City of Mendota Heights; J. Smith-City of Mendota Heights; S. Devich-City of Richfield; K. Aaker- Edina;

1. Review and Approval of the January 18th, 2017 Meeting Minutes

Chair Miller, requested a motion to approve the minutes from the January 2016 NOC meeting, **Representative Bergman** made the motion with a second from **Representative Oleson** and was passed unanimously.

2. Review of Monthly Operations Reports: January and February 2017

Brad Juffer, Assistant Technical Advisor, reported there were 7,457 aircraft noise complaints in January followed by 12,012 aircraft noise complaints for February recorded for MSP.

Complaints in January were up 34% from 2016, while complaints in February were up 58% from 2016. In January, 209 locations filed a complaint related to MSP, with 318 locations filing a complaint in February. Those numbers in 2016 were 295 and 439. This is a drop of 29% and 27% from 2016. The trend instead is an increase in fewer locations filing a large volume of complaints. Five locations filed 48% of all complaints. Ten unique locations filed 65.7% of all complaints for the 2 month period. This is why there is such a large disparity between average complaints per location at 36 and median complaint per location at 3.

The Noise Office recorded 31,868 operations at MSP in January and 29,825 in February. These totals are less than 1% difference from 2016 operations counts. Year-to-date, the noise office recorded 61,693 flights at MSP. This total is .1% above last year. 2.7 million people flew through MSP in December followed by 2.6 million in January. On average 89 people were on every airplane in December with that number falling to 89 in January. MSP made headlines in January as the airport served 37.5 million passengers in 2016 which is 2nd only to 2005. Collectively, during January and February, Regional Jets accounted for 42% of the fleet, while narrow-body aircraft were 55% and wide-body aircraft accounted for the remaining 3%.

Nighttime flights represented 5.8% of the operations during the first 2 months of 2017. Nighttime flights have decreased 3.4% in the first 2 months of 2017 as compared to 2016. The general trend is that the nighttime activity is focused during the 10:00 PM, 11:00 PM and 5:00 AM periods. The cargo activity has subsided from the Christmas months. February saw more alignment between scheduled and actual nighttime operations. There is a slight discrepancy between cargo actual and scheduled activity due to a data gap in the information provided by the carriers.

Juffer then reported on the MSP noise abatement procedures. The Runway 17 Departure Procedure had 99.5% compliance in January and 99.4% compliance in February. 43 jets were west of the 2.5 mile turn point during the 2 months.

The Eagan-Mendota Heights Departure Corridor compliance was 96.4% in January and 98% in February. February's mark was the highest monthly compliance rate since July 2015. A total of 48 jets were north of the corridor and 78 jets were south of the corridor during those two months.

The Crossing-in-the-Corridor procedure compliance during the nighttime was at 38% in January and 58% in February. During the daytime hours, the compliance rate was 30% in January and 25% in February.

Juffer reported on to the Runway Use System (RUS) numbers; high priority runways were used 53.1% and 54.4% in the first two months of 2017. In January, the highest used runways for arrivals were 30L and 30R, mainly driven by the wind direction. Runways 30L, 17 and 30R were the highest used runways for departures in January. The use of Runway 17 occurs during both South flow and Mixed Flows. In 2014 Mixed Flow was used 7% of the time, climbing to 8% in 2015 and 10% in 2016. Year to date, 2017 is back down to 8.5%

Juffer noted the use of Mixed Flow seems to increase when winds are out of the West-Southwest. In February there were more winds from this direction and the use of Mixed Flows increased. Arrivals to Runways 30L and 30R were slightly higher in February than in January. 8.1% of all arrivals in February landed on Runway 35, the highest total since the Converging Runway Operations began being applied to Runway 30R in March 2016. In February, Runways 30L, 17 and 30R remain the highest used runways during the day.

Representative Olson, Minneapolis, asked **Juffer** how the nighttime operations are trending. **Juffer** responded that the total nighttime operations as compared to the same time period in 2016 have fallen 3%. **Olson** commented that she would like to see more long term tracking. **Olson** also asked if there was a pattern of complaint locations. **Juffer** responded that his team did look into that but there was not a general trend. The top ten locations for complaints consisted of one in Inver Grove Heights, two in Eagan, four locations in Minneapolis, one in Burnsville, one in Bloomington, and one in Richfield.

3. Review Format of Monthly Operations Summary Report

Brad Juffer, Assistant Technical Advisor, commented that the technological infrastructure that is used to produce technical reports is approaching end-of-life and the MAC Noise Office will be upgrading this system in 2017.

To meet the requirements of a new system, staff is making improvements to its internal workflow to create a more streamlined and efficient use of data. In 2016, the MAC Noise Office underwent an assessment regarding its communication efforts. As part of the Noise Communication Enhancement Plan, an assessment of the macnoise.com website and the associated reports was completed. According to this assessment, the monthly reports were identified as opportunities to provide more value to the community.

As such, the existing 86 pages of reports for February were consolidated into 4 pages and grouped by topic area: complaints, operations, sound monitoring and noise abatement. Regarding complaints, new metrics were added including the number of operations per complaint, new complaint locations during the month, the average number and median number of complaints, most frequent hour and day for registered complaints, and a three year chart to show complaint trends. In operations, additional metrics include year-to-date operations, a three year chart to show operational trends, and changes to the way fleet mix is categorized. Included in the sound category, a time above 65 decibels per operation and events above 65 decibels per operation section was added. The number of events above and the time above was consolidated into 4 groups and includes a total from all 39 Remote Monitoring Towers (RMTs). The new report has a chart showing the three year monthly average Day-Night Average Sound Level (DNL) at each RMT for the corresponding month compared to the current month with a map to geographically match the chart. The noise abatement page does not contain any new metrics, but consolidates four noise abatement procedures to one page. When accessed online, the report is interactive.

Juffer continued by addressing the MAC Noise Website, and the “Reports on the Fly” and assured the committee members that nearly all the information in the current report will be available either in this PDF report each month or accessible interactively through the macnoise.com website. In addition, there will be .csv export capabilities for those who would like to analyze the data in spreadsheets. Maps on the website will have an interactive feature for users to obtain a deeper understanding of the data.

Juffer stated that the office timeline is to produce both sets of reports for two months, return before the committee in May and demo the new interactive reports functions. After approval from the NOC, the team will discontinue production of the existing reports.

Juffer requested the committee approve the new Monthly Operations Report Summary format.

Representative Olson, Minneapolis, commented that it will be ideal to make the Runway Use section quickly and clearly understood. **Olson** also requested that a graphic be made to represent the time above location with the actual dB level at each location. **Juffer** responded that the RUS information will have tool tips and part of the interactive format will be to show the runway location on a map. In the way that the RUS numbers relate to noise abatement,

that data is located on the Noise Abatement page on the website. In regards to the requested information added to the “Events Above” map, that will be harder as each event is recorded as it relates to each specific RMT. The team will need to discuss those options for the interactive report. **Olson** requested nighttime flight information, outside of how it relates to scheduled versus actual, and how it relates to the total number of nighttime operations trends. In addition to that, **Olson** requested an identification of which airlines are trending higher than others. **Juffer** recommended that due to the space that will require, it would be ideal to place that data on the interactive reports.

Representative Oleson, Bloomington, commented that the direction the Noise Office team is heading with the reports is helpful and accommodating to the general public. One recommendation would be to have the ability for education throughout the interactive reports to help the general public gain a broader understanding of the information they’re reading. **Juffer** responded that the concept is in place and is a goal for the interactive portions of the website. **Representative Dmytrenko** recommended including materials to educate the public, such as a tutorial. **Chair Miller, Eagan**, requested a motion to approve the new Monthly Operations Reports format. The motion was moved by **Representative Bergman, Apple Valley**, and seconded by **Chair Hart, Delta**. The motion passed unanimously.

4. Update on Converging Runway Operations-Kurt Mara, FAA

Kurt Mara, FAA, reminded the NOC that on January 5, 2017, the use of two Arrival Departure Windows were approved to be used at the same time to help with Converging Runway Operations (CRO). Since then, the CRO procedures have been used during daytime hours as long as the weather allows. The changes have been minimal other than there are now departures off both Runway 30L and 30R during CRO operations. The most significant impact is that departure delays dropped drastically. The majority of arrivals have not been impacted. By staying in the CRO configuration throughout the day (arrivals on Runways 30L, 30R and 35 and departures on Runways 30L and 30R), there are some efficiency gains by a few minutes here and there but thus far there are no reportable gains, as defined by 15 minutes. During the busiest time of the day, at 6PM, the configuration allows for aircraft to land more efficiently using three runways, preventing aircraft holding delays. Daytime runway use is similar to that of 2012/2013. During the months of January and February in 2017, the CRO configuration was used about 36% of the time.

Representative Hart, Delta, asked if CRO is in a steady state or if there are improvements to be made. **Mara** responded that there are options being reviewed and one is called a Converging Runway Display Aid, CRDA. This is a tool that the approach controllers use to ghost an arrival flight so the targets may line up and the controller can land the aircraft in a perfect sequence that increases the departure efficiency. This technology is still being worked on and training methods are being navigated. **Hart** asked whether this spacing tool would help approach control smooth out timing of departures and decrease departure taxi time. **Mara** confirmed that yes, that’s the eventual goal, to create optimal spacing and decrease departure taxi time. The tool is currently available but now their team is navigating logistics with the goal to have the tool in use by May or June of 2017. **Representative Goss, Delta**, asked if the CDRA tool is available to use for 30R. **Mara** responded that currently the tool is only linked to runway 30L but linking it to 30R/35 is part of the long term goal. Because of how the tool utilizes its targets, it will not lead more traffic to 30L. However, if one runway has a higher number of departures, then there will be a slight favoritism of runways for arrivals to balance that runway use. **Representative Olson, Minneapolis**, thanked **Mara** for previous information about wind

changes and thus flight pattern changes so alerts could be sent to communities. **Olson** also thanked **Mara** for using Mixed A and that it possibly contributed to the decrease in noise complaints as compared to the same time frame in 2016. **Olson** then asked if arrivals during nighttime hours are distributed evenly on the runways, particularly a regular arrival on Runway 30L around 4:30AM. **Mara** responded that if the winds allow, they follow the Runway Use System, prioritizing departures and then arrivals. Departures receive priority because they're louder than arrivals.

5. Update on RNAV STAR Adjustments-Kurt Mara, FAA,

Kurt Mara, FAA, stated that the Area Navigation (RNAV) Standard Terminal Arrival Route (STAR) adjustments went into effect on January 5th, 2017. Use of the adjusted procedure tracks during January and February of 2017 is very similar to the same time period in 2016. The adjustments made were minimal but it makes the track more flyable and it's more efficient for the controllers which in turn increases safety for all.

6. 2016 Actual Noise Contour Report and Consent Decree Amendment Mitigation Eligibility

Dana Nelson, Technical Advisor, reported that per the requirements of the Consent Decree, the Noise Office is required to publish an annual actual noise contour report by March 1st of each year. On February 28th, 2017 this report was published. It was the first year the contours were developed using the Aviation Environment Design Tool (AEDT), per the Second Amendment to the Consent Decree. Language in the amended Consent Decree also provided clarity on opt-out provisions.

Nelson went on to explain some language added to the 2016 Annual Noise Contour Report reflecting the provisions of the Second Amendment to the Consent Decree, CRO and related runway use statistics, the FAA's mandatory phase out of Stage 2 aircraft operations less than 12,500 ft. MAC's continuing consultant, HNTB assisted in the preparation of the data inputs for the noise model and then ran the AEDT noise model. **Nelson** compared the 2007 forecast noise contour with the 2016 actual noise contour, stating the 60 DNL contour is about 29% smaller and the 65 DNL contour is about 39% smaller than the 2007 forecast. The reasons for the reduction in the noise contour is a 29% reduction in total flight operations. Also a reduction in hushkit Stage 3 operations and nighttime operations. On average in 2016, there was one hushkit Stage 3 jet operation every 10 days as compared to the 2007 forecast of almost 250/day. Compared to the 2007 forecast, nighttime operations in 2016 decreased by about 4.5 average operations.

Nelson pointed out an area by Lake Harriet where the 2016 contour extends beyond the 2007 forecast and attributed the growth to the arrival runway use for flights between 10 PM and 7 AM. This is the area of focus for the extended mitigation program as the actual contours drive the mitigation eligibility per the Second Amendment to the Consent Decree. The current program provides mitigation eligibility until 2023, based on actual noise exposure beyond the federal threshold of 65 DNL, out to 60 DNL. **Nelson** explained the specific eligibility criteria of each home, land use practices, and home location within the actual contours. **Nelson** described both mitigation packages being offered as well as the dollar values associated with the packages and how they factor houses that may have received mitigation in the past.

Nelson reminded the NOC that there are homes within the aforementioned area that met eligibility by virtue of the 2015 actual noise contour and will receive mitigation in 2017. Specifically, 19 single-family homes and 88 multi-family units that were not eligible in the

previous mitigation program, and an additional 119 single-family homes that were previously eligible for the reimbursement package. These homes were determined eligible to receive the Partial Noise Reduction Package and have begun the orientation process to complete the mitigation in 2017.

Per the 2016 actual contours, there are 126 single-family homes newly eligible for the Partial Noise Reduction package, 39 single-family homes eligible for the Partial Noise Reduction package that were previously eligible for mitigation reimbursements, and 121 single-family homes eligible for the Full 5dB Reduction Package. These home owners will be contacted later in 2017 to start orientations for mitigation in 2018. Looking beyond 2018, there are a number of homes entering candidate eligibility in 2017 and assuming they meet the full three years of eligibility, they will be receiving mitigation packages in 2019 and 2020, depending on their year of candidate eligibility.

Representative Bergman, Apple Valley, pointed out the way the areas becoming eligible for mitigation is growing and asked if the Noise Program anticipates that range to continue lengthening. **Nelson** responded that it's difficult to predict since the expansion of the contour is driven by runway use and nighttime operations. Patterns last year showed a lot of south winds and prior to that, the specific direction of those winds wasn't as dominant. **Bergman** clarified that even though a home met the first year of eligibility, if the wind conditions changed, that home could lose eligibility in year two. Then if the wind changed again, they could enter year one eligibility and that pattern could continue until 2023. **Nelson** confirmed, that is correct.

7. Evaluation of Distant Noise Abatement Departure Profile (NADP) Use at MSP

Dana Nelson, Technical Advisor, introduced the topic sharing that some recent questions were presented to the MAC Noise Program Office from MSP FairSkies regarding Noise Abatement Departure Profile (NADP) use at MSP. For reference, in 1993 the FAA published advisory circular 91-53A. This established guidance to standardize two forms of noise abatement departure profiles: close-in and distant. From this guidance, airlines are then responsible for developing their own standard operating procedures specific to each aircraft type. Unless it's noted otherwise, the airlines will use the distant NADP across national airspace. In 1997 the group which was the predecessor to the NOC, MASAC, endorsed the close-in evaluation on Runways 30L and 30R and the Distant on all the other runways. At the time, 51% of the operations were in Stage 2 aircraft and that was a significant deciding factor during this discussion. Stage 2 aircraft operations have a big difference in noise impact between Close-in and Distant NADPs. Close-in was intended to reduce noise within 3.5 miles from the start of take-off and Distant provides noise relief beyond that. As the fleet transitioned to Stage 3, the Close-in NADP benefits began to minimize or even diminish. When the MAC began to update the Part 150 program, MASAC wanted to reevaluate the NADPs. During this process, MASAC recognized these fleet mix changes and a determination was made to support Distant NADPs off all MSP runways. In 2003, the NOC endorsed the previous MASAC decision. The discussion leading up to that decision took into consideration the aggressive sound insulation program for homes located close to the airport, and the continued reductions in Stage 2 and hushkit Stage 3 aircraft operations. In 2012 the NOC directed MAC staff to again analyze the NADPs at MSP. Working with Delta Air Lines and a consulting team, custom profiles were built to model both Close-in and Distant NADPs in the Integrated Noise Model. The NOC evaluated a Close-in and Distant study that included DNL noise contours, and alternative noise metrics. The analysis supported the fact that new aircraft types manufactured to be Stage 3 or better diminished the

variation between the Close-in and Distant NADP noise impacts. At that time the NOC decided to continue Distant NADP's off the end of each runway.

Nelson addressed three questions or concerns recently raised by members of the public related to NADP procedures at MSP: (1) are MSP airlines using the Distant NADPs? Yes. (2) Why does Flight Tracker appear to show inconsistent climb-out procedures? The rate of climb, point where aircraft are reaching altitudes and speeds will vary according to the aircraft type, load factor, and environmental conditions. Therefore, specific climb-outs will differ from one flight to another. (3) Do Distant NADPs impact where an aircraft turns? No. NADPs relate only to the vertical profile of an aircraft on departure. There may be lateral maneuvering during the climb-out procedure but that does not mean they are not following the Distant NADP.

Representative Olson, Minneapolis, asked how the fleet mix changes since 2012 would impact the same study. **Nelson** responded that the 2012 study made individual aircraft profiles, which represented 80% of the aircraft types using MSP. Today, these aircraft types still represent about 75% of the operations. Some of the aircraft that are not incorporated are newer aircraft types with quieter noise signatures. **Representative Goss, Delta** explained that the Close-in is when the aircraft stays at a higher power setting, longer, to reach a higher altitude. The higher power setting is a slower climb if you're tracking on the ground. The noise impact under the aircraft is more prevalent because it's at a higher power setting for longer. Once it's at a higher altitude, the power setting decreases. **Olson** asked where the location is that the noise benefit of this departure procedure starts. **Nelson** responded that the 3.5 mile mark starts at the beginning of take-off, so considering the entire length of the runway, a plane flies almost a mile before actually leaving the airport environment. **Chair Miller, Eagan**, asked if the Close-in versus Distant profiles will eventually be a moot point, taking into consideration the evolution of aircraft technology and thus quieter planes. **Nelson** responded that considering the way technology is moving and improving, theoretically, the answer is yes.

8. Public Comment Period

No Comments

9. Announcements

Dana Nelson, Technical Advisor, announced that Connie Carrino from MSP FairSkies Coalition sent her a letter on March 7th, 2017, after the MAC Noise Program Office published the 2016 Annual Noise Contour Report. The letter requests shapefiles of the 55 dB DNL noise contours; **Nelson** read the letter, in full and on the record, to the NOC. **Representative Olson, Minneapolis**, commented that the City of Minneapolis supports the 55 dB DNL contour be produced as part of the 2017 work plan. They also support evaluation of the n65 metric so the NOC can better engage in the national conversation regarding noise measures. Now that the FAA won't be producing their information until the end of the year, some members shared concerns about evaluating these metrics and maps out of the context of the FAA's evaluation. **Chair Miller, Eagan**, asked **Nelson** to reiterate the precise language used on the work plan **Nelson** responded it is to provide an update on the FAA's survey to re-evaluate noise measurement methods. **Representative Bergman, Apple Valley**, expressed concern over evaluating noise data beyond the current MAC residential noise mitigation eligibility area. **Representative Dmytrenko, Richfield**, commented that while everyone is concerned about noise impact, it is best to not produce a contour report before the FAA completes its evaluation. Publishing a contour outside the mitigation area will be more difficult to clarify to the public who may otherwise see the contour and incorrectly conclude that they are now

eligible for mitigation. **Chair Miller, Eagan**, echoed concerns about setting up false expectations about the 55 dB DNL contour however waiting to see results from the FAA evaluation will be beneficial so the group can have a better idea of the metric to use for evaluation.

10. Adjourn

Chair Miller, Eagan, requested a motion to adjourn, it was moved by **Co-Chair Hart, Delta**, and passed unanimously.

The meeting adjourned at 3:15p.m.

The next meeting of the NOC is scheduled for Wednesday, 17 May 2017.

Respectfully Submitted,
Amie Kolesar, Recording Secretary

MEMORANDUM

ITEM 2

TO: MSP Noise Oversight Committee (NOC)

FROM: Dana Nelson, Manager – Noise, Environment & Planning and
Brad Juffer, Assistant Manager – Noise, Environment & Planning

SUBJECT: **MSP OPTIMIZED PROFILE DESCENT RESULTS**

DATE: May 3, 2017

The MAC Environment Department has developed a first-of-its-kind tool to measure impacts of adopting new FAA NextGen aircraft arrival procedures at MSP, and the results show the biggest known air quality benefit of any single action in MSP history.

The new NextGen arrival procedures were implemented at MSP in March 2015 and incorporate Optimized Profile Descents (OPD). Traditionally, when aircraft were approaching the airport, pilots descended in a series of level-off steps involving reducing altitude, then leveling off multiple times. Using OPD, pilots continue flying at cruise altitude longer, and once they start their descent, they continue it until they land. Keeping the plane throttled back reduces fuel burn and associated greenhouse gas emissions.

Recognizing the environmental benefits of these procedures, as well as the fact that they were overlays of existing arrival procedures, the NOC endorsed adoption of NextGen OPD arrivals at MSP in 2014. At that time, the MAC committed to measuring use and air quality impacts of the procedures at MSP. There was no established methodology for airports to use in measuring such impacts, so MAC staff developed one, using data provided by the FAA and by Delta, Sun Country and Endeavor airlines. The FAA then verified the accuracy of the methodology used to calculate fuel and emissions savings associated with OPD arrivals.

Using data supplied by airlines and the FAA, the MAC has become the first airport operator in the nation to measure the impacts of OPD, and the results are impressive. Airlines burn close to 2.9 million fewer gallons of fuel per year using OPD procedures than they would using traditional descents. As a result of the reduced fuel burn, arriving aircraft emit 28,465 fewer metric tons of carbon dioxide into the atmosphere annually than they otherwise would.

“The reduction in carbon dioxide emissions around MSP is the result of a cooperative effort by community leaders, airlines, the FAA and the Airports Commission to reduce environmental impacts while also improving the safety and efficiency of air traffic,” said Brian Ryks, Executive Director and CEO of the MAC. “This achievement demonstrates that the cooperative approach that has made MSP an industry leader at noise mitigation can also produce huge benefits in other areas, such as in reduced aircraft emissions.”

Since airlines began using OPD arrivals at MSP in March 2015, they have conserved more than 5.8 million gallons of fuel, preventing more than 57,000 metric tons of carbon dioxide from entering the atmosphere. That’s the equivalent of removing more than

12,000 cars from the road, eliminating energy used in 6,000 homes or planting 54,000 acres of forest.

“Delta has a longstanding and ongoing commitment to working with the Noise Oversight Committee, the MAC, the FAA and community leaders to reduce environmental impacts around MSP while also improving safety and efficiency,” said Bill Lentsch, Senior Vice President – Delta Connection and Global Services. “We are proud to have played a role in developing a tool to measure the effects of these new arrival procedures, and we congratulate all of our local partners for their environmental stewardship.”

Last month, Airports Council International-North America presented the MAC with a 2017 Environmental Achievement Award for developing a way to measure use and environmental benefits of OPD. The award recognized the MAC in the Special/Innovative Projects award category.

At the May 17, 2017 NOC meeting, MAC staff will recognize the critical partnership in this effort and share the final carbon emission reduction from incorporating NextGen arrival procedures at MSP.

MEMORANDUM

ITEM 3

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: **GUEST SPEAKER: MSP UPDATE BY EXECUTIVE DIRECTOR/CEO, BRIAN RYKS**

DATE: May 3, 2017

At the May 17, 2017 NOC meeting, MAC Executive Director/CEO Brian Ryks will provide the NOC an MSP Update.

Topics to be discussed include:

- MAC legislative mandate, governance and funding
- MAC Vision and Mission
- Recent accolades
- Trends in passenger and operational levels
- Recent and future improvements at MSP

MEMORANDUM

ITEM 4

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: **REVIEW OF MONTHLY OPERATIONS REPORTS – MARCH AND APRIL, 2017**

DATE: May 3, 2017

Each month the MAC produces a Technical Advisor's Report for the NOC. This report provides information on MSP aircraft noise complaints, aircraft operations and noise levels associated with MSP aircraft operations.

Additionally, the MAC produces four monthly reports assessing the compliance with established noise abatement procedures: the Runway 17 Departure Analysis Report, the Eagan-Mendota Heights Corridor Report, the Crossing-in-the-Corridor Analysis and the MSP Runway Use System (RUS) Report.

At the May 17, 2017 NOC meeting, MAC staff will provide a summary of these five monthly operations reports for the months of March and April, 2017.

MEMORANDUM

ITEM 5

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: **UPDATE ON CONVERGING RUNWAY OPERATIONS – KURT MARA, FAA**

DATE: May 3, 2017

At the May 17, 2017 NOC meeting, Federal Aviation Administration (FAA) Traffic Management Officer, Kurt Mara will provide an update on the agency's efforts to mitigate the effects of Converging Runway Operations (CRO) at Minneapolis-St. Paul International Airport (MSP). The update will include a briefing on the Converging Runway Display Aid (CRDA), which will provide additional assistance to air traffic controllers for safely guiding aircraft operations when operating in a north flow at MSP.

MEMORANDUM

ITEM 6

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: **DELTA AIR LINES FLEET MIX UPDATE**

DATE: May 3, 2017

The single largest factor of conventional noise reduction is source control. Over the past several years the number of noisy aircraft in the fleet at MSP has been declining. In 2014 Delta Air Lines retired their DC-9 aircraft and in August 2016, American Airlines retired 20 of its MD-80 aircraft, marking one of the largest single-day aircraft retirements in airline history. Additionally, the FAA began a process in 2016 to establish quieter Stage 5 aircraft noise standards, which will apply to new aircraft certified after December 31, 2017 (or December 31, 2020 for aircraft weighing less than 121,254 pounds).

Aircraft engine and airframe manufacturers and aerospace designers continually invest in technology improvements to reduce noise levels emitted from aircraft. Although aircraft fleet mix changes are not immediate, the industry has trended toward operating quieter and more efficient aircraft types; a trend that is expected to continue.

With Delta Air Lines operating the largest share of the operations at MSP, MAC staff made a request that the airline provide an update to the NOC on its future fleet mix plans. At the May 17, 2017 NOC meeting, Delta Air Lines Chief Pilot and NOC representative, Captain Gordy Goss, will brief the Committee on the company's future fleet mix plans.

MEMORANDUM

ITEM 7

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: **INTERACTIVE REPORTS DEMONSTRATION AND APPROVAL**

DATE: May 3, 2017

Throughout 2017, MAC Noise Program Office staff has continued its efforts to be more helpful and accessible to the members of the public, most recently targeting the production of the monthly operations reports. At the March 15th 2017 NOC meeting, the Committee reviewed and approved a new NOC Monthly Operations Summary Report format, which represents a more succinct summary of the traditional 86-page monthly reporting system.

The new NOC Monthly Operations Summary Report uses updated technology and consolidates information into four areas—Operations, Complaints, Sound Monitoring and Noise Abatement. The first NOC Monthly Operations Summary Report was produced and released on the macnoise.com website on April 7, 2017.

Because the NOC Monthly Operations Summary Report does not include all of the data previously reported, MAC staff sought to ensure the information would still be available and accessible to the public. MAC staff developed new online tools and capabilities through an interactive website application to allow our customers to interact with the data in an efficient, user-friendly and organized manner.

Features of the new interactive website include:

- A monthly overview of operations, complaints, sound monitoring and noise abatement procedures
- Filtering and sorting capabilities for data tables
- Data visualizations using charts in an interactive dashboard
- Pan and zoom capabilities for maps
- Abilities for users to download data as images or comma-delimited data files

Upon the requested action by the NOC, staff plans to incorporate feedback from the NOC during the month of May and launch the interactive website application in early June 2017. Going forward, the NOC Monthly Operations Summary Reports will be published and the website application will be updated with monthly data within the first ten (10) business days of the following month. In June 2017, staff will discontinue the production of the existing 5 reports—Technical Advisor’s Report, Eagan-Mendota Heights Corridor Report, Runway 17 Departure Analysis Report, Crossing-in-the-Corridor Analysis Report and the MSP Runway Use System Report.

At the May 17, 2017 NOC meeting, MAC staff will demonstrate the new interactive website capabilities and request action for approval.

REQUESTED ACTION

APPROVE THE NEW WEBSITE INTERACTIVE REPORTING CAPABILITIES AND DIRECT STAFF TO DISCONTINUE THE PRODUCTION OF THE MONTHLY TECHNICAL ADVISOR'S REPORT, EAGAN-MENDOTA HEIGHTS CORRIDOR REPORT, RUNWAY 17 DEPARTURE ANALYSIS REPORT, CROSSING-IN-THE-CORRIDOR ANALYSIS REPORT AND THE MSP RUNWAY USE SYSTEM REPORT.

MEMORANDUM

ITEM 8

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: **NEW AIRCRAFT NOISE BASICS VIDEOS**

DATE: May 3, 2017

At the May 17, 2017 NOC meeting, staff will show the second and third in a series of “Noise 101” videos developed as part of the MAC Noise Program Communication Enhancement Plan. These videos and accompanying fact sheets explain efforts underway to reduce aircraft noise and the Minneapolis-St. Paul International Airport (MSP) Noise Oversight Committee (NOC).

The videos and fact sheets are placed on macnoise.com under the “Aircraft Noise Basics” tab and shared on MSP’s YouTube channel. In addition, the videos will be shown at future public meetings regarding aircraft noise held by the MAC.

MEMORANDUM

ITEM 9

TO: MSP Noise Oversight Committee (NOC)

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

SUBJECT: REVIEW OF JANUARY 27 AND APRIL 19 LISTENING SESSIONS

DATE: May 3, 2017

One of the elements of the framework for the MSP Noise Oversight Committee (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 January 25, 2017 at 7:00 P.M., the Winter Listening Session was held at the MAC General Offices. Six residents attended the meeting. Four residents were from Minneapolis and two residents were from Edina. The meeting was also attended by MAC Staff, the MAC Chairman, FAA Air Traffic officials, Delta Air Lines Chief Pilots and a NOC representative.

MAC staff opened the meeting and asked each of the audience members to introduce themselves, what city they live in and what they would like to get out of the meeting. Staff then briefly shared a video on roles and responsibilities of various aviation stakeholders and decision-makers and presented recent NOC activities. The meeting agenda and presentation from the meeting are available at <https://www.macnoise.com/our-neighbors/msp-quarterly-listening-sessions>.

During the open floor conversation, each resident contributed to the dialogue. Throughout the night, the dialogue focused on:

- Converging Runway Operations (CRO) and the increased frequency of arrivals on Runways 12L and 12R
- Residential Noise Mitigation Program eligibility
- Increase in flights during early morning hours
- Area Navigation (RNAV) arrival procedures
- New aircraft use at MSP to reduce noise from the source
- Altitude of aircraft

All questions received answers during the meeting, therefore staff will not be preparing written responses. At the end of the meeting, MAC staff asked that the attendees fill out comment cards about the new meeting format. Comments indicated the attendees appreciate the diverse mix of representatives from the MAC, the FAA, the NOC and the airlines and the willingness by everyone to openly discuss their concerns. Further some commenters said the format allowed for a good flow of dialogue and that they felt listened to.

On April 19, 2017 at 7:00 P.M., the Spring Listening Session was held at the Eagan Community Center. Nineteen residents attended the meeting. The residents were from Eagan, Burnsville, Credit River Township, and Prior Lake. The meeting was also attended by MAC Staff, FAA Air Traffic officials, Delta Air Lines Chief Pilot, NOC committee members, State Senator Jim Carlson, State Representative Sandra Masin and Eagan City Councilmember Gary Hansen.

MAC staff opened the meeting and asked each of the audience members to introduce themselves, what city they live in and what they enjoyed most about their community. Staff then briefly shared the second video from our Aircraft Noise Basics series. The presentation also included information about the staff evaluation of emissions reduction benefits of Optimized Profile Descents at MSP. The meeting agenda and presentation from the meeting are available at <https://www.macnoise.com/our-neighbors/msp-quarterly-listening-sessions>.

Because of the location of the meeting and the audience, much of the open floor conversation focused on Runway 17 departures. Specifically the attendees focused the discussion on:

- Measures being taken by the FAA in an effort to return runway use levels back to pre-Converging Runway Operations levels
- Runway 17 departure frequency
- Enacting penalties and/or disincentives for night time operations
- Runway Use System (RUS) prioritization
- Airport capacity and operational forecasts
- Newer aircraft to reduce noise at the source

All questions received answers during the meeting, therefore staff will not be preparing written responses. At the end of the meeting, MAC staff asked that the attendees fill out comment cards about the new meeting format. Comments indicated the attendees feel listened to, appreciate having FAA and airline representation in attendance to answer questions and are pleased with the restructured meeting format.

The next chance for the public to participate in a Listening Session will be on July 26, 2017 at 7:00 P.M. in Apple Valley. Further details will be made available on the www.macnoise.com website.