



# NOISE OVERSIGHT COMMITTEE

November 28, 2018

*Audio recordings are made of this meeting*

# ITEM 1

## REVIEW AND APPROVAL OF SEPTEMBER 19<sup>TH</sup> MEETING MINUTES



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**





# ITEM 2

## REVIEW OF MONTHLY OPERATIONS REPORTS



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**



# MSP OPERATIONS

SEPTEMBER 2018

OCTOBER 2018

**33,162**

Operations

**1,781**

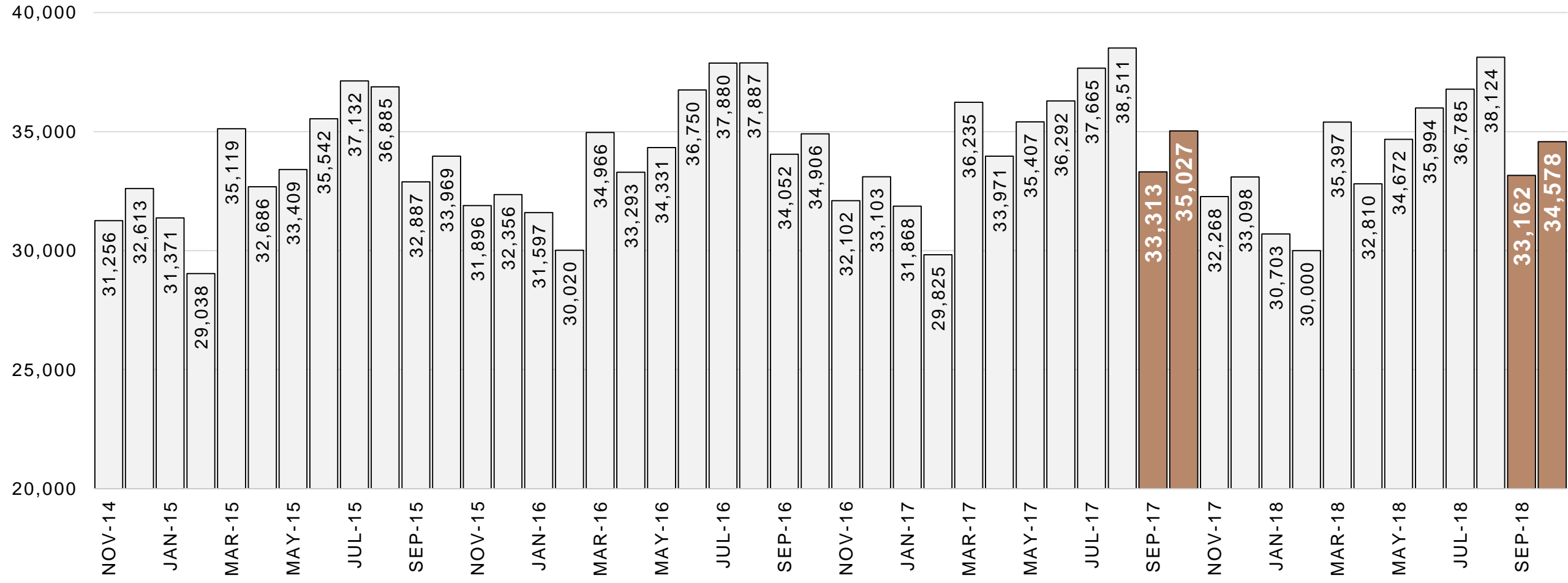
Nighttime Operations  
(10:30 PM – 6:00 AM)

**34,578**

Operations

**1,800**

Nighttime Operations  
(10:30 PM – 6:00 AM)



# MSP OPERATIONS

SEPTEMBER 2018

**33,162**

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Nighttime Operations  
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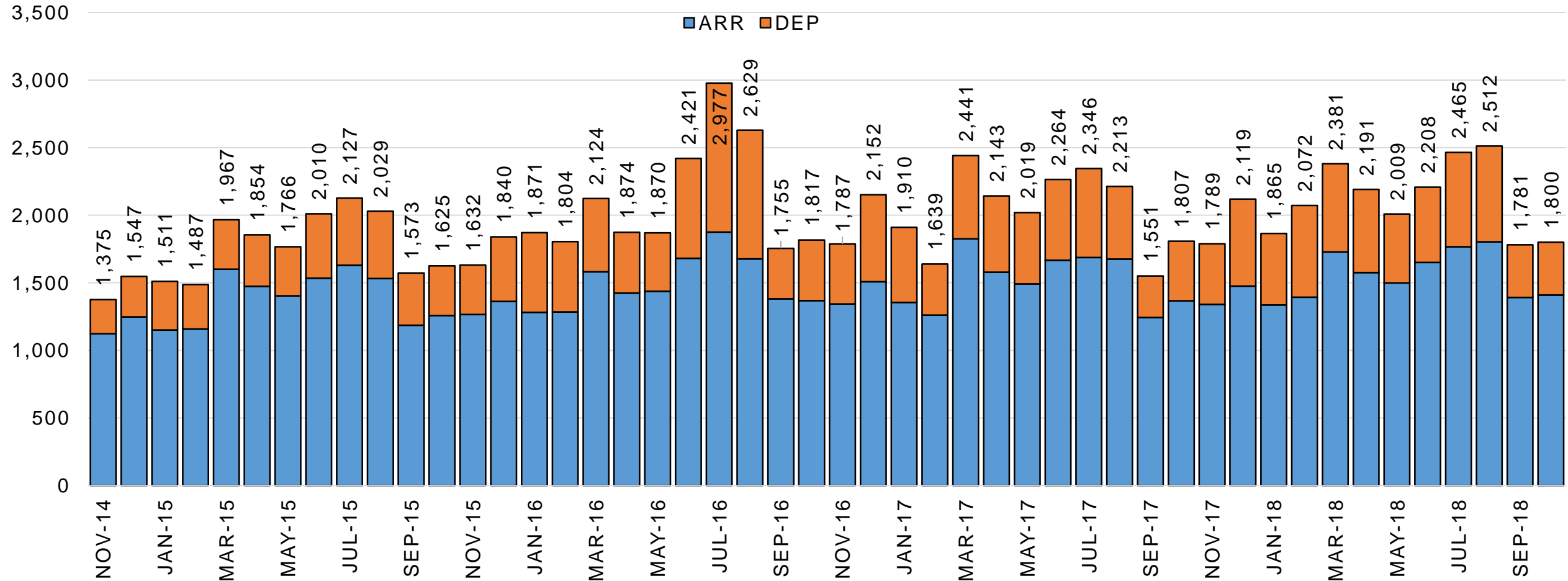
OCTOBER 2018

**34,578**

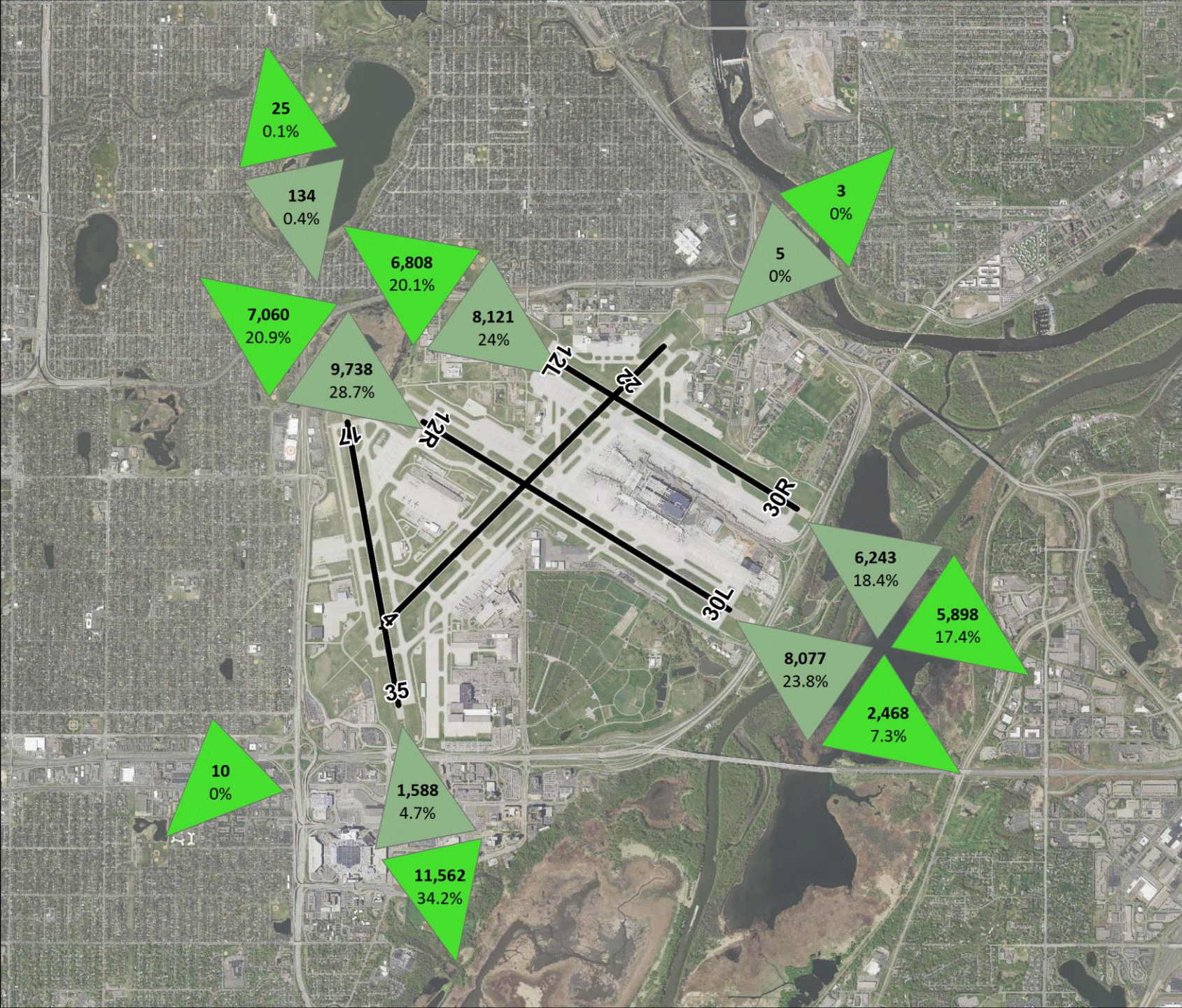
Operations

**1,800**

Nighttime Operations  
(10:30 PM – 6:00 AM)







RUNWAY USE			
<b>67,740</b> OPERATIONS IN SEPTEMBER AND OCTOBER			
PRIORITY 1 <b>33.5%</b>	PRIORITY 2 <b>19.4%</b>	PRIORITY 3 <b>0%</b>	PRIORITY 4 <b>46.8%</b>
<b>33,906</b> ARRIVALS			
PRIORITY 1 <b>42.2%</b>	PRIORITY 2 <b>4.7%</b>	PRIORITY 3 <b>0%</b>	PRIORITY 4 <b>52.7%</b>
<b>33,834</b> DEPARTURES			
PRIORITY 1 <b>24.7%</b>	PRIORITY 2 <b>34.2%</b>	PRIORITY 3 <b>0%</b>	PRIORITY 4 <b>41.1%</b>



# RUNWAY USE

SEPTEMBER 2018

OCTOBER 2018

NORTH FLOW

SOUTH FLOW

MIXED FLOW

NORTH FLOW

SOUTH FLOW

MIXED FLOW

21%

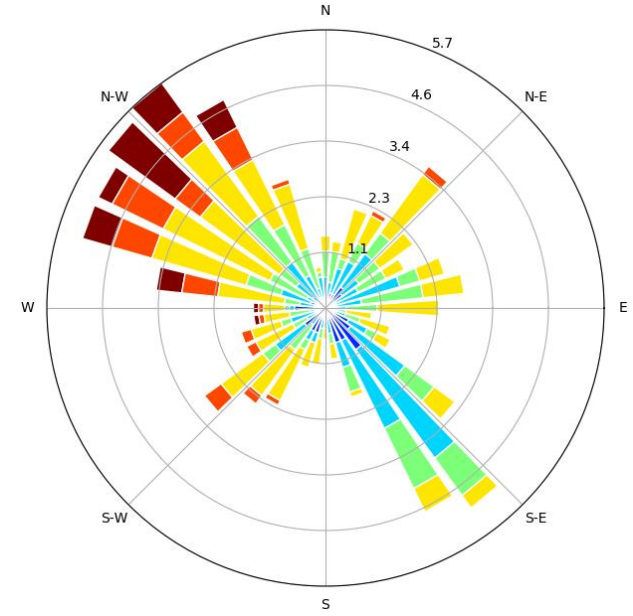
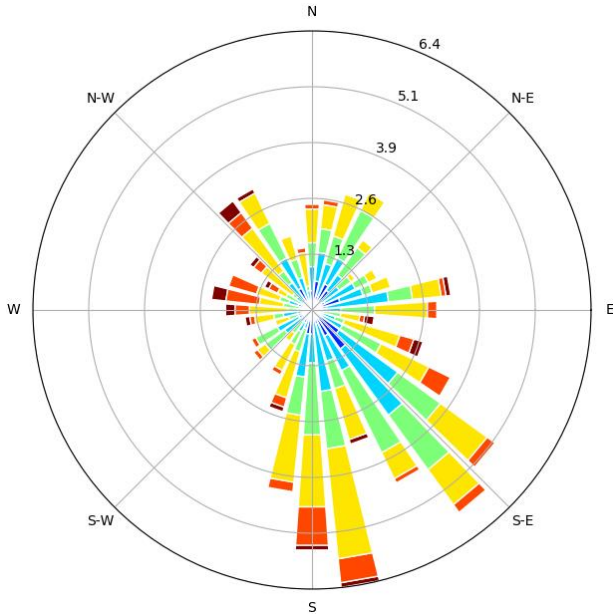
67%

6%

43%

39%

10%



**NORTH FLOW**

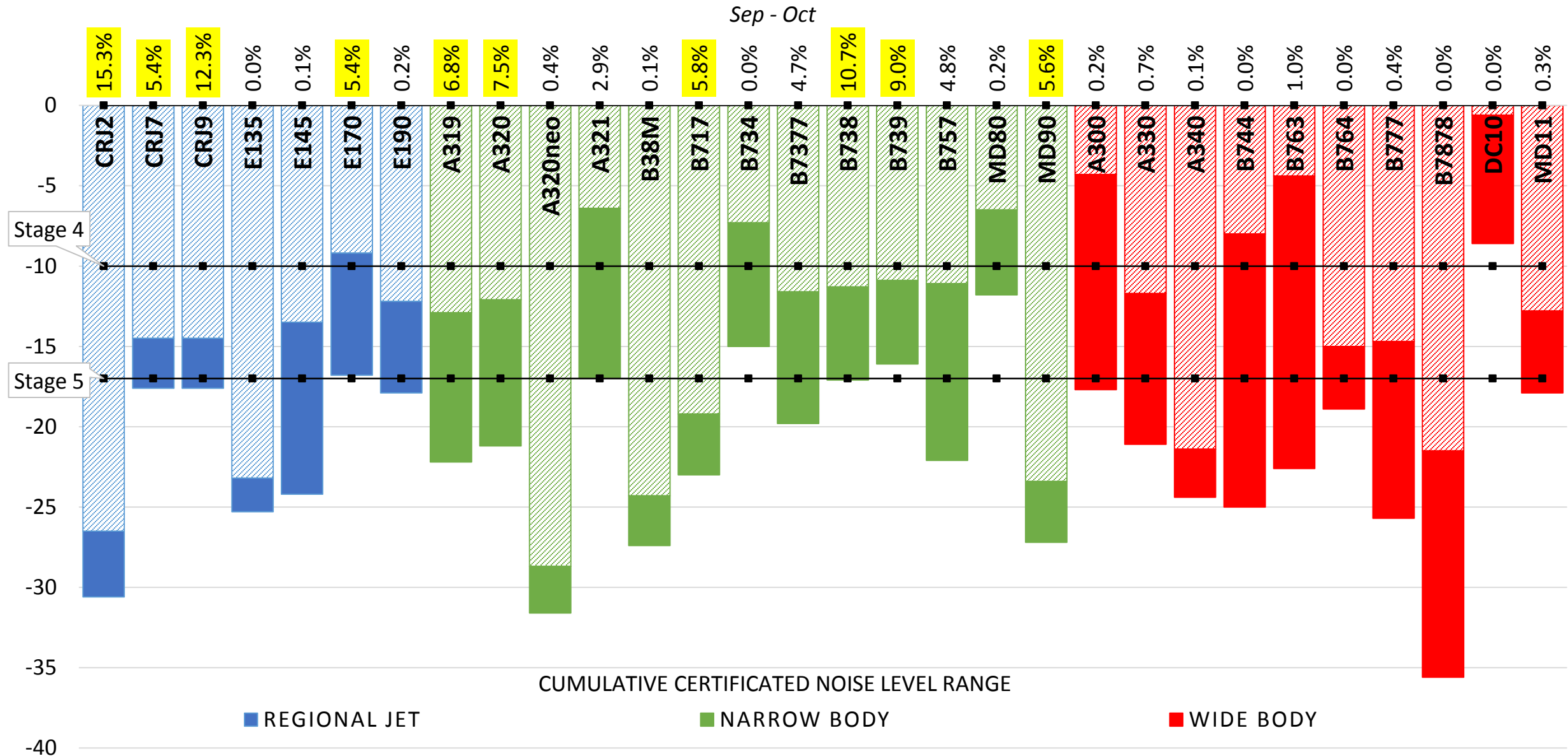
**SOUTH FLOW**

**MIXED FLOW**



# MSP OPERATIONS

## 2018 MSP CARRIER JET USAGE WITH CUMULATIVE CERTIFICATED NOISE LEVELS



SOURCE: USAGE DATA: MACNOMS; NOISE CERTIFICATION DATA: EUROPEAN AVIATION SAFETY AGENCY

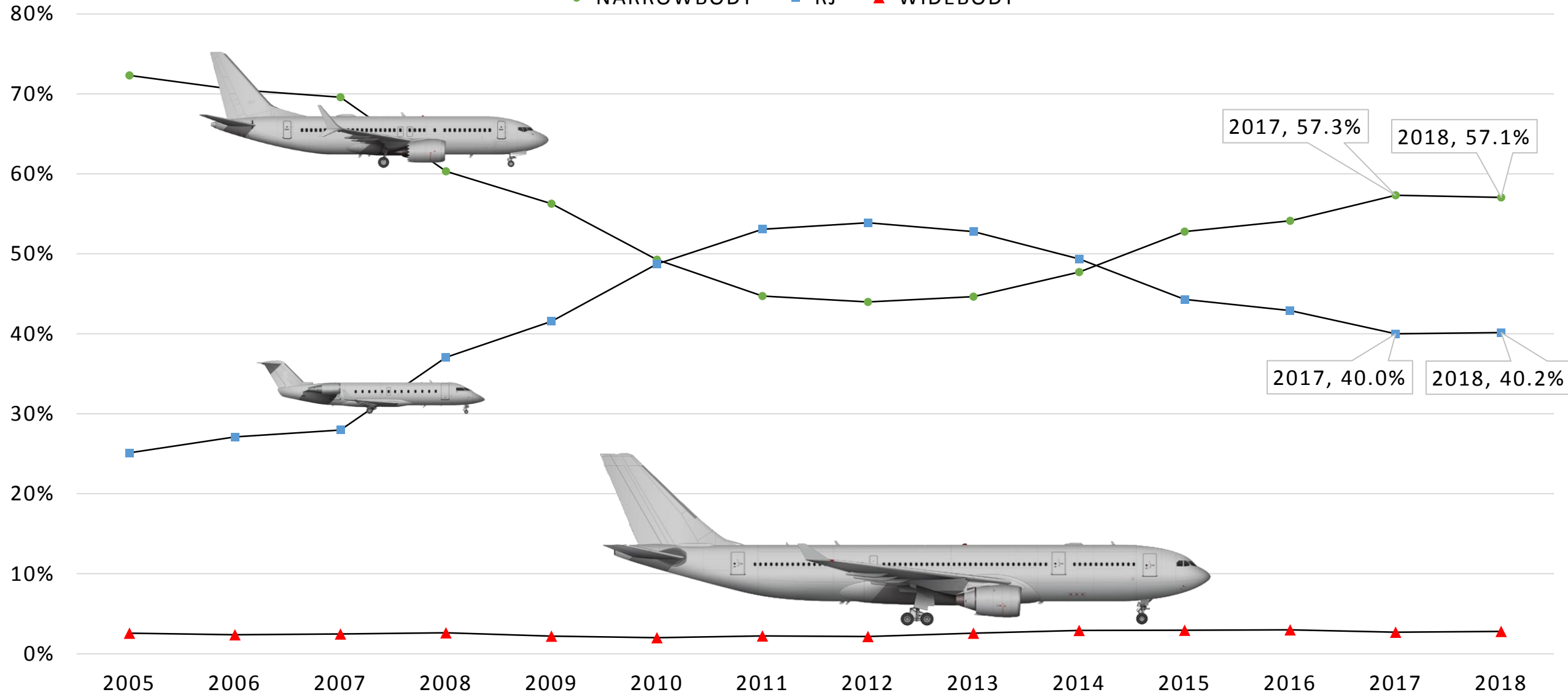
CUMULATIVE CERTIFICATED NOISE LEVELS REPRESENTED AS A RANGE TO ACCOUNT FOR MULTIPLE CERTIFICATION VARIABLES (WEIGHT, MODEL, ENGINE TYPE, AIRFRAME CONFIGURATION, ETC)



# MSP OPERATIONS

## CARRIER JET FLEET MIX

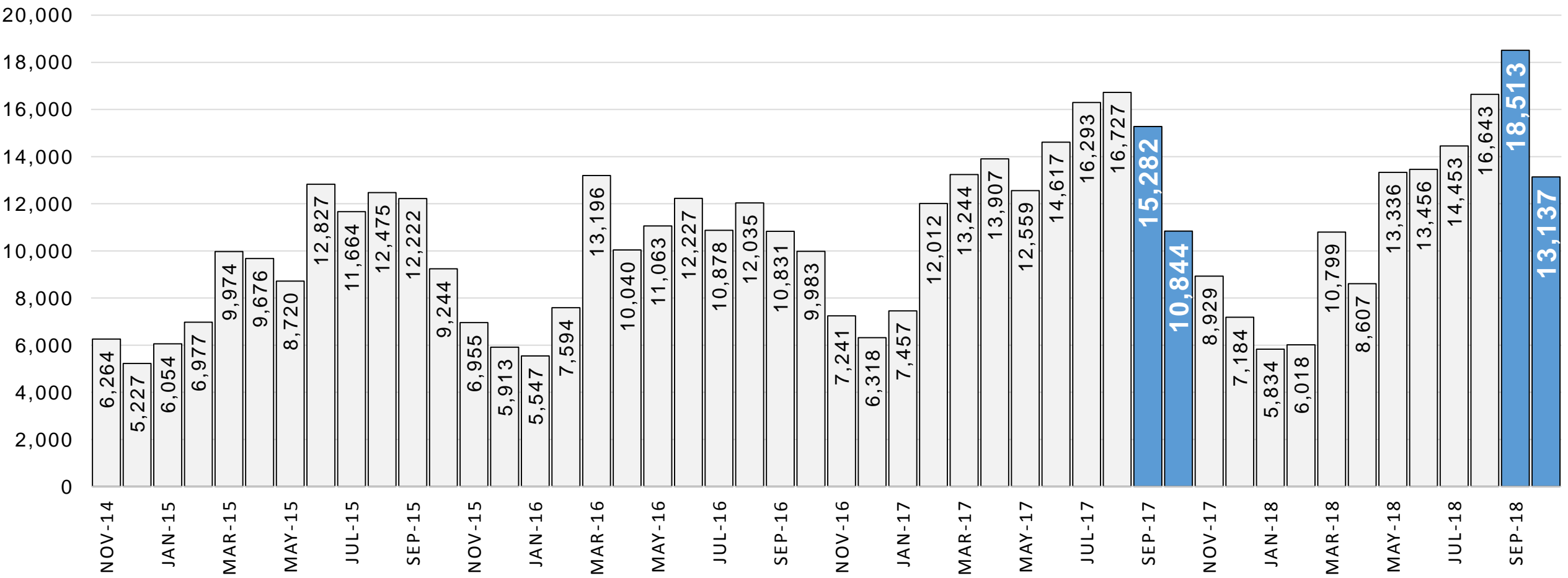
—●— NARROWBODY —■— RJ —▲— WIDEBODY



\*\*\*2018: JAN - OCT ONLY\*\*\*

# MSP COMPLAINTS

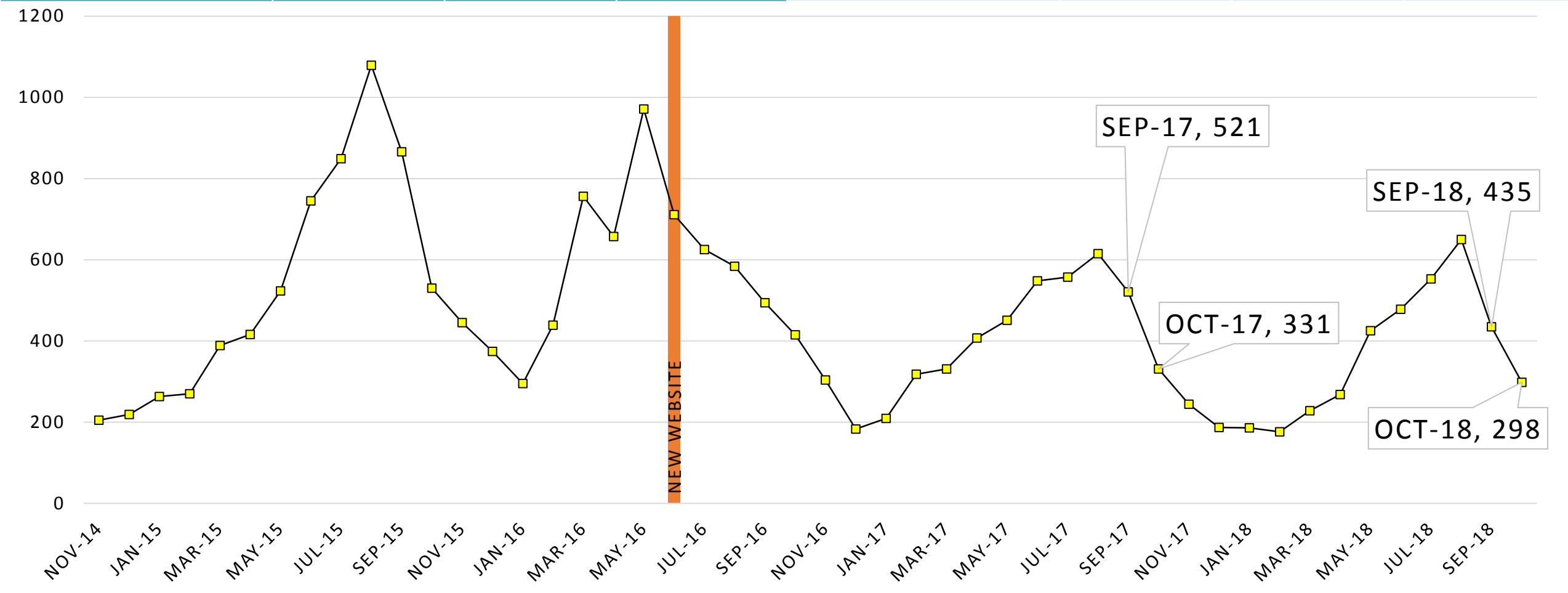
SEPTEMBER 2018				OCTOBER 2018			
COMPLAINTS	LOCATIONS			COMPLAINTS	LOCATIONS		
<b>18,513</b>	<b>435</b>			<b>13,137</b>	<b>298</b>		
Operations per Complaint	New Locations	Average	Median	Operations per Complaint	New Locations	Average	Median
<b>1.8</b>	<b>52</b>	<b>43</b>	<b>3</b>	<b>2.6</b>	<b>32</b>	<b>44</b>	<b>4</b>

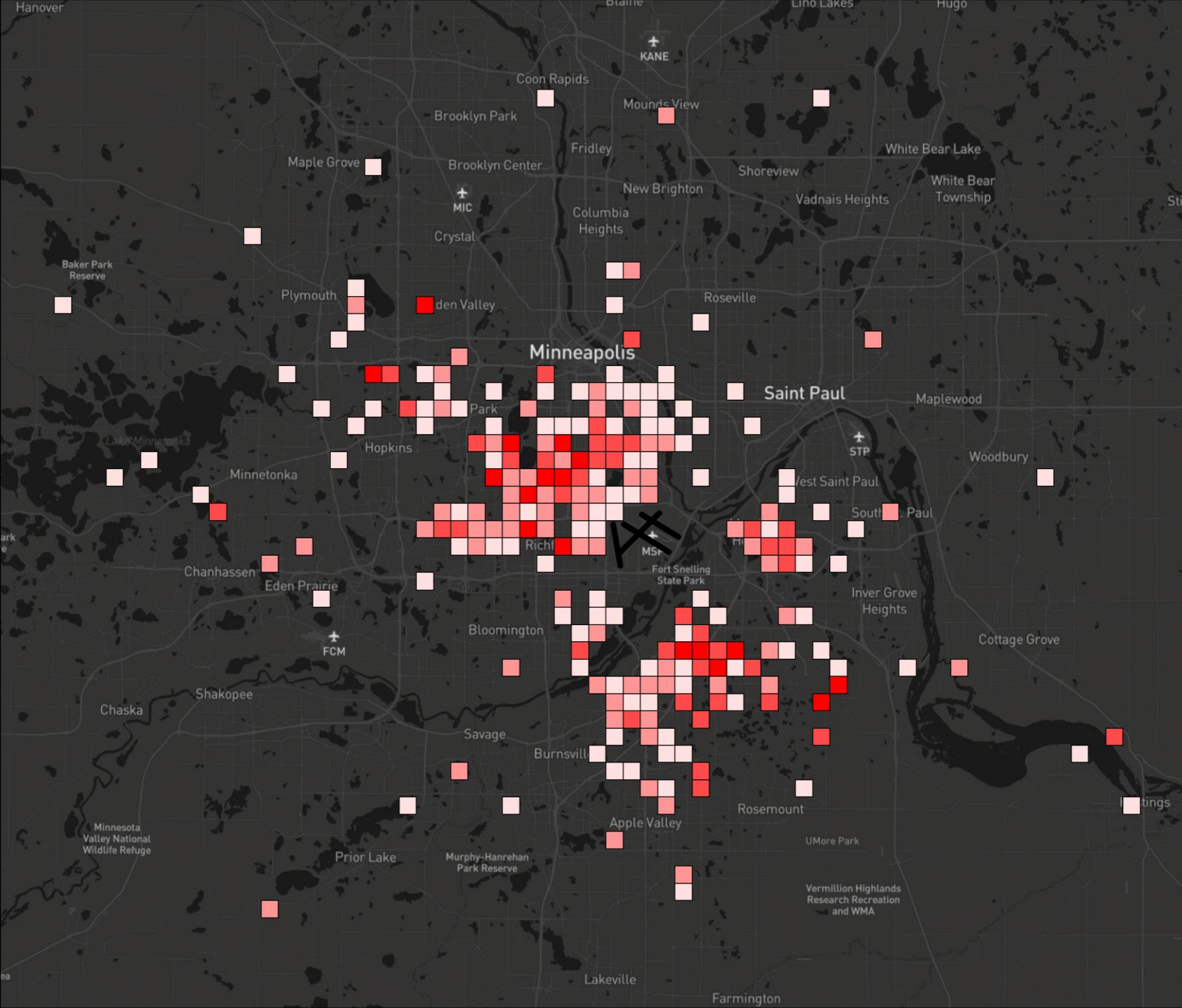




# MSP COMPLAINTS

SEPTEMBER 2018				OCTOBER 2018			
COMPLAINTS	LOCATIONS			COMPLAINTS	LOCATIONS		
<b>18,513</b>	<b>435</b>			<b>13,137</b>	<b>298</b>		
Operations per Complaint	New Locations	Average	Median	Operations per Complaint	New Locations	Average	Median
<b>1.8</b>	<b>52</b>	<b>43</b>	<b>3</b>	<b>2.6</b>	<b>32</b>	<b>44</b>	<b>4</b>





# TOTAL COMPLAINTS

**234**

AREAS WITH AT LEAST 1 LOCATION

**17**

AREAS WITH MORE THAN 300 COMPLAINTS – 7%

**39**

AREAS BETWEEN 60 AND 300 COMPLAINTS – 17%

**77**

AREAS BETWEEN 8 AND 60 COMPLAINTS – 33%

**101**

AREAS WITH LESS THAN 8 COMPLAINTS – 43%





# TOP 10 LOCATIONS

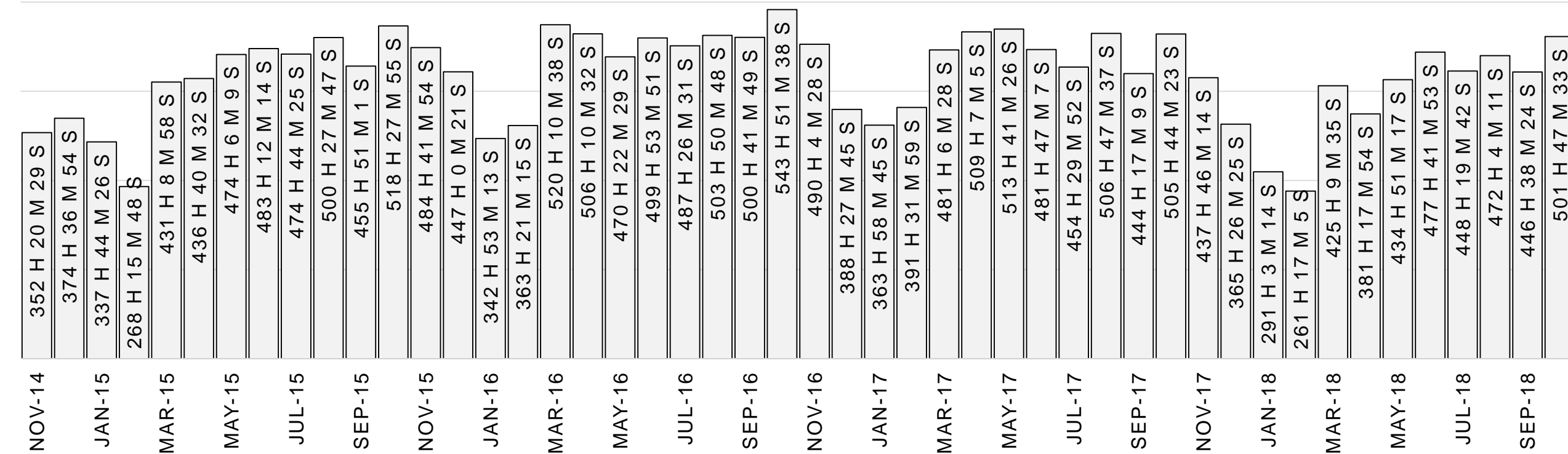
FILED  
**18,761**  
(59%)  
COMPLAINTS DURING THE PREVIOUS  
2 MONTHS

**7 OF 10**  
LOCATIONS WERE IN THE TOP 10  
FOR JULY / AUGUST DATA

**383**  
(71%)  
LOCATIONS FILED 10 OR LESS  
COMPLAINTS

# SOUND MONITORING

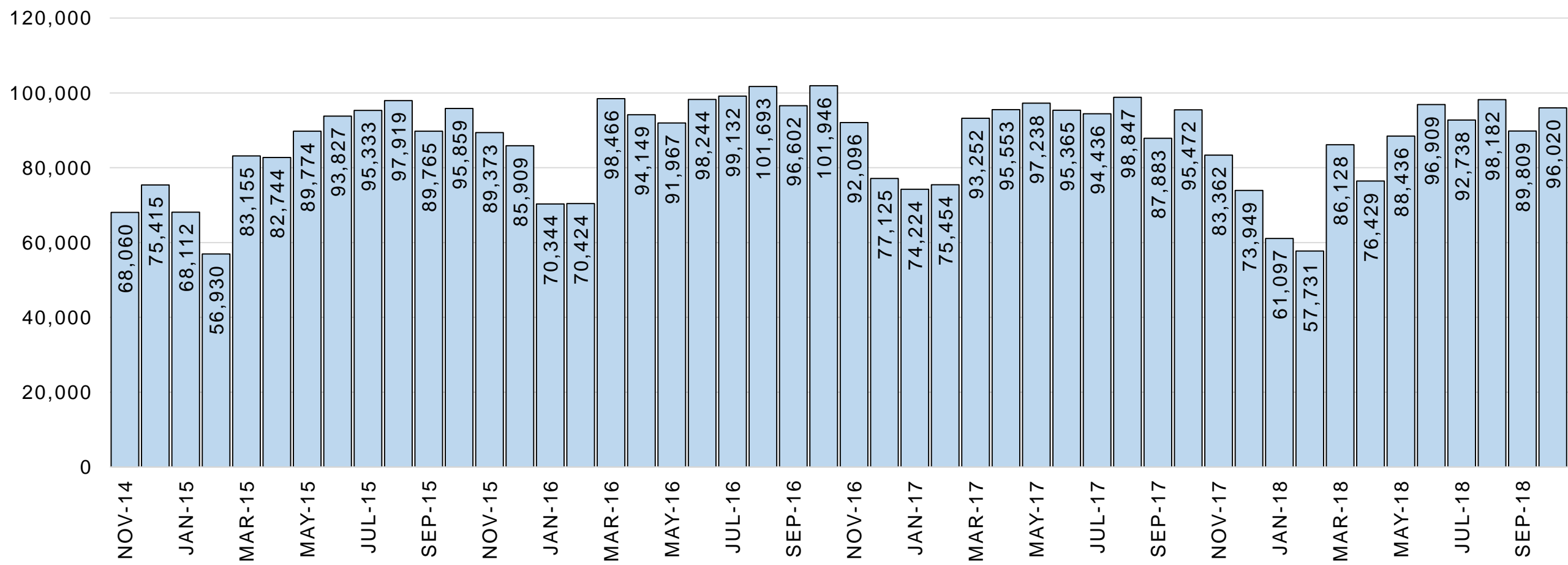
SEPTEMBER 2018			OCTOBER 2018		
Time Above	48s TA <sup>65</sup> per operation	446h 38m TA <sup>65</sup>	Time Above	52s TA <sup>65</sup> per operation	501h 47m TA <sup>65</sup>
Count Above	2.71 N <sup>65</sup> per operation	89,809 N <sup>65</sup>	Count Above	2.78 N <sup>65</sup> per operation	96,020 N <sup>65</sup>





# SOUND MONITORING

SEPTEMBER 2018			OCTOBER 2018		
Time Above	<b>48<sup>s</sup></b> TA <sup>65</sup> per operation	<b>446<sup>h</sup> 38<sup>m</sup></b> TA <sup>65</sup>	Time Above	<b>52<sup>s</sup></b> TA <sup>65</sup> per operation	<b>501<sup>h</sup> 47<sup>m</sup></b> TA <sup>65</sup>
Count Above	<b>2.71</b> N <sup>65</sup> per operation	<b>89,809</b> N <sup>65</sup>	Count Above	<b>2.78</b> N <sup>65</sup> per operation	<b>96,020</b> N <sup>65</sup>



# NOISE ABATEMENT

SEPTEMBER 2018

OCTOBER 2018

Runway 17 **99.5%**

Runway 17 **99.2%**

Corridor **96.2%**

Corridor **95.0%**

Cross Day **35.8%**

Cross Day **32.1%**

Cross Night **46.4%**

Cross Night **43.0%**

RUS

**52.1%**

Arrive – **34%**

Depart – **71%**

RUS

**53.7%**

Arrive – **60%**

Depart – **48%**

# ITEM 3

## PUBLIC COMMENT PERIOD



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**





# ITEM 3

## PUBLIC COMMENT PERIOD

### Speaking at a Meeting

- Please complete and submit a speaker card.
- Each speaker will have one opportunity to speak and is allotted three (3) minutes.
- When called upon to speak, speak clearly into the microphone, state your name and address. If you are affiliated with any organization, please state your affiliation.
- Commenters shall address their comments to the NOC and not to the audience.
- Use of profanity, personal attacks, or threats of violence will not be tolerated.



**NOISE OVERSIGHT COMMITTEE**  
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# ITEM 4

## REVIEW OF FALL LISTENING SESSION



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**



- October 24, 2018
- MAC General Offices
- Meeting Attendees
  - 1 Resident from Apple Valley, Mendota Heights, Minneapolis and Savage
  - Local FAA Air Traffic Management
  - NOC Members Gordy Goss and Loren Olson
  - Minneapolis Councilmember Jeremy Schroeder
- Topics Discussed
  - NOC Structure
  - NOC Purpose
  - 2018 NOC Work Plan
  - 2019 Draft NOC Work Plan



**NOISE OVERSIGHT COMMITTEE  
NOVEMBER 28, 2018**





# Item 4: Review of the Fall Listening Session

- Communicate Listening Session meetings more widely
- Consider opportunities to connect with potential homebuyers and realtors to share aircraft noise information
- Provide more site-specific information on mitigation eligibility and historical mitigation activities

## INFORMATION SHARING



- Conduct a Runway 17 analysis to evaluate departures between 6:00 PM and 6:00 AM and evaluate trends in departure heading usage

## OPERATION SPECIFIC



- Encourage airlines to update their fleet to lead to increased noise reduction
- Encourage airlines to reduce nighttime operations

## SOURCE REDUCTION



**NOISE OVERSIGHT COMMITTEE  
NOVEMBER 28, 2018**



# ITEM 5

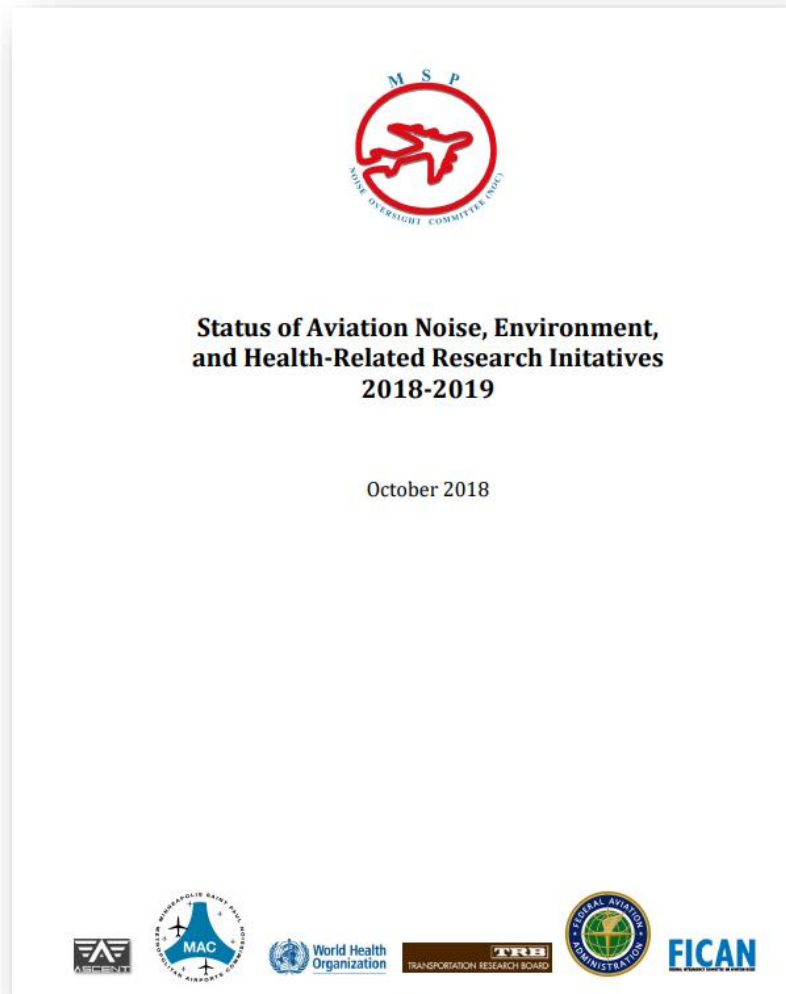
## SUMMARY OF AVIATION NOISE, ENVIRONMENT AND HEALTH-RELATED RESEARCH



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**



## Item 5: Summary of Aviation Noise, Environment and Health-related Research



The summary of research projects provided in the meeting packet include projects that were completed, active, initiated, or anticipated in 2018 or 2019 by:

- Transportation Research Board (TRB),
- FAA's Centers of Excellence (ASCENT),
- Federal Interagency Committee on Aircraft Noise (FICAN)
- World Health Organization (WHO)

<https://www.macnoise.com/sites/www.macenvironment.org/files/pdf/NOC%20Nov%202018%20Agenda%20Packet.pdf>





# ITEM 6

## REVIEW AND APPROVAL OF 2019 NOC WORK PLAN, 2018 NOC ACCOMPLISHMENTS AND 2019 NOC MEETING DATES



**NOISE OVERSIGHT COMMITTEE  
NOVEMBER 28, 2018**



## Item 6: Review and Approval of 2019 NOC Work Plan, 2018 Accomplishments, 2019 NOC Meeting Dates

### Draft 2019 NOC WORK PLAN

1. Review Residential Noise Mitigation Program
2. MSP Noise Program Specific Efforts
  - a) Review the 2018 Actual Noise Contour Report and Residential Noise Mitigation Program Eligibility
  - b) Improve the User Experience of the MAC Noise and Operations Monitoring System (MACNOMS)
  - c) Conduct an MSP Fleet Mix and Nighttime Operations Assessment
  - d) Report the Status of Aviation Noise, Environment, and Health-Related Research Initiatives
  - e) Update on Converging Runway Operations at MSP
  - f) Update on the MSP Long Term Comprehensive Plan and Associated Stakeholder Engagement
  - g) Update on the FAA's Survey to Re-Evaluate Noise Measurement Methods
  - h) Evaluate Noise Management Benchmarking Study findings and discuss considerations
2. Continue to Review Input Received from quarterly Listening Sessions for Possible Agenda Items



# Item 6: Review and Approval of 2019 NOC Work Plan, 2018 Accomplishments, 2019 NOC Meeting Dates



## 2018 NOC Accomplishments

1. Completed a [Fleet Mix and Nighttime Operations Assessment](#) which, in addition to evaluating fleet mix and nighttime operations, included certificated noise levels for aircraft operating at MSP and aircraft altitude trends.
2. Responded to requests from MSP FairSkies Coalition which led to the formalization of a NOC committee goal: *To provide residential sound mitigation out to the actual 60 dB DNL noise contour by the year 2024.*
3. Developed a Bylaw Review Subcommittee to evaluate the NOC's Bylaws as a result of an MSP FairSkies request for greater citizen representation. Subsequently, the NOC adopted the recommended changes to its Bylaws to include more citizen involvement.
4. Received an update on a joint agreement between the FAA and Phoenix Sky Harbor International Airport (PHX) to settle litigation over the FAA's implementation of Performance Based Navigation procedures in PHX.
5. Completed a Vortex Generator Noise Monitoring Study which evaluated noise measurement data from Airbus A320-aircraft family arrivals equipped with vortex generators compared to non-equipped aircraft. The study found only minor noise level differences on aircraft equipped with vortex generators.
6. Heard updates on the 2018 Super Bowl in Minneapolis and the FAA's and MAC's efforts to prepare, communicate and facilitate the associated demand on the airspace and airport facilities.
7. Pursuant to the Second Amendment to the Consent Decree, reviewed the MSP 2017 Annual Noise Contour Report published on February 28, 2018. The report noted that based on the 415,703 total annual operations in 2017, the actual 60 dB DNL contour is 27% smaller than the 2007 forecast contour, and the 65 dB DNL contour is 38% smaller. The report also explained that there are areas of the contour, near the arrival areas for Runway 12R/30L, where additional homes are achieving candidate eligibility in the MAC's Residential Noise Mitigation Program.
8. Received an update on the MAC's implementation of one of the most progressive noise mitigation programs in the world. The MAC reported spending \$482.9 million to provide residential noise mitigation out to 60 dB DNL noise contour. 939 residences were invited to participate in the noise mitigation program for the 2017-2019 period, with the types and numbers of residences invited to participate per year as follows:
  - 2017 Mitigation Program: 138 single-family homes and 88 multi-family structures
  - 2018 Mitigation Program: 283 single-family homes
  - 2019 Mitigation Program: 430 single-family homes
9. Assisted with a Runway 12L departure proposal from the Mendota Heights Airport Relations Commission and delivered to the FAA for a feasibility evaluation. The FAA reported that the departure proposal was not feasible because it would reduce the available headings off Runway 12L from three to one, and it would also impact the capacity for Runway 17. However, FAA committed to providing additional controller training for Crossing-in-the-Corridor use during periods of low-to-mid traffic demand periods to increase compliance with the procedure.



# Item 6: Review and Approval of 2019 NOC Work Plan, 2018 Accomplishments, 2019 NOC Meeting Dates



## 2018 MSP NOC Accomplishments (Cont'd)

10. Reviewed Runway Use System (RUS) priorities, advocated to the FAA to utilize the RUS to the maximum extent possible, and discussed various ways of reporting runway use and airport flows.
11. Conducted an MSP Noise Management Benchmarking Study to detail the regulatory constraints imposed on U.S. airport noise programs; provide an independent comparison of the MAC Noise Program Office efforts to peer airports; and identify opportunities. The study concluded that the MAC Noise Program Office performs well amongst peer airports across each category of noise management.
12. Scheduled and held regular updates from the FAA on the agency's Converging Runway Operations (CRO) efforts to develop and install software tools to help reduce complexity, increase efficiency and minimize noise impacts associated with CRO.
13. Received a demonstration from the MAC about the MAC's new FlightTracker application which improves the user experience on mobile devices and provides additional analytical tools and information for users.
14. Heard a presentation on the MAC Noise Office's efforts with Machine Learning, in partnership with a University of Minnesota PhD student, to improve aircraft noise event and aircraft operation matching process, increase analysis efficiency by reducing manual efforts, and enhance the quality of data reported from the 39 Remote Monitoring Towers.
15. Received an update on the FAA's efforts to re-evaluate noise measurement methods at U.S. airports.
16. Heard from the MAC Executive Director and CEO, Bryan Ryks on updates on the organization, recent MAC accolades, trends in passengers and operations, and future development at MSP.
17. Received a presentation from ecoDemonstrator Program Lead for Boeing, Doug Christensen, who shared information about Boeing's ongoing efforts and future commitments to test technologies and accelerate development for better fuel economy and environmental performance.
18. Co-sponsored a Listening Session with the Eagan Airport Relations Commission to listen to concerns from residents of Eagan.
19. Communicated noise concerns to the FAA on behalf of residents overflowed by Runway 17 departures, which led to a memo from the FAA Air Traffic Manager to controllers to reinforce standard operating procedures between the hours of 10:30 PM and 6:00 AM to use, to the maximum extent feasible, the Eagan/Mendota Heights Departure Corridor and the Crossing-in-the-Corridor noise abatement procedures.
20. Approved a mobile noise monitoring request from the Eagan Airport Relations Commission to evaluate the location of two existing Remote Monitoring Towers to ensure their current location is optimal for collecting noise events from aircraft arriving to and departing from MSP.
21. Reviewed research initiatives from FAA Center of Excellence/ASCENT, TRB, and FICAN.
22. Received ongoing review of MSP monthly operations reports which include aircraft noise complaints, operations, runway use, noise events, and compliance with noise abatement procedures.
23. Evaluated citizen input received during quarterly Listening Sessions as possible discussion topics at future NOC meetings. Ideas collected during the Fall Listening Session were documented from citizens who expressed what they would like the NOC to consider specifically for its 2019 Work Plan.

## Item 6: Review and Approval of 2019 NOC Work Plan, 2018 Accomplishments, 2019 NOC Meeting Dates



### 2019 MSP NOC Meeting Dates

Staff recommends the following 2019 NOC meeting dates:

- January 16
- March 20
- May 15
- July 17
- September 18
- November 20

An agenda review session will begin at 1:00 PM for the NOC members, alternates and at-large contacts. Each NOC meeting will begin at 1:30 PM in the Lindbergh Conference Room in the MAC General Office building, unless otherwise noted.

### REQUESTED ACTION

APPROVE AND RECOMMEND TO THE MAC PLANNING, DEVELOPMENT AND ENVIRONMENT COMMITTEE THE FINAL 2019 NOC WORK PLAN AND APPROVE THE LIST OF 2018 ACCOMPLISHMENTS AND 2019 MEETING DATES.

# ITEM 7

## GUEST SPEAKER: MSP CONVERGING RUNWAY OPERATIONS UPDATE



**NOISE OVERSIGHT COMMITTEE  
NOVEMBER 28, 2018**





# ITEM 8

## STAKEHOLDER ENGAGEMENT PLAN FOR MSP 2040 LTCP



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**



## Stakeholder Engagement Plan Objectives

Fulfill the MAC's legislative purpose to:

- Promote air navigation and transportation, international, national, state, and local, in and through the State of Minnesota.
- Promote the efficient, safe and economical handling of air commerce and to assure the inclusion of the State in national and international programs of air transportation. To those ends, develop the full potentialities of the metropolitan area as an aviation center.
- Assure minimum environmental impact from air navigation and transportation for residents of the metropolitan area, promote the overall goals of the State's environmental policies and minimize the public's exposure to noise and safety hazards around airports.

Conduct planning for future airport facilities in a responsible and transparent manner that includes specific engagement processes designed to build trust and establish a shared understanding of airport, traveler, and community needs

- Actively listen to stakeholder ideas and topics of interest
- Strengthen MAC's relationship with its stakeholder groups
- Establish a system to reach a wide variety of stakeholders
- Communicate the services and benefits the MAC's system of airports delivers to the region

Support and document a thorough and effective public involvement process



# Item 8: Stakeholder Engagement Plan for MSP 2040 LTCP

## Stakeholder Engagement Plan Approach

**Airport Community Panel** - an advisory panel of key stakeholder groups serving several functions:

- Represent a broad range of stakeholder groups;
- Receive information about the plan and then conveying it to their constituencies;
- Provide input as the voice of their key stakeholders on various aspects of the plan
- Ensure public concerns and aspirations are considered;

Key stakeholder groups include:

- Local community leaders and city planners
- MSP airport travelers
- MSP airlines
- Federal Aviation Administration
- Transportation Security Administration
- Regional business representatives

**Project Milestones** - create an inclusive and transparent process and ensure a regular rhythm of public involvement, the planning process will be divided into four distinct phases, or “milestones.”

- 1) LTCP Introduction, Planning Goals & Objectives, Existing Conditions
- 2) MSP Aviation Activity Forecasts, Facility Requirements (Gap Analysis)
- 3) Alternative Design Concepts, Environmental and Land Use Planning Evaluation
- 4) Review Draft LTCP and Public Comment Period

These milestones will culminate in a public meeting event to share information about each phase and receive input.





# Item 8: Stakeholder Engagement Plan for MSP 2040 LTCP

## Stakeholder Engagement Plan Communication

### **Project Website**

The MAC will create and maintain a project website to share information and will include:

- Public meeting information
- Public project documents (such as technical reports, newsletters, presentations, fact sheets, etc.)
- Frequently asked questions
- How to contact the project team
- How to sign up for E-News subscription service (see below)
- Project timeline

### **E-News Monthly Project Updates**

An email “E-News” subscription service will be set-up through GovDelivery. Individuals can sign up for the subscription on the project website. Once signed-up they will receive project updates throughout the planning process.



### **Project Newsletters**

A project newsletter will be created in advance of each public meeting event. The newsletters will be distributed through:

- MSP Airport Newsletter
- MSP Airport and Airline Affairs Committee
- MSP Airport Foundation
- Terminal 2 Users Group
- MSP Noise Oversight Committee
- MSP Traveler Advisory Committee
- MAC Noise Program Office website
- Project website
- Sent via email to the E-News distribution list
- Printed copies will be made available at the public meeting events

### **Public Notifications for the Public Meeting Events**

### **Updates at the NOC and MAC’s PD&E Committee**

### **Additional Public Presentations Upon Request**



# ITEM 9

## NOISE ABATEMENT DASHBOARD UPDATE



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 28, 2018**



## Item 9: Noise Abatement Dashboard Update

- One of the NOC functions stated in the mission is
  - “Monitor compliance with established noise policy at MSP”
- MAC Staff provides data online daily, through published reports monthly and during NOC meetings bi-monthly
- The goal of the Noise Abatement Dashboard is to provide more timely compliance information to air traffic control

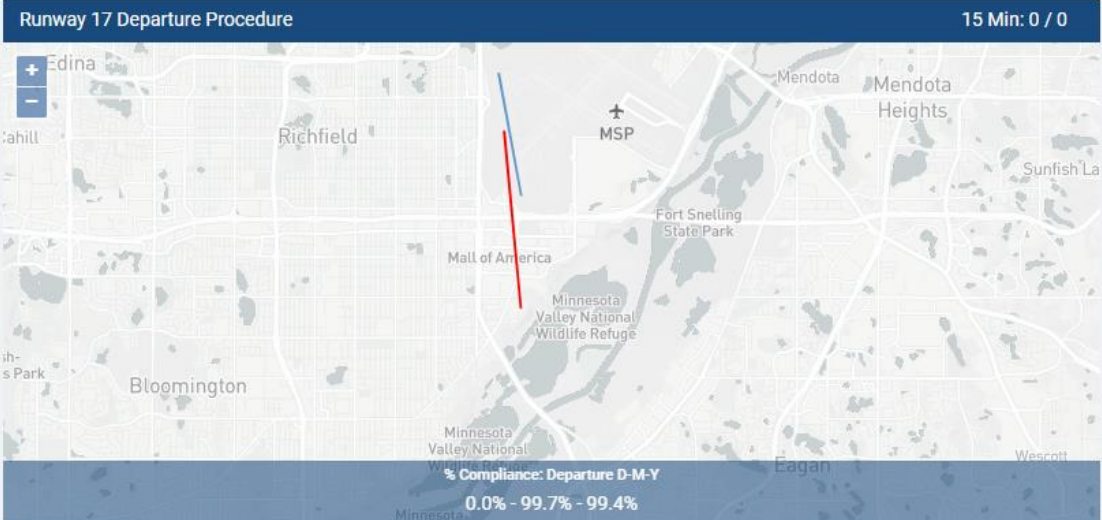
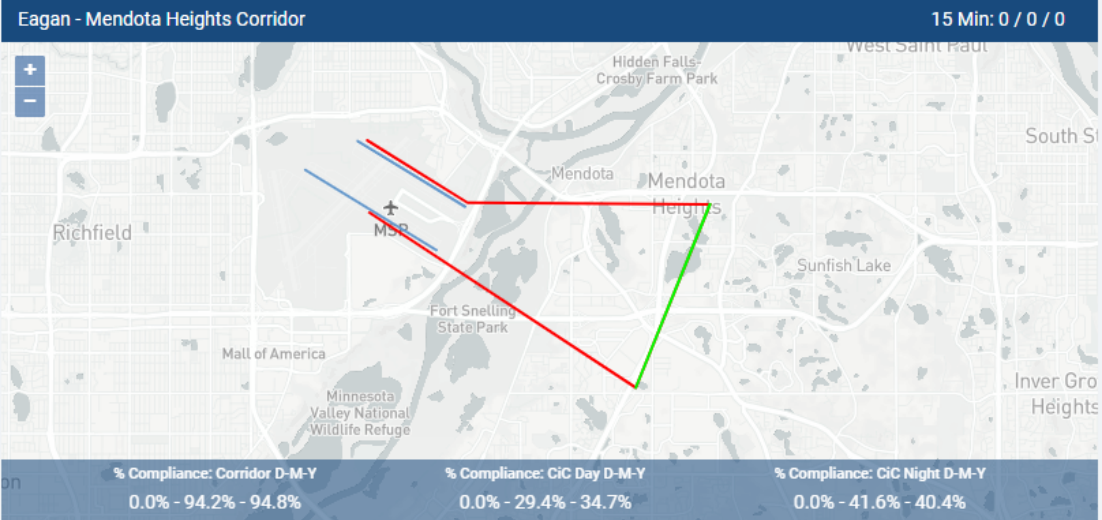


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# Item 9: Noise Abatement Dashboard Update



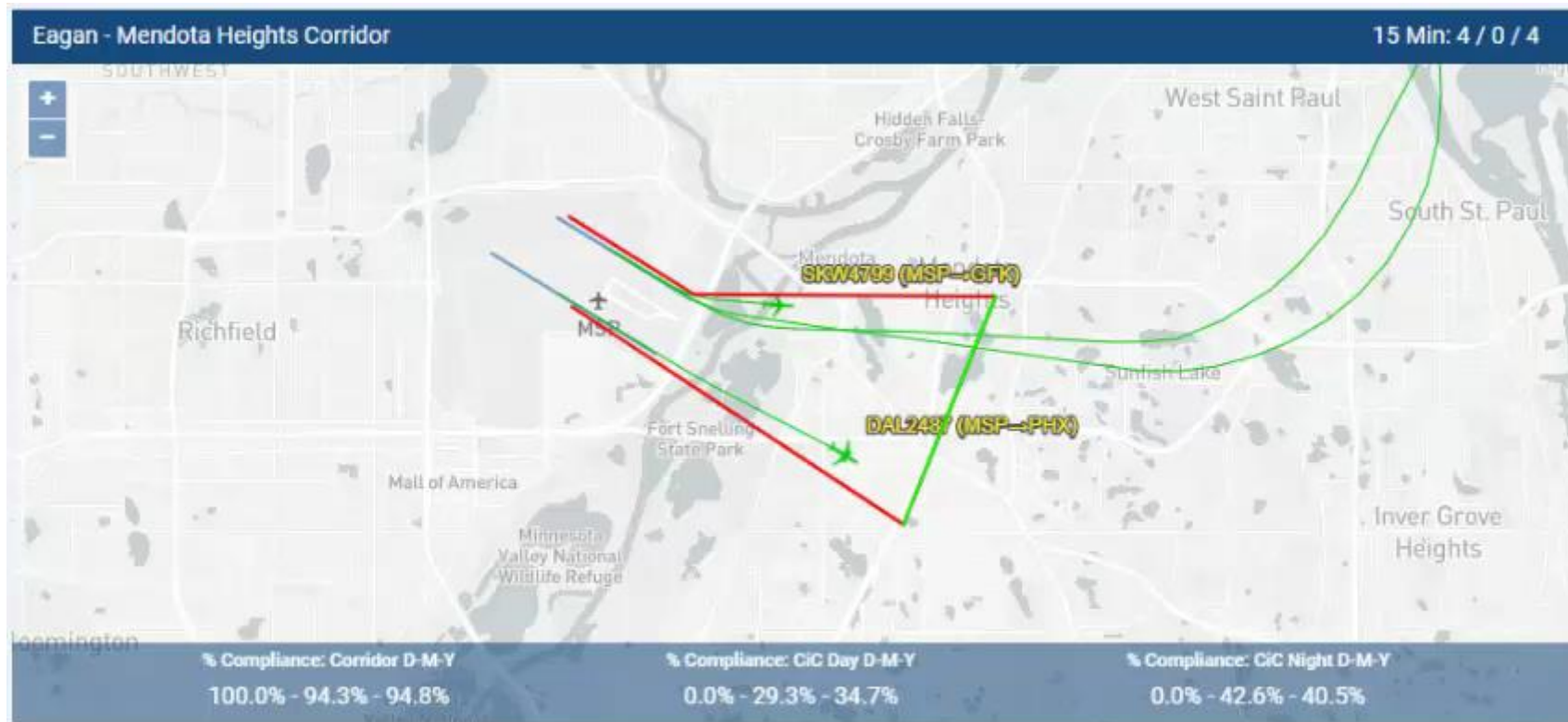
### Runway Use by Hour

Hour	Arrival Config	Departure Config	Flow	Operations
15:00	30R,30L	30R,30L	Straight North Flow	14
14:00	30R,30L	30R,30L	Straight North Flow	68
13:00	30R,30L	30R,30L	Straight North Flow	74
12:00	30R,30L	30R,30L	Straight North Flow	49
11:00	30R,30L	30R,30L	Straight North Flow	74
10:00	30R,30L	30R,30L	Straight North Flow	62

### Daily Abatement Metrics

Date	NOV (current)		OCT	SEP	AUG	Notes	Violations
	Eagan-MH	CIC Day	CIC Night	Runway 17	RUS		
11/01/2018	97.4%	49.3%	0.0%	99.7%	52.3%		5
11/02/2018	90.0%	47.0%	28.6%	100.0%	52.1%		21
11/03/2018	98.8%	41.4%	66.7%	99.5%	49.2%		3
11/04/2018	73.9%	24.0%	57.1%	N/A	50.5%		67
11/05/2018	100.0%	24.2%	N/A	99.4%	55.8%		2

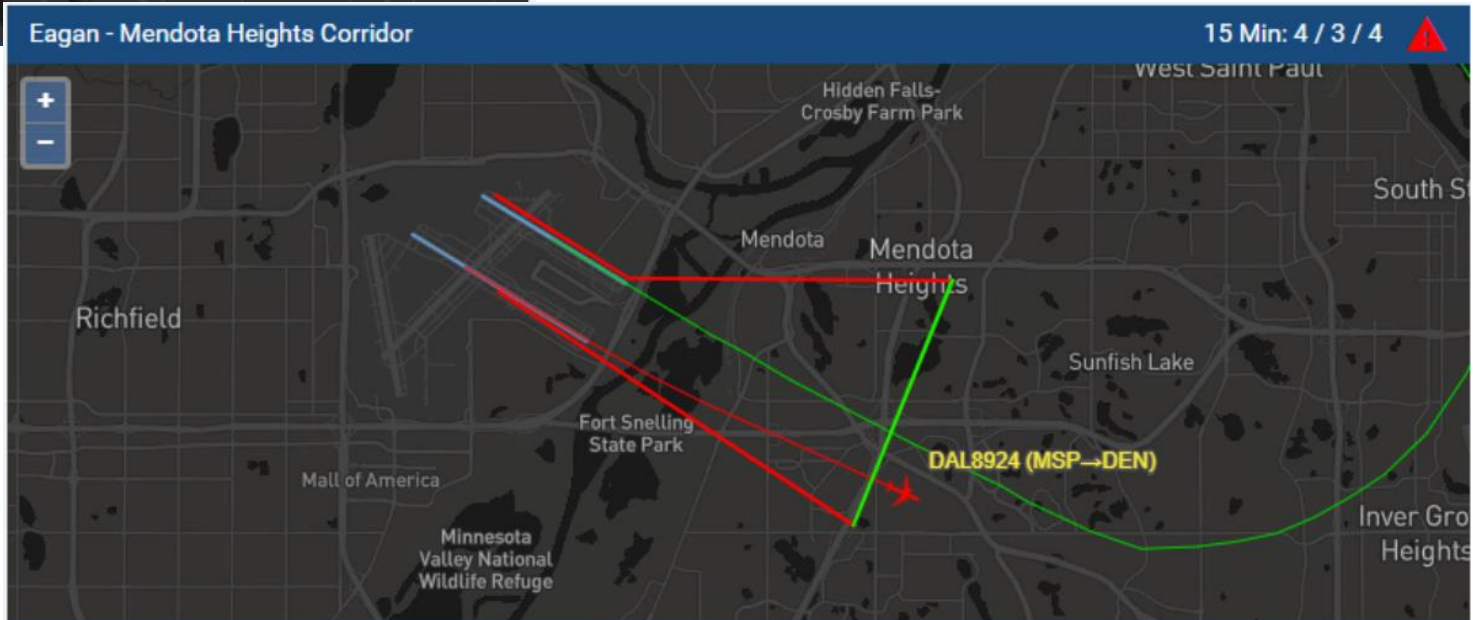
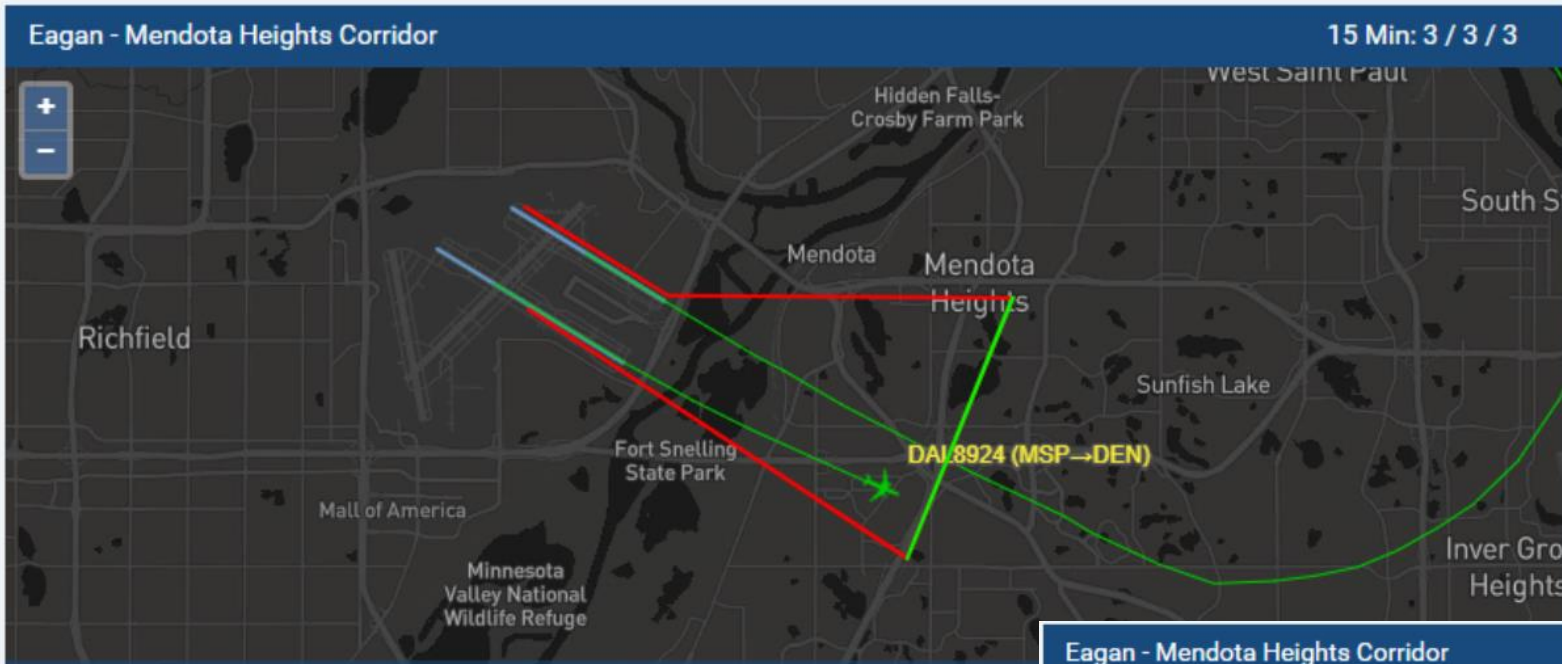
# Item 9: Noise Abatement Dashboard Update



**NOISE OVERSIGHT COMMITTEE  
NOVEMBER 28, 2018**



# Item 9: Noise Abatement Dashboard Update





# ITEM 10

## ANNOUNCEMENTS

### Winter Listening Session

Wednesday, January 23, 2019 @ 7:00 PM

MAC General Offices

Lindbergh Conference Room

### January NOC Meeting

Wednesday, January 16, 2019 @ 1:30 PM

MAC General Offices

Lindbergh Conference Room



NOISE OVERSIGHT COMMITTEE  
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