



## Metropolitan Airports Commission (MAC)

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

### NOC Committee Members

Dianne Miller – Co-Chair, City of Eagan Representative (Assistant City Administrator)  
Jeffrey Hart – Co-Chair (Delta Air Lines)  
Ryan Barette – Minnesota Business Aviation Association Representative  
Pam Dmytrenko – City of Richfield Representative (Assistant City Manager)  
Gordon Goss – Chief Pilot Representative (Delta Air Lines)  
Todd Lawrence – Charter/Scheduled Operator Representative (Sun Country Airlines)  
Tom Link – At-Large Community Representative (Inver Grove Heights City Staff)  
Jay Miller – City of Mendota Heights Representative (Mendota Heights City Council)  
Angie Moos – Cargo Carrier Representative (United Parcel Service)  
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

September 20, 2017 at 1:30 pm  
MAC General Office Building  
Lindbergh Conference Room

*(Jeffrey 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 July 19, 2017 Meeting Minutes
2. 1:35 – 1:45 Review of Monthly Operations Reports: July and August, 2017
3. 1:45 – 2:20 Update on Phoenix Sky Harbor International Airport PBN Ruling
4. 2:20 – 2:40 Evaluate and Enhance the Reporting of the Runway Use System (RUS)
5. 2:40 – 2:50 Investigate Noise-Reducing Landscaping Options
6. 2:50 – 3:00 Status of FAA Center of Excellence/ASCENT, TRB and FICAN Research Initiatives
7. 3:00 – 3:10 Review of July 26, 2017 Listening Session
8. 3:00 Public Comment Period
9. Announcements
10. Adjourn



## MSP NOISE OVERSIGHT COMMITTEE MEETING MINUTES

Wednesday, 19th of July 2017 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, 19th of July 2017, in the Lindbergh Conference Room at the MAC General Office. Chair Miller called the meeting to order at 1:30pm. The following were in attendance:

**Representatives:** T. Link; J. Oleson; G. Goss; P. Vick; J. Hart; D. Miller; P. Dmytrenko; J. Miller; J. Quincy; R. Barette; T. Lawrence

**Staff:** D. Nelson; B. Juffer, C. Leqve; A. Kolesar; P. Mosites; P. Burke; M. Takamiya; J. Lewis; N. Ralston;

**Others:** A. Roth - City of Apple Valley; J. Aul - City of Bloomington; D. Langer-FAA; M. Doran – City of Richfield; M. Nolan – City of Edina; S. Fortier – FAA; A. Nemcek – Rosemount; M. Brindle – City of Edina; M. Regan-Gonzalez – City of Richfield; S. Devich – City of Richfield; D. Perry – FAA; J. Smith – City of Mendota Heights; D. O’Leary – City of Sunfish Lake;

Chair Dianne Miller made a motion to add agenda item number 7, an update on CRO from Kurt Mara, FAA. **Chair Hart, Delta**, made the motion with a second from **Representative Dmytrenko, Richfield**. The motion was passed unanimously.

### 1. Review and Approval of the May 17, 2017 Meeting Minutes

**Chair Dianne Miller, Eagan**, requested a motion to approve the minutes from the March 2017 NOC meeting. **Representative Hart, Delta** made the motion with a second from **Representative Oleson, Bloomington** and the motion was passed unanimously.

### 2. Nomination and Election of NOC Co-Chairs

**Dana Nelson, Technical Advisor**, introduced the nomination and election process for the user group and co-chair elections. **Representative Goss, Delta**, nominated Jeff Hart, Delta, for the co-chair election. A voice vote took place and Representative Hart was unanimously voted in, as co-chair, for a two year term. **Representative Oleson, Bloomington**, nominated Dianne Miller, Eagan, as co-chair, representing the community. A voice vote took place and Representative Miller was unanimously voted in as the co-chair for a two year term.

### 3. Review of Monthly Operations Reports: May and June, 2017

**Brad Juffer, Assistant Technical Advisor**, started by reporting 35,407 flights operated at MSP in May, a 3.1% increase from May 2016. In June, there were 36,292 operations, a 1.25% decrease from June 2016. Year to date operations at MSP are 203,598 which is currently 1.3% above YTD operations at this time in 2016.

There were 2,019 nighttime operations in May 2017 which is nearly an 8% increase from 2016. In June there were 2,264 nighttime operations which is a 6.5% decrease from 2016. Nighttime operations, year to date, are at 13,694; this number is an increase of 46 operations from this same time period in 2016.

In May 2017, MSP was in a South flow 37% of the time compared to 50% in 2016. MSP was in a North flow 43% of the time in May 2017 versus a 29% in 2016. In June 2017, MSP was in a South flow 33% of the time compared to 49% in 2016. June 2017, MSP was in a North flow 42% of the time compared to of 32% in 2016.

In May 2017 the fleet mix consisted of 41% regional jets, 56% narrow body, and 3% wide body aircraft. In May 2016 the breakout was 54% regional jets, 43% narrow body, and 3% wide body. June 2017 had a mix of 39% regional jets, 58% narrow body, and 3% wide body aircraft. June 2016 had 54% regional jets, 43% narrow body, and 3% wide body aircraft.

A total of 12,559 complaints were filed in May 2017 from 451 locations. In June 2017, 14,618 complaints were filed from 549 locations.

On average, there were 2.8 operations for every complaint in May 2017 and that number dropped slightly to 2.5 in June 2017. These numbers are slightly lower than they were in 2016, May averaged 3.1 operations per complaint and June saw 3.0. These numbers can be attributed to the rise in complaint totals but the operations numbers staying similar to that of 2016.

In response to a request from NOC members, the top 25 locations with complaints were shown on a map. In May and June of 2017, those particular 25 locations filed 69% of all the complaints. The top 5 locations filed 38% of all complaints and those locations are in Minneapolis, Inver Grove Heights, and Eagan.

According to MAC's 39 sound monitors, in May there were 514 hours with sound events over 65 decibels and in June that number dropped slightly to 482 hours with such events. The count of aircraft events over 65 decibels was 97,236 in May and 95,365 in June. On average, the time above 65 decibels per operation was 52 seconds in May and 48 seconds in June.

The average duration of each recorded sound event in May was 19 seconds and that average fell slightly to 18.2 in June.

**Juffer** then reported on the noise abatement procedure compliance, beginning with the Runway 17 Departure Procedure, noting that May had 99.9% compliance and June had 99.8% compliance.

The Eagan-Mendota Heights Departure Corridor experienced 90.7% compliance in May and 94.7% compliance in June. In May, 34 jets were north of the corridor and 233 were south of the corridor. Most of these events occurred on May 18<sup>th</sup> and May 20<sup>th</sup> due to weather. In June there were 37 jets north and 110 south of the corridor which mostly occurred on June 5<sup>th</sup> due to gusty winds.

The Crossing-in-the-Corridor procedure was used for 38% of the operations during the day in May and 37% in June. During nighttime hours, the crossing procedure was used 33% of the time in May (37 flights) and 53% in June (81 flights).

High priority runways from the Runway Use System were used 53.2% of the time in May and 52.9% of the time in June.

**Representative Oleson, Bloomington**, commented that many elements of the new reporting system are imperative but that he encourages the NOC and MAC to not lose sight that key elements, those crucial to residents, be easy to navigate within the website. **Juffer** responded that the report he gives at each meeting is, specifically, for the NOC. The website and the related operations reports are organized in a way that is intended to meet the needs of residents visiting the site for information.

**Representative Quincy, Minneapolis**, asked if it was possible to know which time of day the top five complaint locations registered complaints and whether they were related to arrivals or departures. **Juffer** responded that the aggregate data shows that the top hour is 8pm but 7am and 6pm also tend to have frequent complaints. Looking at the map you can see that the Eagan locations will be more related to departures of Runway 17, Inver Grove Heights will be related to departures on 17 and arrivals on 30L. **Quincy** responded that he would expect to see that data however resident communications are expressing disturbances from departures and that deviates from what has historically been typical. **Co-Chair Hart, Delta**, asked what the criteria is for a new location of a complaint. **Juffer** responded that it's defined as anyone who has set up an account online or anyone who has called from a location that hasn't received a complaint before.

#### 4. Review of Residential Noise Mitigation Program Implementation

**Dana Nelson, Technical Advisor**, gave historical context for the mitigation program. From 1992-2006 everything within the 2007 forecast 65dB DNL noise contour was mitigated. Over 7,800 single family homes, over 1,300 multi-family units, and 18 schools were mitigated. In 2008, the initiation of the 2007 Consent Decree program began, which provided residential mitigation out to the 2007 forecast 60 dB DNL noise contour and initiated mitigation reimbursements. From 2008-2014 over 5,400 single family homes and almost 2,000 multi-family units were mitigated, and over 1,700 reimbursements were paid. Through the leadership of the NOC, the 2013 Consent Decree Amendment extended the mitigation program commitment to 2023. Moving forward, eligibility of homes are determined annually, based on actual noise contours developed for the preceding calendar year. Per the amended Consent Decree, a home will become eligible if it is located, for a period of three consecutive years in the actual 60-64 DNL noise contour, and within a higher noise impact mitigation area when compared to the original Consent Decree program. The MAC will begin providing noise mitigation to homeowners in the year following their determination of eligibility.

**Pat Mosites, Mitigation Project Manager**, explained the mitigation packages, and the status of the 2017 and 2018 programs. The 2017 mitigation program used the 2013/2014/2015 actual noise contours, which qualified 138 single-family and 88 multi-family homes for the Partial Noise Reduction Package. In collaboration with the City of Minneapolis, letters confirming home's eligibility were sent in June 2016. Three homeowner orientation meetings were held in March, design visits began in March, construction on the first homes began in June, and all participating 2017 Mitigation Program homes will be completed by December 31, 2017.

Regarding the 2018 Mitigation Program, the 2014/2015/2016 actual noise contours qualified 164 single-family homes for the Partial Noise Reduction Package and 123 single-family homes for the Full 5 dB Reduction Package. In collaboration with the City of Minneapolis, letters, questionnaires, and orientation meeting invites were sent to qualified homeowners in June 2017. For this portion of the program, six homeowner orientation meetings will be held on a monthly basis starting in July 2017. Design visits of homes will begin in August 2017, construction will commence in January 2018, and all the qualifying homes will be mitigated by December 31, 2018.

#### 5. 2018 Super Bowl Aircraft Activity Update

**Phil Burke, Director of MSP Operations**, was assigned the internal MAC coordinator role to prepare for the Super Bowl in February 2018. In collaboration with FAA ATC, they are coordinating the air traffic plan for the Super Bowl. Burke introduced the Mission Statement: “Boldly welcoming Super Bowl LII to Minnesota, where our people are surprisingly warm, the airport communities world-class, and the experience unforgettable”. There are a number of considerations for MSP when welcoming the Super Bowl to MN and committees dedicated to addressing them: Safety and Security, General Aviation Airports, Ground Transportation, Volunteers, and Operations. Representatives for these committees met with the team from Houston to learn from their experiences hosting the Super Bowl in 2016. The day after the Super Bowl is expected to be the busiest passenger day in MSP history, and the goal is to operate at the top of our game when it comes to safety and exceptional customer experience.

**Sean Fortier, FAA Traffic Management Officer**, introduced FAA’s research, planning, and outreach phases. Utilizing historical data from the previous year’s Super Bowl the expected main impact will be the Thursday before the Super Bowl through the Monday after. There are expected to be 1,100 aircraft on the ground at MSP on Sunday and 3,000 additional operations.

**Representative Dmytrenko, Richfield**, asked what the plan is to communicate with the public the anticipated air traffic and associated noise levels. **Fortier** responded that those notifications are part of the outreach phase. **Dana Nelson, Technical Advisor**, added that electronic communications will be sent through the MAC noise communication channels and encouraged communities to also share communications on their websites and social media platforms. **Nelson** said information will also be provided at listening sessions through the Noise Office as well.

#### 6. Fly Quiet Award Program Evaluation

**Dana Nelson, Technical Advisor**, discussed that the 2017 NOC Work Plan includes an evaluation of the benefits, challenges and applicability of a Fly Quiet Award Program at MSP. Some U.S. airports have instituted such programs: Vancouver International, YVR; Oakland International, OAK; and Seattle-Tacoma International, SEA. YVR’s award is based on average annual noise levels at noise monitors located under their major runway. Anecdotally from YVR, they said that while they’re grateful for the award however the award has not resulted in airlines changing operations to comply with the award criteria. OAK had a similar comment although their criteria was based on voluntary noise abatement procedures. SEA’s award was based on adherence to noise abatement procedures, single event noise levels at noise monitors, and field rule violations for ground run-ups. Their response to the program mirrored that of YVR and OAK. **Nelson’s** team pinpointed a number of challenges for the award program at MSP, such as noise abatement procedures are voluntary and reflect air traffic control procedures and adherence. Nighttime operations have increased and while analyzing actual nighttime operations could be

done, it's not a fair representation because such operations may be delayed and do not necessarily reflect the operator's choice. Weather, other aircraft delays, or any other circumstance can push operations in to the night when maybe they weren't scheduled at that time. Looking at only scheduled operations wouldn't provide an accurate representation either, since not all regional carriers and cargo operators report their schedules.

**Representative Oleson, Bloomington**, recommended that NOC hold on to this information for future decisions but at the moment, moving forward does not seem to be advantageous. **Representative Quincy, Minneapolis**, vocalized his agreement with Representative Oleson. **Representative Goss, Delta**, echoed both previous comments.

## 7. Converging Runway Operations Update

**Kurt Mara, FAA Traffic Management Officer**, updated the NOC on the recent Converging Runway Operations (CRO) activities. He reported that CRO is continuing to be a challenge for traffic controllers because it is more restrictive than prior to the new rules implemented in July 2015. The Converging Runway Display Aid (CRDA) is a tool that was discussed at the last NOC meeting and has been providing some benefit, but is labor-intensive for controllers. In early June 2017, FAA started flexing the arrival rates up during three peak arrival demand periods throughout the day which has proven to reduce arrival delays. ATC meets weekly to review CRDA use and brainstorm refinements. The next phase is to review departures and find time frames to focus on flexing departure rates up to decrease delays. During periods of high departure demand, the arrivals will be routed to the parallel runways (30L and 30R), which would remove the Arrival Departure Window (ADW) concern for Runway 35. This is anticipated to help departure delay, specifically to Runway 30R. The next tool the FAA is reviewing for use, long term, is for different departure headings off 30R to miss the intersection point for a go-around on 35 and therefore be able to operate departures off Runway 30R without consideration to the Runway 35 ADW. The safety leaders at FAA headquarters are analyzing this possibility as a way to revert Runway 30R departures back to being independent from the ADW on Runway 35. The first phase is to gather data and ensure that it is a viable solution while still maintaining FAA safety margins. This would include procedure modeling using computer software to determine headings that would ensure the intersection point in space would be avoided. After procedure modeling, a procedural test would be run to gather actual operational data for study and review. After the procedure test, a final determination will be made as to whether or not this is a feasible long-term solution for CRO. **Mara** said is likely it will be a year-and-a-half to two years before that determination would be made.

**Representative Goss, Delta**, if implementation of headings of 30R, will this be annotated within the FAA's lexicon for an alternative means of compliance? **Mara** replied that is always a concern. This is not considered an alternative means of compliance, it is not considered a waiver; this will be considered "other means that are locally developed".

**Dana Nelson, Technical Advisor**, added that a few components are related to this CRO update - a resolution passed by the NOC to ask the FAA to evaluate the environmental and capacity impacts once they've come to a conclusion with CRO. These potential evaluation time periods may need to be extended by a year or so. There is a relational impact to the MSP Long Term Comprehensive Plan, originally initiated in 2015 at MSP with a 20 year look ahead. Delaying the LTCP has been determined to be appropriate so the correct assumptions related to runway use, flight track use and airport capacity in the document. **Representative Link, Inver Grove Heights**, said it would be helpful to have that information for the community comprehensive plans, but there doesn't seem to be a way to pull that information together in

order to be correctly utilized by the cities. **Chair Miller, Eagan**, added that there is great risk involved in putting inaccurate information out to the public. **Representative Oleson, Bloomington**, commented that the community comprehensive plans could have a note that explains the circumstances asked how this language is then added to the LTCP for Met Council. **Nelson** responded that there are approved forecasted contours within an environmental planning document that can be used for future planning documents. In addition, projects in the next five year CIP will not be held up by this LTCP delay. **Representative Quincy, Minneapolis**, commented that this is an update to the existing LTCP and thusly are operating under the existing LTCP. The 5 year update affects the forecast, the forecast affects how the noise contours are drawn. For the record, **Quincy** stated he is not in favor of expanding the noise contours. It seems that the FAA is trying to figure out how to go back to airport efficiency levels before CRO. That then would have a detrimental effect to those on the ground from a noise point of view. The goal of this noise oversight body should be, how will we meet efficiency and safety standards while truly overseeing the noise impacts. **Quincy** went on to say that a delay to ensure the 5-year update reflects the most accurate forecast information, which seems to make sense. **Miller** asked Nelson if she had the direction needed as her interpretation is that there was a consensus of the board to further delay the MSP LTCP.

#### 8. Public Comment Period

None

#### 9. Announcements

The Summer Listening Session will be held on July 26<sup>th</sup>, 2017 at 7pm in Apple Valley, MN.

#### 10. Adjourn

A motion to adjourn was requested by **Chair Miller, Eagan**, moved by **Representative Dmytrenko, Richfield**, and seconded by **Representative Miller, Mendota Heights**.

The meeting adjourned at p.m.

The next meeting of the NOC is scheduled for Wednesday, 20 September 2017.

Respectfully Submitted,  
Amie Kolesar, Recording Secretary

# MEMORANDUM

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ITEM 2

**TO:** MSP Noise Oversight Committee (NOC)

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

**SUBJECT:** **REVIEW OF MONTHLY OPERATIONS REPORTS: JULY AND AUGUST, 2017**

**DATE:** September 6, 2017

Each month the MAC reports information on MSP aircraft operations, aircraft noise complaints, sound levels associated with MSP aircraft operations, and compliance with established noise abatement procedures on its interactive reporting website: <https://www.macenvironment.org/reports/>.

At the September 20, 2017 NOC meeting, MAC staff will provide a summary of this information for the months of July and August, 2017. To view these summary reports prior to the meeting, visit the Archives section at the link above.



# MEMORANDUM

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ITEM 3

**TO:** MSP Noise Oversight Committee (NOC)

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

**SUBJECT:** **UPDATE ON PHOENIX SKY HARBOR INTERNATIONAL AIRPORT PBN RULING**

**DATE:** September 6, 2017

On August 29, 2017, the U.S. Court of Appeals for the District of Columbia Circuit ruled that the Federal Aviation Administration's (FAA) implementation of Performance Based Navigation (PBN) procedures at Phoenix Sky Harbor International Airport violated federal law. Specifically, the Court ruled that the September 2014 procedure implementation and airspace changes without notifying local elected officials and residents was arbitrary and capricious and violated the National Historic Preservation Act, The National Environmental Policy Act, the Department of Transportation Act, and FAA's Environmental Order 1050.1E.

The Court's judgment and opinion documents are attached.

At the September 20, 2017 NOC meeting, MAC staff will provide an update on this topic.

**United States Court of Appeals**  
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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**No. 15-1158**

**September Term, 2016**

FILED ON: AUGUST 29, 2017

CITY OF PHOENIX, ARIZONA,  
PETITIONER

v.

MICHAEL P. HUERTA AND FEDERAL AVIATION ADMINISTRATION,  
RESPONDENTS

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Consolidated with 15-1247

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On Petitions for Review of a Decision  
by the Federal Aviation Administration

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Before: ROGERS and GRIFFITH, *Circuit Judges*, and SENTELLE, *Senior Circuit Judge*

**J U D G M E N T**

These causes came on to be heard on the petitions for review of an order of the by the Federal Aviation Administration and were argued by counsel. On consideration thereof, it is

**ORDERED** and **ADJUDGED** that the petitions for review be granted; the September 18, 2014 order implementing the new flight routes and procedures at Sky Harbor International Airport be vacated; and the matter be remanded to the FAA for further proceedings, in accordance with the opinion of the court filed herein this date.

**Per Curiam**

**FOR THE COURT:**  
Mark J. Langer, Clerk

BY: /s/

Ken Meadows  
Deputy Clerk

Date: August 29, 2017

Opinion for the court filed by Circuit Judge Griffith.  
Dissenting opinion filed by Senior Circuit Judge Sentelle.

United States Court of Appeals  
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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Argued March 17, 2017

Decided August 29, 2017

No. 15-1158

CITY OF PHOENIX, ARIZONA,  
PETITIONER

v.

MICHAEL P. HUERTA AND FEDERAL AVIATION  
ADMINISTRATION,  
RESPONDENTS

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Consolidated with 15-1247

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On Petitions for Review of a Decision  
by the Federal Aviation Administration

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*John E. Putnam* argued the cause for petitioner City of Phoenix, Arizona. With him on the briefs was *Peter J. Kirsch*.

*Matthew G. Adams*, pro hac vice, argued the cause for petitioners Story Preservation Association, et al. With him on the briefs was *Peter L. Gray*.

*Lane N. McFadden*, Attorney, U.S. Department of Justice, argued the cause for respondents. With him on the brief was *John C. Cruden*, Assistant Attorney General at the time the brief was filed.

Before: ROGERS and GRIFFITH, *Circuit Judges*, and SENTELLE, *Senior Circuit Judge*.

Opinion for the Court filed by *Circuit Judge* GRIFFITH.

Dissenting opinion filed by *Senior Circuit Judge* SENTELLE.

GRIFFITH, *Circuit Judge*: In September 2014, the Federal Aviation Administration changed longstanding flight routes in and out of Phoenix Sky Harbor International Airport. The city of Phoenix and a historic neighborhood association both petitioned for review, alleging that the FAA's action was arbitrary and capricious. We agree.

## I

Phoenix Sky Harbor International Airport is one of the nation's busiest airports. To minimize the impact of the sound of aircraft on residents, the FAA historically has routed flights over industrial and agricultural parts of the City, and the City has used zoning to minimize impact on residential areas and either purchased or furnished with sound insulation the homes most affected by flight paths, at a cost of hundreds of millions of dollars.

In response to a mandate from Congress to modernize the nation's air-traffic control system, *see* FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, §§ 101(a), 213(a)(1)(A), 126 Stat. 11, 47, the FAA sought to alter the flight routes in and out of Sky Harbor and to employ satellite technology to guide planes. For consultation on its developing plans, the FAA formed the Phoenix Airspace Users Work Group with the City and others.

One of the new flight paths the FAA devised would route planes over a major avenue and various public parks and historic neighborhoods. The new route would increase air traffic over these areas by 300%, with 85% of the increase coming from jets. The FAA consulted on the environmental impact of this and other proposed changes primarily with a low-level employee in Phoenix's Aviation Department, who warned the FAA that he lacked the expertise and authority to discuss environmental matters on the City's behalf. The FAA never conveyed the proposed route changes to senior officials in the City's Aviation Department, local officials responsible for affected parks or historic districts, or elected city officials.

As plans progressed, the FAA used computer software to model the noise impact of the proposed route changes. This modeling predicted that two areas in Phoenix, which included twenty-five historic properties and nineteen public parks, would experience an increase in noise large enough to be "potentially controversial." But the agency concluded that these projected noise levels would not have a "[s]ignificant [environmental] impact" under FAA criteria. Joint Appendix 333, 334. Based on this conclusion, the FAA issued a declaration categorically excluding the new flight routes from further environmental review. The FAA shared these conclusions with the State Historic Preservation Officer, predicting that the new noise levels would not disrupt conversation at a distance of three feet and would be no louder than the background noise of a commercial area. The State Officer concurred in this prediction.

The FAA presented the finalized flight routes in an April 2013 meeting attended by a low-level project manager of the City's Aviation Department. The agency also sent the proposed routes and maps showing affected areas to the other low-level

Aviation Department employee, with the caveat that plans were “subject to change.” J.A. 302. In May 2014, the FAA notified the Phoenix Airspace Users Work Group that the new routes would take effect in September. The FAA did not share its environmental conclusions with Airport management until the day before the routes were to go into effect. Management asked the FAA to delay implementation so the public could be informed. The FAA refused.

On September 18, 2014, the FAA published the new routes, and related procedures, and made them effective immediately. The public’s reaction was swift and severe: the planes supplied the sound, the public provided the fury. In the next two weeks, the Airport received more noise complaints than it had received in all of the previous year.<sup>1</sup> Residents complained that the flights overhead were too loud and frequent and rattled windows and doors in their homes. Some claimed that they had trouble sleeping uninterrupted, carrying on conversations outdoors, or feeling comfortable indoors without earmuffs to mute the noise.<sup>2</sup>

In response to the uproar, the FAA held a public meeting the next month that drew 400 attendees and hundreds of comments.<sup>3</sup> There the agency promised to review the noise

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<sup>1</sup> See Brittany Hargrave, *Phoenix Neighbors Protest Sky Harbor Flight-Path Change*, THE ARIZONA REPUBLIC, Sept. 30, 2014 (updated Oct. 1, 2014), <http://azc.cc/YQ1wu5>.

<sup>2</sup> See Ashley Thompson, *Neighbors Upset at FAA’s New Flight Patterns Hold Day of Protest*, KNXV, Oct. 24, 2015, <http://www.abc15.com/news/region-phoenix-metro/central-phoenix/neighbors-upset-at-faas-new-flight-patterns-hold-day-of-protest>.

<sup>3</sup> See Miriam Wasser, *Sound and Fury: Frustrated Phoenix Residents Are Roaring Ever Since the FAA Changed Sky Harbor Flight Paths*, PHOENIX NEW TIMES, Mar. 4, 2015,

issue and update the City's Aviation Department. The FAA later claimed to have identified and corrected the problem: aircraft had been straying from the new routes. The agency said it was "teaming with the airport staff and industry experts" to see what more could be done about the noise levels. J.A. 609. But despite the FAA's assurances, the City continued to receive record numbers of noise complaints. In early December, the City told the FAA that public concern remained high.

That month the State Historic Preservation Officer also asked the FAA to reconsider the new routes in light of their impact on historic properties, which he said was far worse than he had been led to believe. He said he had originally concurred with the agency's optimistic projections only out of deference to the FAA's technical expertise.

Around the same time, the FAA's Regional Administrator met with Phoenix's City Council and publicly admitted, "I think it's clear that . . . [our pre-implementation procedures were] probably not enough because we didn't anticipate this being as significant an impact as it has been, so I'm certainly not here to tell you that we've done everything right and everything we should have done." J.A. 773.

A week after this concession, the City asked the agency to reopen consultation and restore the old routes until the City and the agency could engage the public in discussions. In response, the FAA said it would work with the airport and airlines to investigate additional changes to the flight paths. To that end, the FAA promised to reconvene the original Working Group,

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<http://www.phoenixnewtimes.com/news/sound-and-fury-frustrated-phoenix-residents-are-roaring-ever-since-the-faa-changed-sky-harbor-flight-paths-6654056>; Caitlin McGlade, *FAA Will Study Solution to Flight-Path Noise*, THE ARIZONA REPUBLIC, Oct. 16, 2014 (updated Oct. 17, 2014), <http://azc.cc/1waaUm9>.

assuring the City that it was “an important player in this process.” J.A. 750-51. But the agency also said it could not reinstate the routes in place before September 18, 2014, because that would require a time-consuming series of related changes to air-traffic control and aircraft automation systems, as well as additional safety and environmental reviews. The FAA also declined the Preservation Officer’s request to reopen environmental review of the new routes.

In mid-February and again in early April the following year, the City submitted data to the FAA purporting to show that the agency’s assertions to the Preservation Officer regarding the noise impact of the new routes were “massive[ly] and material[ly]” incorrect. J.A. 814. The City also alleged that computer modeling the FAA was required to use under its own regulations showed that 40,000 additional residents would be exposed to noise loud enough to disrupt speech compared to before the new routes were implemented. And the City renewed its request that the FAA reopen a statutorily mandated consultation process with the State Preservation Office, in order to provide the City with data from the FAA’s modeling, conduct an environmental review of the route changes, and find ways to either minimize the noise impact of those changes or restore the old routes.

In mid-April the FAA responded with a letter to the City that included the Working Group’s final report. The report evaluated alternative routes and amended some existing routes but reaffirmed the agency’s decision not to conduct further review of the new flight paths’ environmental impact. And though the accompanying letter expressed the FAA’s frustration that the City had offered no alternative route proposals, the letter also conveyed the agency’s promise to consider further modifications as it “continue[d] to support a collaborative approach towards addressing the community’s



concerns.” J.A. 1036. The letter did not address the City’s data, modeling, or requests. In fact, the accompanying documents disclosed that noise level reduction was not among the Working Group’s stated objectives.

The City’s response expressed frustration that despite initial promises, the FAA had organized the Working Group so that it would *not* address the noise issue, and had even excluded the City from meetings for fear of confrontation between the City and the airlines. Indeed, the City was not listed as a Working Group member. The City also protested that it *had* provided an alternative plan to the FAA—namely, reinstating the original routes but continuing to use satellite technology—which the City claimed would eliminate the 69% increase in residents exposed to higher noise levels and cost airlines only \$700,000 more per year in fuel compared to the new routes.

In late May, the City met with the FAA and the airlines to again discuss ways to fix the noise issues. The FAA characterized these discussions as “productive” in a follow-up letter sent on June 1. J.A. 1109. The letter also listed short-term adjustments the agency could make within six months, as well as some “longer term” possibilities, which the agency could implement within a year following additional environmental review. *Id.* The letter said nothing about the City’s data submissions, previous requests to reopen consultation and environmental review, proposal to return to the old routes while still using satellite technology, or exclusion from the Working Group.

Also on June 1, the City sought review in our court, characterizing the FAA’s last letter as a final order. The Historic Neighborhoods filed their own petition for review in late July. The FAA moved to dismiss these petitions as untimely.

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## II

We must first determine whether these petitions are untimely. A petition for review of an FAA order must be filed in the Court of Appeals “not later than 60 days after the order is issued.” 49 U.S.C. § 46110(a). The parties disagree over when this sixty-day clock began to run—i.e., when the FAA’s decision regarding the new flight routes crystallized into final agency action. The answer is relevant because only a final action can be a reviewable “order” within the meaning of section 46110’s sixty-day deadline. *See Flytenow, Inc. v. FAA*, 808 F.3d 882, 888-89 (D.C. Cir. 2015). A final order is one that “mark[s] the consummation of the agency’s decisionmaking process” and that either determines “rights or obligations” or is a source of “legal consequences.” *Friedman v. FAA*, 841 F.3d 537, 541 (D.C. Cir. 2016) (quoting *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997)).

The FAA contends that its final “order” regarding the new routes issued on September 18, 2014, when the routes were formally published and put into effect. We agree. The September 2014 publication was a final order because it satisfies both prongs of the finality test.

First, the September publication marked “the consummation of the agency’s decisionmaking process,” *id.*, because it put the new routes into effect following extensive testing and evaluation intended to ensure that those routes would be safe and consistent with air traffic requirements, *see* Fed. Aviation Admin., Order No. 7100.41, Performance Based Navigation Implementation Process §§ 2-3 to 2-6 (2014).

Petitioners respond that although the new routes went into effect in September, the agency’s decisionmaking process regarding those routes had not yet concluded. *See Friedman*,

841 F.3d at 541. Petitioners note that the FAA's process for developing new routes actually has *five* steps, of which publication of the new routes was only the fourth. The fifth step provides for post-implementation monitoring and review, which, petitioners contend, could have led to further route changes.

But this final step is not part of the agency's "*decisionmaking* process." *Id.* (emphasis added). Rather, it consists of "Monitoring and Evaluation" of decisions already "[i]mplement[ed]," *see* Order 7100.41, *supra*, § 2-7, "to ensure" that those decisions play out "as expected," *id.* To be sure, that monitoring *might* lead to adjustments to the new routes, but by then the primary development of those routes has already happened. *Cf. Friedman*, 841 F.3d at 543 (explaining that "a vague prospect of reconsideration" does not defeat a finding of finality).

As for the second prong of the finality test, it was the September publication, and not the June 1 letter or any of the agency's other reports or communications, that determined "rights [and] obligations" and produced "legal consequences." *Id.* at 541. And it was the September publication that led to the effects petitioners now seek to reverse: increased noise in certain areas of Phoenix. We also note that the relief requested by petitioners is "vacat[ur] and remand [of the] FAA's decision to implement the [new flight] routes"—that is, of the September order. Phoenix Br. 61. Thus, petitioners implicitly recognize that the September publication, and only that publication, determined the legal consequences they wish to challenge. We therefore conclude that the September 18, 2014 publication of the new flight routes was the relevant final "order."

The petitions thus came more than half a year too late. The review statute, however, provides that a court may allow a petition to be filed after the usual deadline “if there are reasonable grounds for not filing by the 60th day.” 49 U.S.C. § 46110(a). While we “rarely [find] ‘reasonable grounds’ under section 46110(a),” *Elec. Privacy Info. Ctr. v. FAA*, 821 F.3d 39, 43 (D.C. Cir. 2016), we have done so in cases quite similar to this one.

For instance, in *Paralyzed Veterans of America v. Civil Aeronautics Board*, the Board promulgated a final rule but “explicitly left its rulemaking docket open in order to receive additional comments from the public.” 752 F.2d 694, 705 n.82 (D.C. Cir. 1985), *rev’d on other grounds sub nom. U.S. Dep’t of Transp. v. Paralyzed Veterans of Am.*, 477 U.S. 597 (1986). “Aware that the rule might be undergoing modification, and unable to predict how extensive any modifications would be, petitioners elected to wait until the regulation was in final form before seeking review,” six months after the final rule had been published. *Id.* We found that petitioners had shown “reasonable grounds” for late filing under a review statute materially the same as the one at issue here.<sup>4</sup> *See id.* (citing 49 U.S.C. § 1486(a) (1976)). In doing so, we observed that “[a]ny delay simply served properly to exhaust petitioners’ administrative remedies, and to conserve the resources of both the litigants and this court.” *Id.*

Similarly, in *Safe Extensions, Inc. v. FAA*, after the FAA’s publication of an advisory circular establishing certain

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<sup>4</sup> In *Paralyzed Veterans*, the petitioners had filed a petition for review within sixty days of an amended final order. But the *Paralyzed Veterans* court treated that fact as a *distinct* reason to review the petition, considering “[m]ore important[.]” the fact that petitioners had shown reasonable grounds for delaying their petition for review of the *original* order. *See* 752 F.2d at 705 n.82.

requirements for manufacturing products provoked a “significant uproar in the industry,” the FAA told the industry to ignore the existing order pending a revision. 509 F.3d 593, 603 (D.C. Cir. 2007). The petitioner, “[b]ased on these representations, and hoping to avoid litigation,” decided to wait and see if the agency would address the petitioner’s concerns voluntarily. *Id.* As a result, we found reasonable grounds for the petitioner’s late filing. *Id.* at 604.

To be sure, in *Safe Extensions* the FAA had expressly directed the petitioner to ignore the final order, whereas here the FAA merely promised to look into possible modifications. But the key in *Safe Extensions* was that the agency left parties “with the impression that [it] would address their concerns” by replacing its original order with a revised one. *Id.* at 596. There we were concerned that the agency’s comments “could have confused the petitioner and others.” *Id.* at 603.

Those same concerns are present here. The FAA repeatedly communicated—in an October public meeting, in a November letter, in a December public meeting, in a January letter, in a February decision to reconvene the Working Group, in an April letter, and in a May meeting with city officials—that the agency was looking into the noise problem, was open to fixing the issue, and wanted to work with the City and others to find a solution. This pattern would certainly have led reasonable observers to think the FAA might fix the noise problem without being forced to do so by a court. And given the FAA’s serial promises, petitioning for review soon after the September order might have shut down dialogue between the petitioners and the agency. *See* Oral Arg. Tr. 58:8-13. We do not punish the petitioners for treating litigation as a last rather than a first resort when an agency behaves as the FAA did here. *See Paralyzed Veterans*, 752 F.2d at 705 n.82.

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While we rarely find a reasonable-grounds exception, this is such a rare case. We hold that petitioners had reasonable grounds for their delay in filing. To conclude otherwise would encourage the FAA to promise to fix a problem just long enough for sixty days to lapse and then to argue that the resulting petitions were untimely. We therefore reach the merits of the petitions.

### III

The petitioners argue that the FAA's approval of the new flight routes was arbitrary and capricious and violated the National Historic Preservation Act, the National Environmental Policy Act, the Department of Transportation Act, and the FAA's Order 1050.1E. We agree.<sup>5</sup>

#### A

Under the National Historic Preservation Act, federal agencies must “account [for] the effect of their actions on structures eligible for inclusion in the National Register of Historic Places.” *Ill. Commerce Comm’n v. ICC*, 848 F.2d 1246, 1261 (D.C. Cir. 1988). In fulfilling this obligation, agencies must consult with certain stakeholders in the potentially affected areas, including representatives of local governments. *See* 36 C.F.R. § 800.2(a)(4), (c)(3). If an agency determines that no historic structures will be adversely affected, it still has to “notify all consulting parties”—including a representative of the local government—and give them any relevant documentation. *Id.* § 800.5(c).

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<sup>5</sup> Petitioners also claim that the FAA violated the agency's own Order 7100.41 by excluding the City from the Working Group reconvened in the wake of the controversy over the new routes. We do not reach that argument, however, because our review is limited to the agency's September order.

Here the FAA failed to fulfill these obligations because it consulted only low-level employees in the City's Aviation Department, whom the City had never designated as its representatives. True, the City never informed the FAA that low-level Aviation Department employees were inadequate points of contact, but that is irrelevant. Neither statute nor regulation imposes a duty on local governments to affirmatively inform the agency of their chosen representatives. Just the opposite: the agency must ask local governments who their authorized representatives are. *See id.* § 800.3(f), (f)(1). The FAA never took that step here. And the FAA's failure to notify and provide documentation to the City of the agency's finding of no adverse impact violated regulations under the Preservation Act, and denied the City its right to participate in the process and object to the FAA's findings. *See id.* §§ 800.2(c)(3), 800.5(c)(2).

Additionally, unless confidential information is involved, agencies must "provide the public with information about an undertaking and its effects on historic properties *and* seek public comment and input." *Id.* § 800.2(d)(2) (emphasis added). The FAA admits, however, that it did not make "local citizens and community leaders" aware of the proposed new routes and procedures, J.A. 364, and it does not claim that any confidentiality concerns applied.

Further, by keeping the public in the dark, the agency made it impossible for the public to submit views on the project's potential effects—views that the FAA is required to consider. *See* 36 C.F.R. § 800.5(a); *see also Am. Bird Conservancy v. FCC*, 516 F.3d 1027, 1035 (D.C. Cir. 2008) ("Interested persons cannot request an [environmental assessment] for actions they do not know about, much less for actions already completed.").

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B

Under the National Environmental Policy Act (NEPA), federal agencies must assess and disclose the environmental impacts of “major” actions prior to taking those actions. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.1. This process “ensures” that *before* an agency acts, it will “have available” and “carefully consider[] detailed information concerning significant environmental impacts.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The process also “guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of [the] decision.” *Id.*

NEPA’s requirements vary based on the type of agency action in question. Actions with significant environmental effects require a full environmental-impact statement. Actions with impacts that are not significant or are unknown require a briefer environmental assessment. And actions “which do not individually or cumulatively have a significant effect on the human environment” can be categorically excluded from any environmental review. 40 C.F.R. § 1508.4.

However, the FAA may not categorically exclude an action from environmental review if “the Administrator determines that extraordinary circumstances” would counsel otherwise. FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 213(c)(1), 126 Stat. 11, 49. Under the FAA’s own regulations, extraordinary circumstances exist when an action’s effects “are likely to be highly controversial on environmental grounds.” Fed. Aviation Admin., Order No. 1050.1E, Environmental Impacts: Policies and Procedures ¶ 304i (2004). Here, the FAA found that the new routes were



“not likely to be highly controversial on environmental grounds,” and thus determined that no extraordinary circumstances existed. That determination was arbitrary and capricious.

The FAA’s determination was arbitrary in light of the agency’s admitted failure to notify “local citizens and community leaders” of the proposed new routes before they went into effect. J.A. 364, 367. This failure made it impossible for the FAA to take into account “[o]pposition on environmental grounds by a . . . State, or local government agency or by . . . a substantial number of the persons affected by the [FAA’s] action.” Order 1050.1E, *supra*, ¶ 304i; *cf. Am. Bird Conservancy*, 516 F.3d at 1035 (faulting the agency for its lack of diligence in informing and involving the public since “[i]nterested persons cannot request an [environmental assessment] for actions they do not know about, much less for actions already completed”).

The FAA argues that it was reasonable simply to assume that its proposal would not be controversial on environmental grounds, given that the agency had “confirmed that no significant noise impacts were anticipated at all, received the concurrence of the State Historic Preservation Officer[,] who expressed no concerns, and then further discussed the finding with the Airport Authority[,] [which] also expressed no concerns.” FAA Br. 80. Common sense reveals otherwise. As noted, the FAA’s proposal would increase by 300% the number of aircraft flying over twenty-five historic neighborhoods and buildings and nineteen public parks, with 85% of the new flight traffic coming from jets. The idea that a change with these effects would not be highly controversial is “so implausible” that it could not reflect reasoned decisionmaking. *See Motor Vehicle Mfrs. Ass’n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

The FAA also erred by deviating from its usual practice in assessing when new flight routes are likely to be highly controversial, without giving a “reasoned explanation for . . . treating similar situations differently.” *W. Deptford Energy, LLC v. FERC*, 766 F.3d 10, 20 (D.C. Cir. 2014). In assessing proposed route changes at airports in Boston, Northern California, Charlotte, and Atlanta, the FAA has relied on its general observation that a proposal is likely to be highly controversial if it would increase sound levels by five or more decibels in an area already experiencing average levels of 45-60 decibels. But here the agency said exactly the opposite and never explained its about-face. The FAA replies that “[e]ach airport is different and the potential effects of any changes at those airports will differ as well.” FAA Br. 81. But that does not explain how the Phoenix plan could be less likely to stir controversy than other plans that had *the same* projected impact. Thus, the agency acted arbitrarily in departing from its usual determinations regarding when a projected noise increase is likely to be highly controversial.

In short, the FAA had several reasons to anticipate that the new flight routes would be highly controversial: The agency was changing routes that had been in place for a long time, on which the City had relied in setting its zoning policy and buying affected homes. The air traffic over some areas would increase by 300%—with 85% of that increase attributed to jets—when before only prop aircraft flew overhead. The FAA found a “potential [for] controversy” but did not notify local citizens and community leaders of the proposed changes as the agency was obligated to, much less allow citizens and leaders to weigh in.<sup>6</sup> And the agency departed from its determinations

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<sup>6</sup> Although at times it may be difficult to identify precisely who must be notified, the FAA’s regulatory acknowledgment of its

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in materially identical cases. Thus, the FAA acted arbitrarily in finding under Order 1050.1E that the new routes were unlikely to be highly controversial and could thus be categorically excluded from further environmental review.

C

Petitioners also raise two claims related to the Transportation Act's section 4(f). First, they argue that the FAA violated its duty to consult with the City in assessing whether the new routes would substantially impair the City's parks and historic sites. Second, petitioners claim that the FAA was wrong to find that the routes would *not* substantially impair these protected areas. We agree on both points.

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Section 4(f) of the Transportation Act calls for “special effort[s] to preserve the natural beauty of . . . public park and recreation lands . . . and historic sites.” 49 U.S.C. § 303(a). To that end, the FAA's regulations require it to consult “*all* appropriate . . . State[] and *local officials having jurisdiction* over the affected section 4(f)” areas when assessing whether a noise increase might substantially impair these areas. Order 1050.1E, *supra*, ¶ 6.2e (emphases added). According to the City, the agency violated this requirement by not consulting the proper city officials about the proposed flight routes in Phoenix. *Cf. Nat'l Conservative Political Action Comm. v. FEC*, 626 F.2d 953, 959 (D.C. Cir. 1980) (“Agencies are under

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obligation has narrowed the field. Here, given the changes about to occur, it was unreasonable to ignore elected local officials once the FAA was on notice that the Aviation Department employee lacked authorization to speak for the City of Phoenix. *See infra* Part III.C (discussing FAA regulations under section 4(f) of the Transportation Act).

an obligation to follow their own regulations, procedures, and precedents, or provide a rational explanation for their departures.”).

The FAA responds that it *did* consult employees in the City’s Aviation Department, and that at the time the City didn’t tell the agency what the City now asserts: that those employees lacked authority to speak for the City regarding the new flight routes. Thus, the FAA contends, its failure to consult other local officials was not arbitrary.

We are not persuaded. As noted, the FAA spoke mainly with one low-level employee in the City’s Aviation Department and occasionally with other low-ranking members of the department. But it was unreasonable for the agency simply to assume that low-level Aviation Department employees had jurisdiction over the historic sites and public parks protected by section 4(f), much less that these employees (along with the State Historic Preservation Officer) represented *all* the local officials with such jurisdiction, as the agency’s consultation duties required. Besides, the FAA cites no evidence that it consulted with these City officials on historic sites and public parks in particular. Thus, the FAA’s consultation process was arbitrarily confined.

Section 4(f) also provides that a federal transportation project may “use” a public park or historic site only if “there is no prudent and feasible alternative to using that land.” 49 U.S.C. § 303(c)(1). A project makes “constructive use” of a protected area if the project would “substantially impair” that area. Order 1050.1E, *supra*, ¶ 6.2e. And a project substantially impairs an area if it “substantially diminish[es]” the “activities, features, or attributes . . . that contribute to its enjoyment.” *Id.*

¶ 6.2f. For instance, a project would make constructive use of a park if it subjected the park to aircraft noise “at levels high enough to have negative consequences of a substantial nature that amount to a taking.” *Id.* In that case, the project could lawfully proceed only if there was no prudent and feasible alternative to using the park.

In determining whether a transportation project would substantially impair an area protected under section 4(f), the FAA may rely on guidelines set forth in 14 C.F.R. pt. 150 (the Part 150 guidelines), including the directive “to evaluate impacts on historic properties that are in use as residences.” Order 1050.1E, *supra*, ¶ 6.2h. But the Part 150 guidelines “may *not* be sufficient to determine the noise impact” on historic residences if “a quiet setting is a generally recognized purpose and attribute” of those residences. *Id.* (emphasis added). Here the FAA found that a quiet setting was not a recognized purpose of the affected historic homes, neighborhoods, and sites, so the agency relied only on the Part 150 guidelines in assessing the noise impact on those sites. And on that basis, it concluded that the increased noise would not substantially impair the historic buildings and areas in question.

The City contends that it was unreasonable for the FAA to rely only on the Part 150 guidelines, because the agency didn’t have enough information to tell if the areas affected here were generally recognized as quiet settings. We agree.

As evidence that these sites were not “generally recognized” as quiet settings, the FAA pointed to the sites’ urban location. *Id.* But that isn’t enough: even in the heart of a city, some neighborhoods might be recognized as quiet oases. The agency also observed that planes were flying over the affected historic sites even before the new routes took effect. But those earlier flights involved propeller aircraft that flew far

less often, so the homes beneath them might still have been generally recognized as “quiet setting[s].” *Id.*

Thus, it was unreasonable for the agency to rely only on the Part 150 guidelines in concluding that noise from the new flight routes would not substantially impair the affected historic sites. As a result, that conclusion lacks substantial supporting evidence. For both these reasons, we find that the agency’s substantial-impairment analysis was arbitrary and capricious. *See BFI Waste Sys. of N. Am. v. FAA*, 293 F.3d 527, 532 (D.C. Cir. 2002) (observing that an agency’s action is arbitrary and capricious if it is “‘not supported by substantial evidence’ in the record as a whole” (quoting *Motor Vehicle Mfrs. Ass’n of U.S. v. Ruckelshaus*, 719 F.2d 1159, 1164 (D.C. Cir. 1989))); *see also State Farm*, 463 U.S. at 43 (“We may not supply a reasoned basis for the agency’s action that the agency itself has not given.” (quoting *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947))).

#### IV

For the foregoing reasons, we grant the petitions, vacate the September 18, 2014 order implementing the new flight routes and procedures at Sky Harbor International Airport, and remand the matter to the FAA for further proceedings consistent with this opinion.

*So ordered.*

SENTELLE, *Senior Circuit Judge*, dissenting:

I respectfully dissent from the majority's opinion in this case, not because I disagree with the merits but because I believe the court should not reach them. I therefore express no opinion on the merits and instead disembark at the question of timeliness.

As the majority acknowledges, petitions for review of an FAA order must be filed "not later than 60 days after the order is issued." 49 U.S.C. § 46110(a); *see* Maj. Op. at 8. Nevertheless, as my colleagues note, the petitions in this case were filed "more than half a year too late." Maj. Op. at 10. Such late filing is excused "only if there are reasonable grounds for not filing" within the 60-day period. § 46110(a); *see* Maj. Op. at 10. The majority relies on two cases, *Paralyzed Veterans of America v. Civil Aeronautics Board*, 752 F.2d 694 (D.C. Cir. 1985), *rev'd on other grounds sub nom. U.S. Dep't of Transp. v. Paralyzed Veterans of Am.*, 477 U.S. 597 (1986), and *Safe Extensions, Inc. v. FAA*, 509 F.3d 593 (D.C. Cir. 2007), for its conclusion that reasonable grounds exist in the present case. *See* Maj. Op. at 10-12. Both cases, however, are distinguishable.

As my colleagues in the majority acknowledge, in *Paralyzed Veterans*, "the Board promulgated a final rule but 'explicitly left its rulemaking docket open in order to receive additional comments from the public.'" Maj. Op. at 10 (citing *Paralyzed Veterans*, 752 F.2d at 705 n.82). This unusual circumstance, prompting the petitioners to wait for further changes to the rule before filing for review, constituted reasonable grounds within the meaning of § 46110(a). And, as the majority acknowledges in discussing *Safe Extensions*, that case involved the FAA instructing parties to ignore an order as it would be modified and revised. *Safe Extensions*, 509 F.3d at 603; Maj. Op. at 10-11. The petitioner accordingly waited to file and, given that unique context, we concluded

reasonable grounds existed for delayed filing. *Safe Extensions*, 509 F.3d at 604. These factual contexts are distinguishable from the present case, in which the FAA never promised to suspend the existing order and explicitly had the new flight paths continue while it considered the possibility of future changes. Mere agency acknowledgment of the possibility of future modification is not a rare circumstance; *Paralyzed Veterans* and *Safe Extensions* are instead the truly rare circumstances of an agency explicitly inducing warranted delay by a putative petitioner. Agencies are often welcome to re-initiate the decision-making process at some future point and to follow the necessary procedures to change their minds — this mere possibility, or even the mention of it, cannot be enough to excuse a petitioner’s failure to file within the statutorily mandated 60-day period. Otherwise, the statutory limit would cease to have meaning.

Instead, as we observed in *Electronic Privacy Information Center v. FAA*, 821 F.3d 39, 43 (D.C. Cir. 2016), “[w]e have rarely found ‘reasonable grounds’ under section 46110(a).” *Safe Extensions* (and, by comparison, *Paralyzed Veterans*) is the “rare instance[.]” of such reasonable grounds, not the rule. *Nat’l Fed’n of the Blind v. U.S. Dep’t of Transp.*, 827 F.3d 51, 57 (D.C. Cir. 2016). Because reasonable grounds are so infrequent, the onus is almost always on the petitioners to protect themselves and file within the 60-day timeframe. The FAA’s failure to act with perfect clarity is not sufficient to remove petitioners’ duty to protect themselves. *See, e.g., Nat’l Fed’n of the Blind*, 827 F.3d at 57-58; *Elec. Privacy Info. Ctr.*, 821 F.3d at 42-43; *Avia Dynamics, Inc. v. FAA*, 641 F.3d 515, 521 (D.C. Cir. 2011). Mere confusion over where or when to file, lack of clarity by the FAA in its communications, ignorance, and lack of notice do not suffice, at least independently, to qualify as reasonable grounds for delay under § 46110(a) and our precedent. *See Nat’l Fed’n of the Blind*,



827 F.3d at 57-58; *Elec. Privacy Info. Ctr.*, 821 F.3d at 42-43; *Avia Dynamics*, 641 F.3d at 521. Such grounds are rare and found in unique circumstances, such as *Safe Extensions* and agency procurements of delay by promising a new order and instructing parties to ignore the prior one, or *Paralyzed Veterans* and an agency leaving its rulemaking docket open during the modification process, where delay “simply served properly to exhaust petitioners’ administrative remedies,” 752 F.2d at 705 n.82. No such unusual facts are in the present case. I would determine that petitioners lacked reasonable grounds for untimely filing.

I note in passing the majority’s references to petitioners’ notice and knowledge of the FAA’s proceedings having come through “low-level” employees. *See* Maj. Op. at 3-4, 13. I do not see that this can help establish reasonable grounds for any delay, let alone one stretching six months beyond the 60-day statutory provision. There was ample time for the higher-ups to gain and act on adequate knowledge.

In concluding that petitioners did not have reasonable grounds for waiting six months to file for review, I do not contend that the FAA acted with perfect clarity at all times. However, the record does not suggest to me that petitioners had a clear reason, akin to those rare instances present in *Paralyzed Veterans* and *Safe Extensions*, to forego at the very least a protective filing. For this reason, I would decide this case on the question of timeliness, deny the petitions for review, and decline to reach the merits of their arguments.

# MEMORANDUM

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ITEM 4

**TO:** MSP Noise Oversight Committee (NOC)

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

**SUBJECT:** **EVALUATE AND ENHANCE THE REPORTING OF THE RUNWAY USE SYSTEM (RUS)**

**DATE:** September 6, 2017

The NOC 2017 Work Plan includes an evaluation of enhancements to Runway Use System (RUS) reporting.

## *Background*

The RUS establishes runway selection preferences to promote flight activity over less-populated residential areas. The RUS is used to varying degrees depending on weather and traffic levels. Weather is a driving factor in runway selection, as is capacity during peak operational periods. The FAA Air Traffic Control must select runways that align aircraft arrivals and departures into the wind and maintain necessary airport capacity.

In May 2015, MAC staff began publishing a monthly RUS Report for MSP. The report provided a monthly summary of the count and percent use of RUS high-priority runways. Currently, the MAC reports RUS metrics as part of the recently launched Interactive Reports website ([www.macenvironment.org/reports/](http://www.macenvironment.org/reports/)). The RUS high-priority runway usage is included on the Operations and Abatement Overview pages.

The tables from the original RUS Report are available in the Abatement - Runway Use System section of the Interactive Reports website. In this section, the use of the runways is provided for all hours and during nighttime (10:30 PM – 6:00 AM), morning (6:00 AM – 7:30 AM) and evening (9:00 PM – 10:30 PM).

The Committee proposed this agenda item to evaluate different options of reporting the RUS, such as breaking down the first priority (Runways 12L and 12R) from the second priority (Runway 17) or reporting on airport flow, such as North Flow, South Flow.

Staff has developed a new Interactive Reports page to report airport flow data and provide historical monthly trends and year-to-date trends for all hours and during the night.

At the September 20, 2017 NOC meeting, MAC staff will provide the Committee with a demonstration of the proposed enhancement to the regular reporting of the RUS.

# MEMORANDUM

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ITEM 5

**TO:** MSP Noise Oversight Committee (NOC)

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

**SUBJECT:** **INVESTIGATE NOISE-REDUCING LANDSCAPING OPTIONS**

**DATE:** September 6, 2017

The 2017 NOC Work Plan includes an investigation into noise-reducing landscaping options. Such landscaping techniques exist at Amsterdam's Schiphol Airport, where ridges were created off one end of their newest runway to dampen ground noise from the airport by deflecting low-frequency sound waves.

Schiphol Airport, just south of downtown Amsterdam, is one of the busiest airports in the world. The airport is on over 6,800 acres of flat lowlands which used to be the bed of a lake. In 2003 the airport built a sixth runway used only in one direction (arrivals from the north and departures to the north). Following the opening of the runway, concerns about low-frequency ground noise increased in a neighborhood to the south of the new runway. The flat, broad land off the south end of the runway did little to deflect and absorb low-frequency soundwaves. Therefore an 80-acre area of green space was converted into a series of trenches and ridges, which have reduced ground noise by two to three decibels.

The constrained footprint of MSP's 3,400 acres, which is only half the land mass of Schiphol Airport, does not offer a feasible location for such landscaping techniques on airport property. Additionally, the land surrounding MSP is controlled by surrounding municipalities and developed by those municipalities to be something other than agricultural. Therefore, there are no feasible areas immediately surrounding the airport for constructing noise-reducing landscaping options. These landscaping options do little to reduce overflight noise. To effectively reduce ground noise, these landscaped areas must be located close to the source of the noise; therefore, landscaping techniques beyond areas immediately surrounding the airport would not reduce ground noise.

To reduce ground noise at MSP, the MAC has an airport field rule for aircraft engine run-up procedures, requiring all aircraft-mounted engine maintenance run-ups to be conducted at the run-up pad and establishes quiet hours for run-ups and aircraft powerbacks. Additionally the west cargo area near Cedar Avenue has specific aircraft start-up procedures to reduce ground-noise for areas in east Richfield.

The NOC will discuss this topic at MSP at its September 20, 2017 NOC meeting.

# MEMORANDUM

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ITEM 6

**TO:** MSP Noise Oversight Committee (NOC)

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

**SUBJECT:** **STATUS OF FAA CENTER OF EXCELLENCE/ASCENT AND TRB RESEARCH INITIATIVES**

**DATE:** September 6, 2017

In accordance with the 2017 NOC Work Plan, MAC Noise Program Office staff has enclosed an updated report of aviation-related research initiatives pertaining to aircraft noise, environmental topics, and health effects.

A summary of the research projects that were completed, active, initiated, or anticipated in 2017 or 2018 is provided in the attached report, and includes work by the Transportation Research Board (TRB), The FAA's Centers of Excellence (ASCENT) and other health-related reports.



Update on Aviation-Related  
Research Initiatives Pertaining to  
Aircraft Noise, Human Health,  
and Environmental Topics

August 2017



**Noise & Health**   
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## Transportation Research Board

The mission of the Transportation Research Board (TRB) is to promote innovation and progress in transportation through research. According to the TRB website, the organization facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encouraged their implementation<sup>1</sup>.

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

While there are projects and studies being undertaken by the ACRP to address many aircraft, airport and aviation aspects, below is a summary of the noise-related, environment-related, and health-related projects that are dated for completion in 2017 or 2018. Additionally, several projects as noted are anticipated to begin in 2018.<sup>2</sup>

Project Number	Project Title, Date, and Webpage Link
ACRP 02-43	<b>Development of a NO<sub>x</sub> Chemistry Module for EDMS/AEDT to Predict NO<sub>2</sub> Concentrations (Completion Date: 1/31/2017)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3438">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3438</a>
ACRP 02-47	<b>Assessing Aircraft Noise Conditions Affecting Student Achievement--Case Studies (Completion Date: 3/31/2017)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3693">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3693</a>
ACRP 02-48	<b>Assessing Community Annoyance of Helicopter Noise (Completion Date: 6/30/2017)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3694">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3694</a>
ACRP 02-52	<b>Improving AEDT Noise Modeling of Hard, Soft, and Mixed Ground Surfaces (Completion Date: 4/28/2017)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3698">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3698</a>
ACRP 02-55	<b>Enhanced AEDT Modeling of Aircraft Arrival and Departure Profiles (Completion Date: 3/20/2018)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3701">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3701</a>
ACRP 02-58	<b>Dispersion Modeling Guidance for Airports Addressing Local Air Quality Health Concerns (Completion Date: 7/31/2017)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3704">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3704</a>
ACRP 02-66	<b>Commercial Space Operations Noise and Sonic Boom Modeling and Analysis (Completion Date: 5/29/2017)</b>
	<a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3839">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3839</a>

<sup>1</sup> <http://www.trb.org/AboutTRB/AboutTRB.aspx>

<sup>2</sup> <http://www.trb.org/Projects/Projects2.aspx>

Project Number	Project Title, Date, and Internet Link (Continued from Previous Page)
ACRP 02-67	<p><b>Airport Air Quality Management Guidebook and Resource Library (Completion Date: 8/31/2017)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3840">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3840</a></p>
ACRP 02-69	<p><b>Integrating Airport Sustainability and the NEPA Process (Completion Date: 3/28/2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4015">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4015</a></p>
ACRP 02-72	<p><b>Developing a Comprehensive Renewable Resources Strategy (Completion Date: 3/28/2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4018">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4018</a></p>
ACRP 02-73	<p><b>Interactive Tool for Understanding NEPA at General Aviation Airports (Completion Date: 11/4/2017)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4019">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4019</a></p>
ACRP 02-77	<p><b>Revolving Funds for Sustainability Projects at Airports (Completion Date: 12/5/2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4235">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4235</a></p>
ACRP 02-78	<p><b>Climate Resilience and Benefit Cost Analysis--A Handbook for Airports (Completion Date: 11/10/2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4236">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4236</a></p>
ACRP 02-79	<p><b>Improving AEDT Modeling for Aircraft Noise Reflection and Diffraction from Terrain and Manmade Structures (Completion Date: 1/31/2019)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4237">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4237</a></p>
ACRP 02-80	<p><b>Quantifying Emissions Reductions at Airports from the Use of Alternative Jet Fuels (Completion Date: 11/14/2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4238">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4238</a></p>
ACRP 02-81	<p><b>Commercial Space Operations Noise and Sonic Boom Measurements (Completion Date: 7/31/2019)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4239">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4239</a></p>
ACRP 02-82	<p><b>Advancing Airport Transportation to Achieve Zero-Emissions Status (Anticipated: 2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4419">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4419</a></p>
ACRP 02-83	<p><b>Measuring Quality of Life in Communities Surrounding Airports (Anticipated: 2018)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4420">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4420</a></p>
ACRP 03-37	<p><b>Using GIS for Collaborative Land Use Compatibility Planning Near Airports (Completion Date: 12/29/2017)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3842">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3842</a></p>
ACRP 03-38	<p><b>Understanding FAA Grant Assurance Obligations (Completion Date: 7/27/2016)</b></p> <p><a href="http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3843">http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=3843</a></p>



## ASCENT

The Aviation Sustainability Center, called ASCENT—previously referred to as the FAA’s Center of Excellence program—conducts aviation-related research to develop “science-based” solutions to challenges posed by aircraft operations. Projects undertaken by ASCENT are funded by the FAA, NASA, DOD, Transport Canada, and the US EPA. Below is a summary of the noise-related or emissions-related projects that were initiated, updated or completed in 2017. Information about these projects and other projects completed prior to 2017 may be found on the Ascent website.<sup>3</sup>

Project Number	Project Title, Date, and Internet Link
003	<b>Cardiovascular Disease and Aircraft Noise Exposure (6/20/2017)</b>
	<a href="https://ascent.aero/project/noise-impact-health-research/">https://ascent.aero/project/noise-impact-health-research/</a>
004	<b>Estimate of Noise Level Reduction (6/19/2017)</b>
	<a href="https://ascent.aero/project/estimate-of-noise-level-reduction/">https://ascent.aero/project/estimate-of-noise-level-reduction/</a>
005	<b>Noise Emission and Propagation Modeling (07/20/2016)</b>
	<a href="https://ascent.aero/project/noise-emission-and-propagation-modeling/">https://ascent.aero/project/noise-emission-and-propagation-modeling/</a>
010	<b>Aircraft Technology Modeling and Assessment (7/11/2017)</b>
	<a href="https://ascent.aero/project/aircraft-technology-modeling-and-assessment/">https://ascent.aero/project/aircraft-technology-modeling-and-assessment/</a>
011	<b>Rapid Fleet-wide Environmental Assessment Capability (7/14/2017)</b>
	<a href="https://ascent.aero/project/rapid-fleet-wide-environmental-assessment-capability/">https://ascent.aero/project/rapid-fleet-wide-environmental-assessment-capability/</a>
017	<b>Pilot Study on Aircraft Noise and Sleep Disturbance (7/12/2017)</b>
	<a href="https://ascent.aero/project/noise-exposure-response-sleep-disturbance/">https://ascent.aero/project/noise-exposure-response-sleep-disturbance/</a>
018	<b>Health Impacts Quantification for Aviation Air Quality Tools (6/30/2017)</b>
	<a href="https://ascent.aero/project/health-impacts-quantification-for-aviation-air-quality-tools/">https://ascent.aero/project/health-impacts-quantification-for-aviation-air-quality-tools/</a>
019	<b>Development of Aviation Air Quality Tools for Airport-Specific Impact Assessment: Air Quality Modeling (6/28/2017)</b>
	<a href="https://ascent.aero/project/development-of-aviation-air-quality-tools-for-airport-specific-impact-assessment-air-quality-modeling/">https://ascent.aero/project/development-of-aviation-air-quality-tools-for-airport-specific-impact-assessment-air-quality-modeling/</a>
020	<b>Development of NAS wide and Global Rapid Aviation Air Quality (7/6/2017)</b>
	<a href="https://ascent.aero/project/development-of-nas-wide-and-global-rapid-aviation-air-quality/">https://ascent.aero/project/development-of-nas-wide-and-global-rapid-aviation-air-quality/</a>
023	<b>Analytical Approach for Quantifying Noise from Advanced Operational Procedures (7/14/2017)</b>
	<a href="https://ascent.aero/project/analytical-approach-for-quantifying-noise-from-advanced-operational-procedures/">https://ascent.aero/project/analytical-approach-for-quantifying-noise-from-advanced-operational-procedures/</a>

<sup>3</sup> <https://ascent.aero/project/>

<b>Project Number</b>	<b>Project Title, Date, and Internet Link (Continued from Previous Page)</b>
033	<b>Alternative Fuels Test Database Library (6/23/2017)</b>
	<a href="https://ascent.aero/project/alternative-fuels-test-database-library/">https://ascent.aero/project/alternative-fuels-test-database-library/</a>
035	<b>Airline Flight Data Examination to Improve flight Performance Modeling (1/10/2017)</b>
	<a href="https://ascent.aero/project/airline-flight-data-examination-to-improve-flight-performance-modeling/">https://ascent.aero/project/airline-flight-data-examination-to-improve-flight-performance-modeling/</a>
037	<b>CLEEN II Technology Modeling and Assessment (6/28/2017)</b>
	<a href="https://ascent.aero/project/cleen-ii-technology-modeling-and-assessment/">https://ascent.aero/project/cleen-ii-technology-modeling-and-assessment/</a>
038	<b>Rotorcraft Noise Abatement Procedures Development (2/21/2017)</b>
	<a href="https://ascent.aero/project/rotorcraft-noise-abatement-procedures-development/">https://ascent.aero/project/rotorcraft-noise-abatement-procedures-development/</a>
039	<b>Naphthalene Removal Assessment (7/11/2017)</b>
	<a href="https://ascent.aero/project/naphthalene-removal-assessment/">https://ascent.aero/project/naphthalene-removal-assessment/</a>
041	<b>Identification of Noise Acceptance Onset for Noise Certification Standards of Supersonic Airplanes (6/8/2017)</b>
	<a href="https://ascent.aero/project/identification-of-noise-acceptance-onset-for-noise-certification-standards-of-supersonic-airplanes/">https://ascent.aero/project/identification-of-noise-acceptance-onset-for-noise-certification-standards-of-supersonic-airplanes/</a>
042	<b>Acoustical Model of Mach Cut-off (6/8/2017)</b>
	<a href="https://ascent.aero/project/acoustical-model-of-mach-cut-off/">https://ascent.aero/project/acoustical-model-of-mach-cut-off/</a>
043	<b>Noise Power Distance Re-Evaluation (6/21/2017)</b>
	<a href="https://ascent.aero/project/noise-power-distance-re-evaluation/">https://ascent.aero/project/noise-power-distance-re-evaluation/</a>
045	<b>Takeoff/Climb Analysis to Support AEDT APM Development (7/12/2017)</b>
	<a href="https://ascent.aero/project/takeoffclimb-analysis-to-support-aedt-apm-development/">https://ascent.aero/project/takeoffclimb-analysis-to-support-aedt-apm-development/</a>
046	<b>Surface Analysis to Support AEDT APM Development (7/6/2017)</b>
	<a href="https://ascent.aero/project/surface-analysis-to-support-aedt-apm-development/">https://ascent.aero/project/surface-analysis-to-support-aedt-apm-development/</a>
048	<b>Analysis to Support the Development of an Engine nvPM Emissions Standards (1/3/2017)</b>
	<a href="https://ascent.aero/project/analysis-to-support-the-development-of-an-engine-nvpm-emissions-standards/">https://ascent.aero/project/analysis-to-support-the-development-of-an-engine-nvpm-emissions-standards/</a>

## Other Health-Related Studies

Internet searches for aircraft noise-related health effects topics revealed that research is ongoing in this field of study. The table below lists studies published in 2017 by various scholars worldwide.

Study ID	Study Title, Release Date, and Internet Link
A	<b>Association between Aircraft, Road and Railway Traffic Noise and Depression in a Large Case-Control Study Based on Secondary Data (1/2017)</b> <a href="http://www.sciencedirect.com/science/article/pii/S0013935116305461">http://www.sciencedirect.com/science/article/pii/S0013935116305461</a>
B	<b>Using Mindfulness to Reduce the Health Effects of Community Reaction to Aircraft Noise (8/14/2017)</b> <a href="http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2017;volume=19;issue=89;spage=165;epage=173;aulast=Hede">http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2017;volume=19;issue=89;spage=165;epage=173;aulast=Hede</a>
C	<b>Aviation Noise Impacts: State of the Science (4/17/2017)</b> <a href="http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2017;volume=19;issue=87;spage=41;epage=50;aulast=Basner">http://www.noiseandhealth.org/article.asp?issn=1463-1741;year=2017;volume=19;issue=87;spage=41;epage=50;aulast=Basner</a>
D	<b>A summary of the Association Between Noise and Health (3/3/2017)</b> <a href="http://sboh.wa.gov/Portals/7/Doc/Meetings/2017/03-08/Tab10b-LiteratureReview.pdf">http://sboh.wa.gov/Portals/7/Doc/Meetings/2017/03-08/Tab10b-LiteratureReview.pdf</a>

# MEMORANDUM

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ITEM 7

**TO:** MSP Noise Oversight Committee (NOC)

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

**SUBJECT:** **REVIEW OF JULY 26, 2017 LISTENING SESSION**

**DATE:** September 6, 2017

One of the elements of the framework for the NOC includes convening a quarterly meeting with the public. The primary goal of the meeting is to ensure residents' concerns are heard and considered as part of the ongoing effort by the MAC and the NOC to address noise and other topics around MSP. The NOC may review the topics discussed and add them to future meeting agendas at their sole discretion.

On July 26, 2017 at 7:00 P.M., the Summer Listening Session was held at the Apple Valley Municipal Center. Nine residents attended the meeting. The residents were from Apple Valley, Eagan, Inver Grove Heights and Richfield. The meeting was also attended by MAC Staff, FAA Air Traffic officials, NOC committee members and Apple Valley city staff.

MAC staff opened the meeting and asked each of the audience members to introduce themselves. Staff then shared the third video from our Aircraft Noise Basics series. The presentation concluded with a demo of the new Interactive Reports website. 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 35 arrivals and Runway 17 departures. Specifically the attendees focused the discussion on:

- Runway 17 departures and Runway 35 arrivals
- MSP nighttime operations
- Noise monitoring locations and data
- Runway Use System (RUS) prioritization
- Components of the Federal Environmental Impact Statement completed for the construction of Runway 17/35
- Converging Runway Operations and its effect on runway use

At the end of the meeting, MAC staff asked that the attendees fill out comment cards about the new meeting format. Written comments indicated the attendees appreciate the information and the meeting format. One participant suggested that information from aircraft engineers and FAA regulators would be helpful.

The next chance for the public to participate in a Listening Session will be on October 25, 2017 at 7:00 P.M. at the MAC General Offices. Further details will be made available on the [www.macnoise.com](http://www.macnoise.com) website.