



# NOISE OVERSIGHT COMMITTEE

November 18, 2020

*Audio recordings are made of this meeting*

# AGENDA

## 1. Consent

1.1. Approval of September 16, 2020 Meeting Minutes

### 1.2. Reports

1.2.1. Monthly Operations Reports: September and October 2020

1.2.2. Review of Fall Listening Session

1.2.3. Review of Residential Noise Mitigation Program Implementation

## 2. Public Comment Period

## 3. Business

3.1. 2021 NOC Work Plan, NOC 2020 Accomplishments, and 2021 NOC Meeting Dates

## 4. Information

4.1. Update on the FAA's Survey to Re-evaluate Noise Measurement Methods

## 5. Announcements

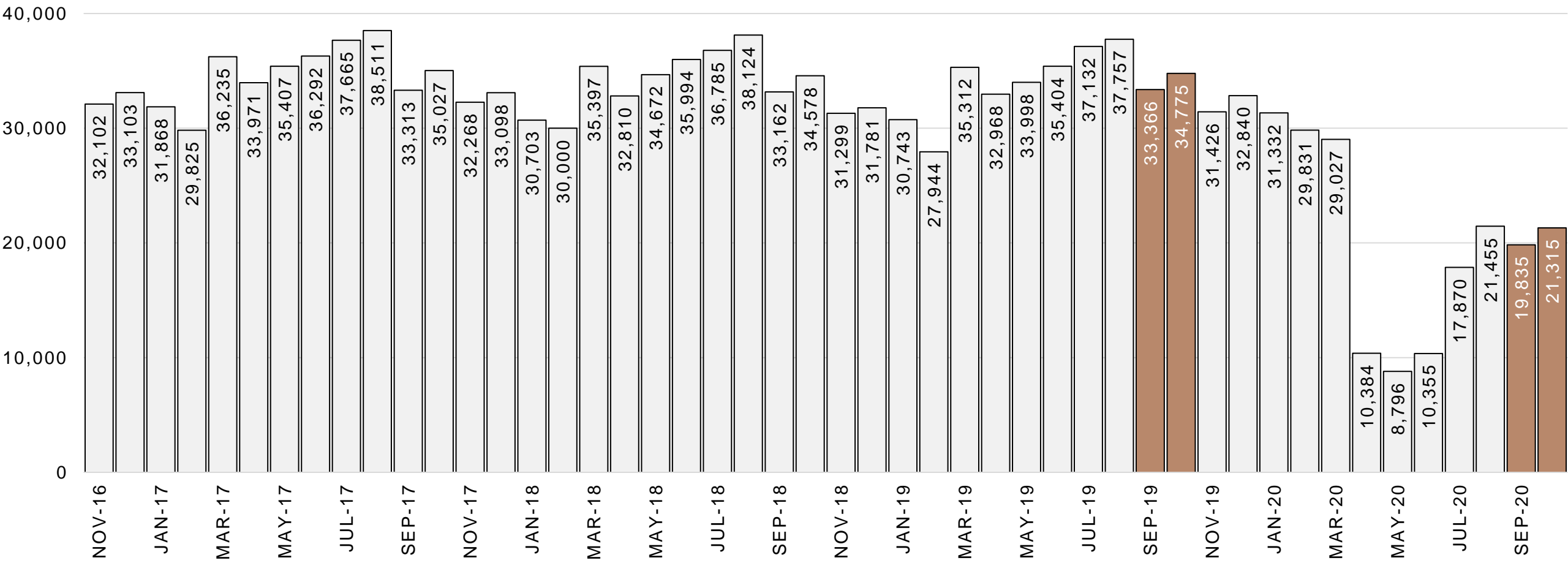
## 6. Adjourn



**NOISE OVERSIGHT COMMITTEE**  
**NOVEMBER 18, 2020**

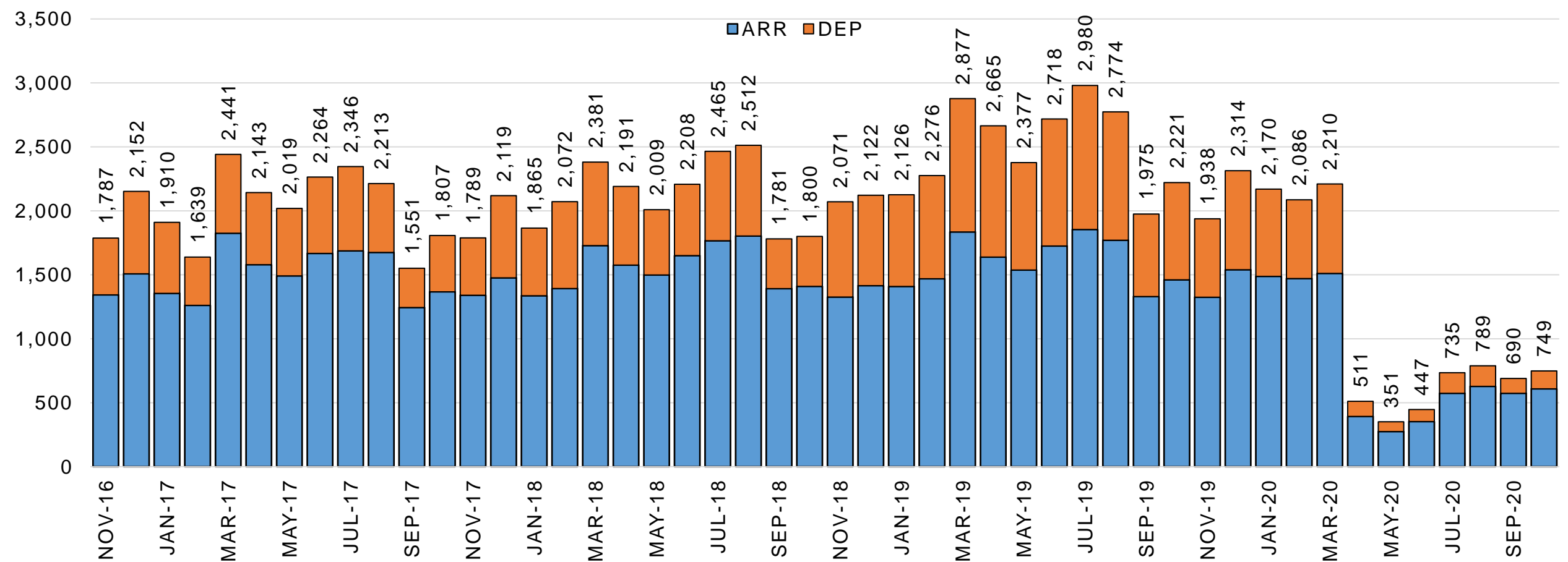
# MSP OPERATIONS

SEPT 2020		OCT 2020	
<b>19,835</b>	<b>690</b>	<b>21,315</b>	<b>749</b>
Operations	Nighttime Operations (10:30 PM – 6:00 AM)	Operations	Nighttime Operations (10:30 PM – 6:00 AM)



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# RUNWAY USE

SEPT 2020		
NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
42%	46%	2%

OCT 2020		
NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
57%	30%	3%

2019 JAN – OCT		
NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
35%	48%	14%

2020 JAN – OCT		
NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
43%	44%	5%

**North Flow**



**South Flow**



**Mixed Flow**



# SEPT – OCT RUNWAY USE

**41,311**  
OPERATIONS IN SEPT – OCT

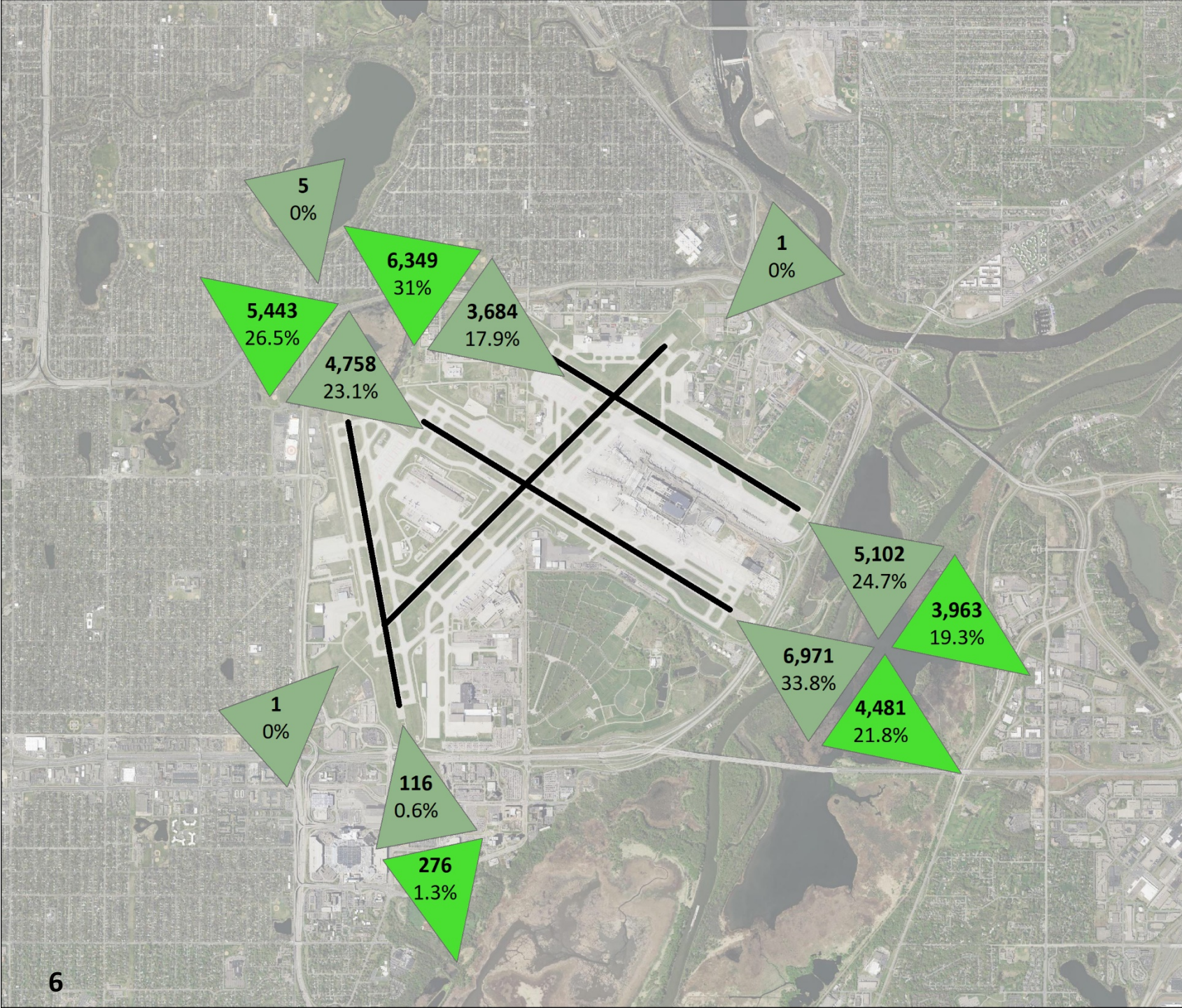
PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
<b>50%</b>	<b>1%</b>	<b>0%</b>	<b>49%</b>

**20,684**  
ARRIVALS

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
<b>58%</b>	<b>1%</b>	<b>0%</b>	<b>41%</b>

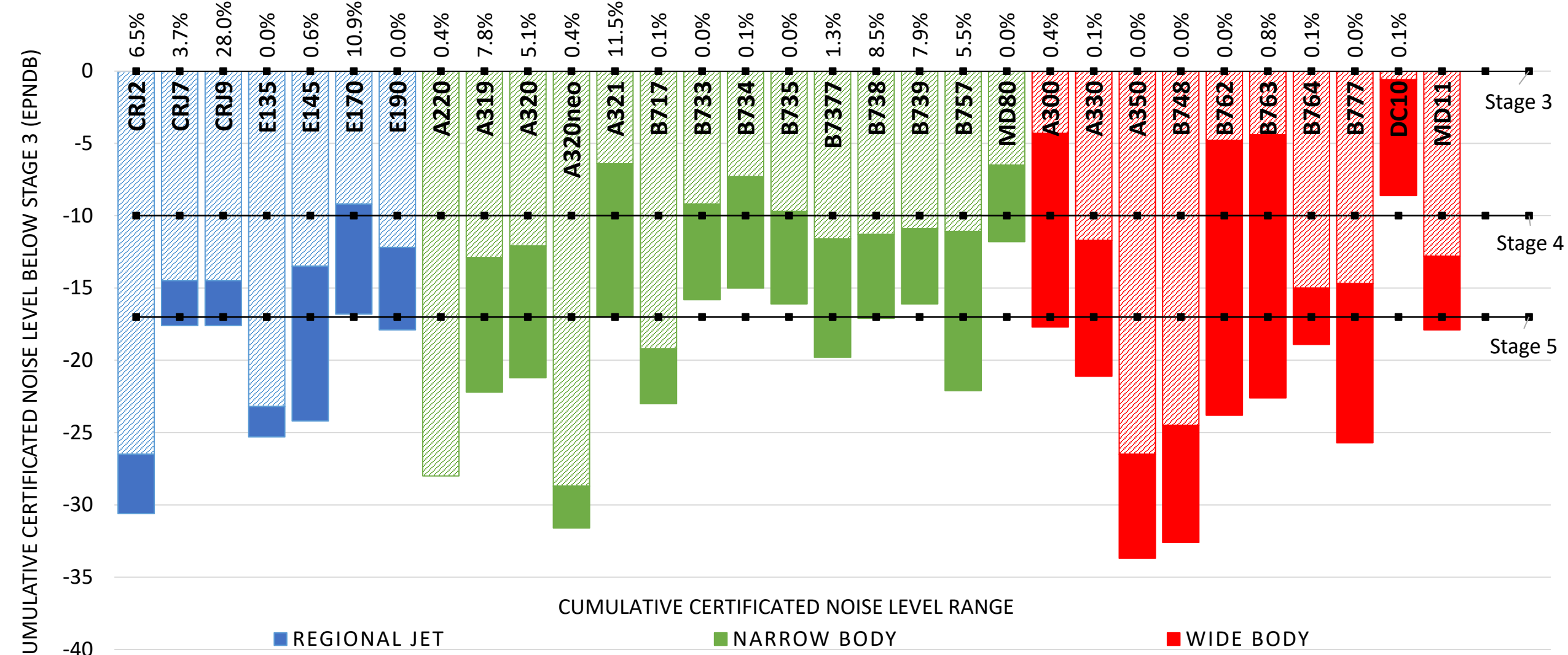
**20,628**  
DEPARTURES

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
<b>41%</b>	<b>1%</b>	<b>0%</b>	<b>57%</b>



## 2020 MSP CARRIER JET USAGE WITH CUMULATIVE CERTIFICATED NOISE LEVELS

Sep - Oct



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)

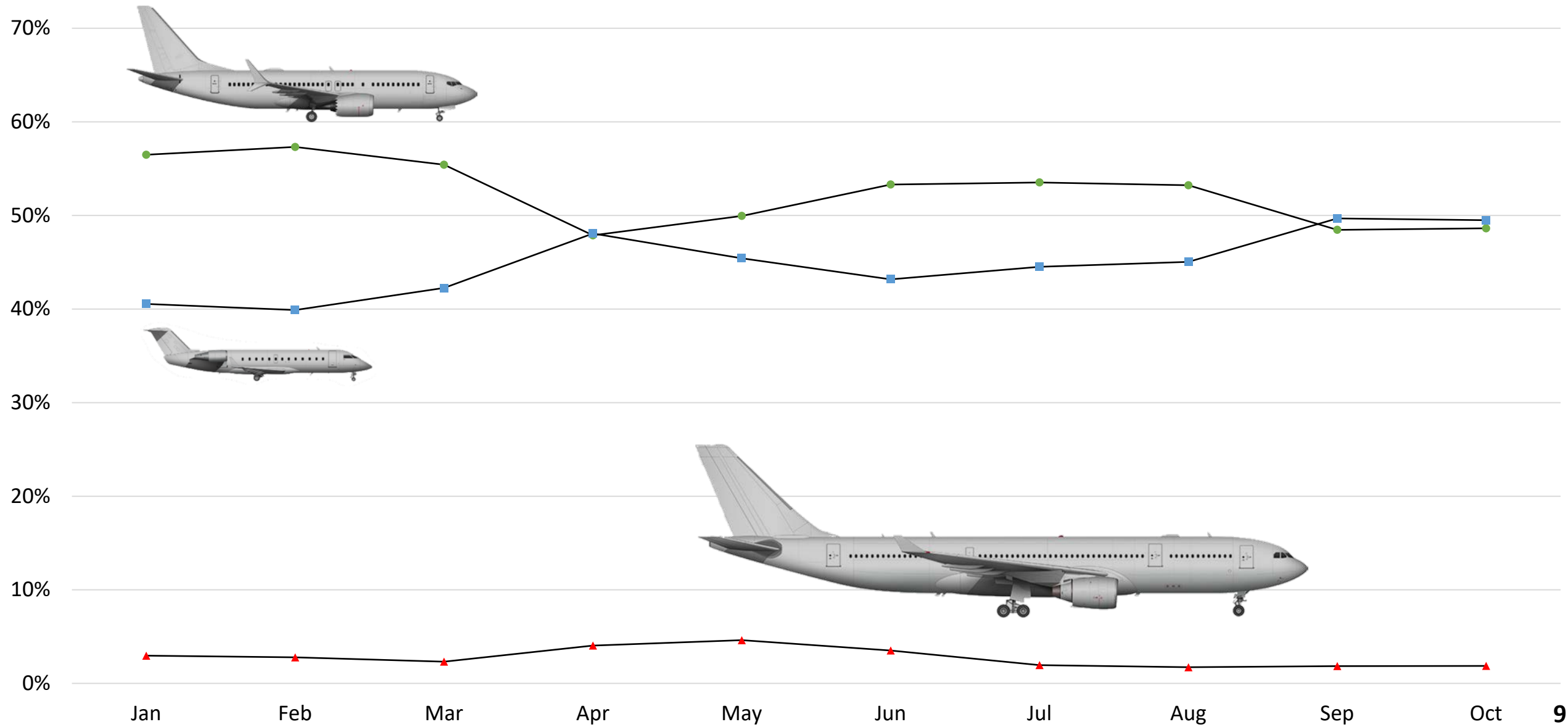




# MSP OPERATIONS

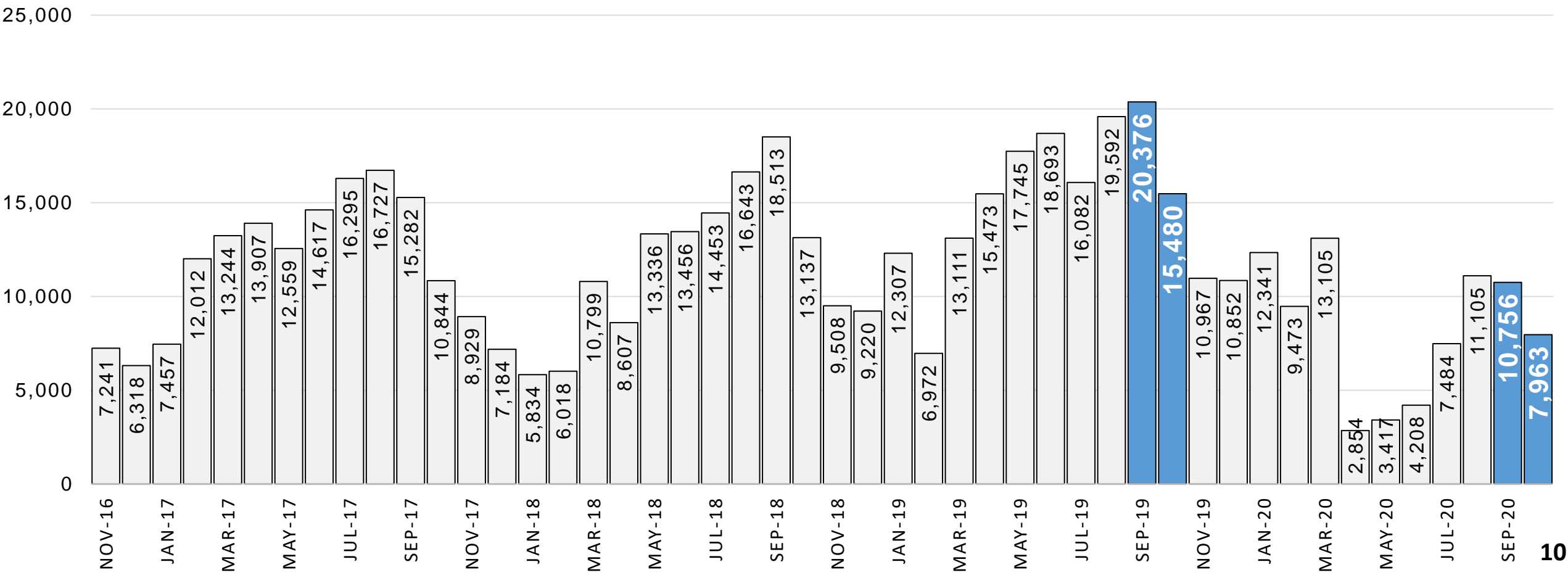
## 2020 CARRIER JET FLEET MIX

—●— NARROWBODY —■— RJ —▲— WIDEBODY

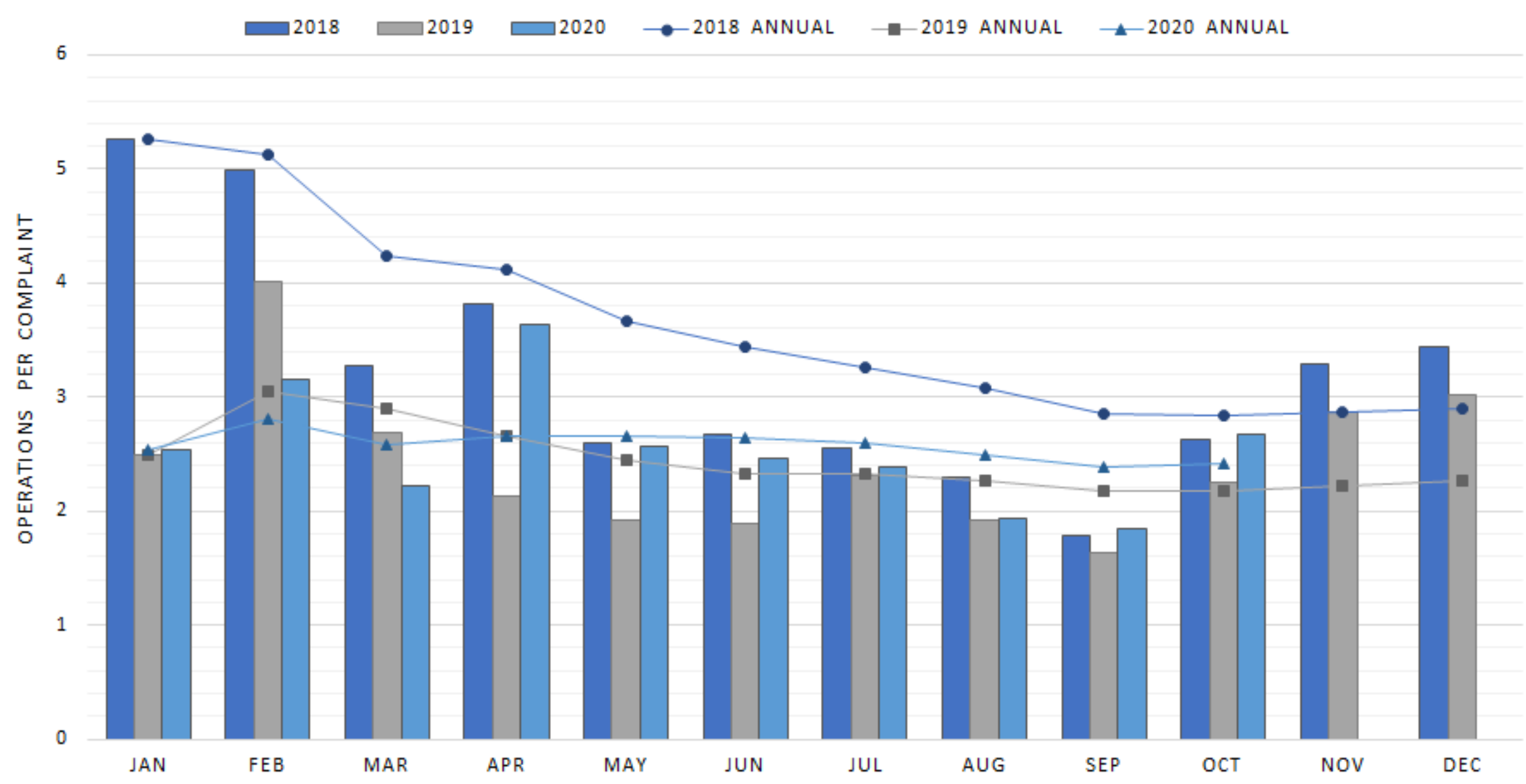


# MSP COMPLAINTS

SEPT 2020				OCT 2020			
COMPLAINTS	LOCATIONS			COMPLAINTS	LOCATIONS		
<b>10,756</b>	<b>269</b>			<b>7,963</b>	<b>181</b>		
Operations per Complaint	New Locations	Average	Median	Operations per Complaint	New Locations	Average	Median
<b>1.8</b>	<b>29</b>	<b>40</b>	<b>4</b>	<b>2.7</b>	<b>13</b>	<b>44</b>	<b>4</b>

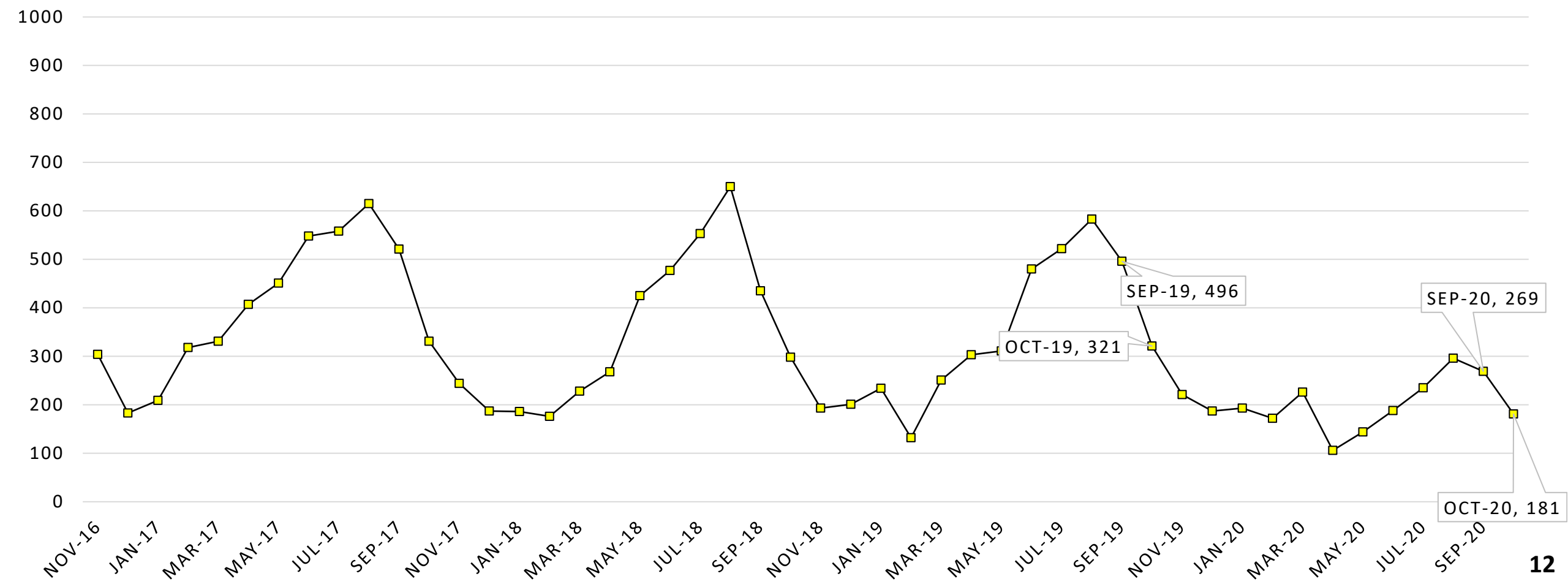


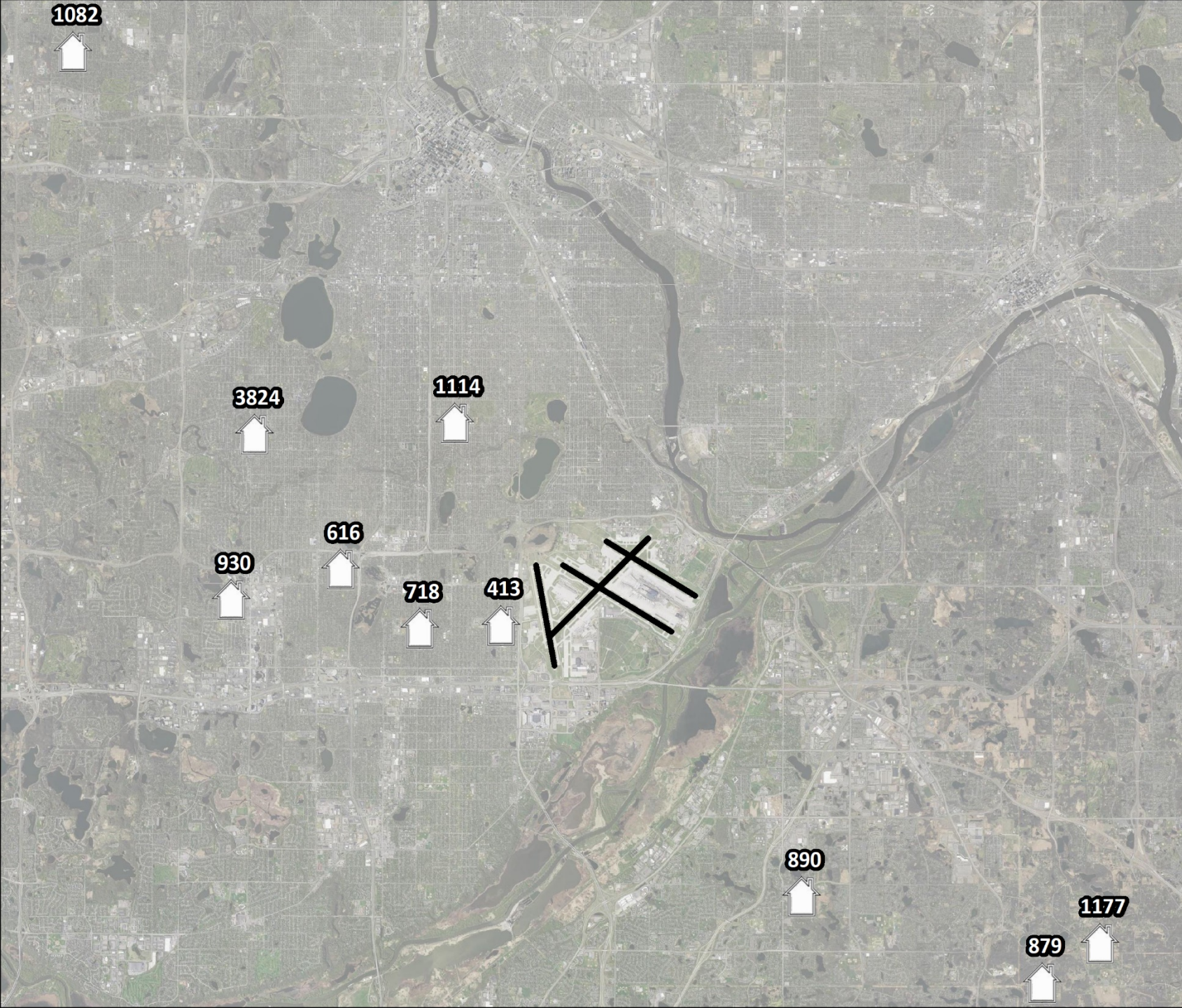
## MSP OPERATIONS PER COMPLAINT BY MONTH



# MSP COMPLAINTS

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COMPLAINTS	LOCATIONS			COMPLAINTS	LOCATIONS		
<b>10,756</b>	<b>269</b>			<b>7,963</b>	<b>181</b>		
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# TOP 10 LOCATIONS

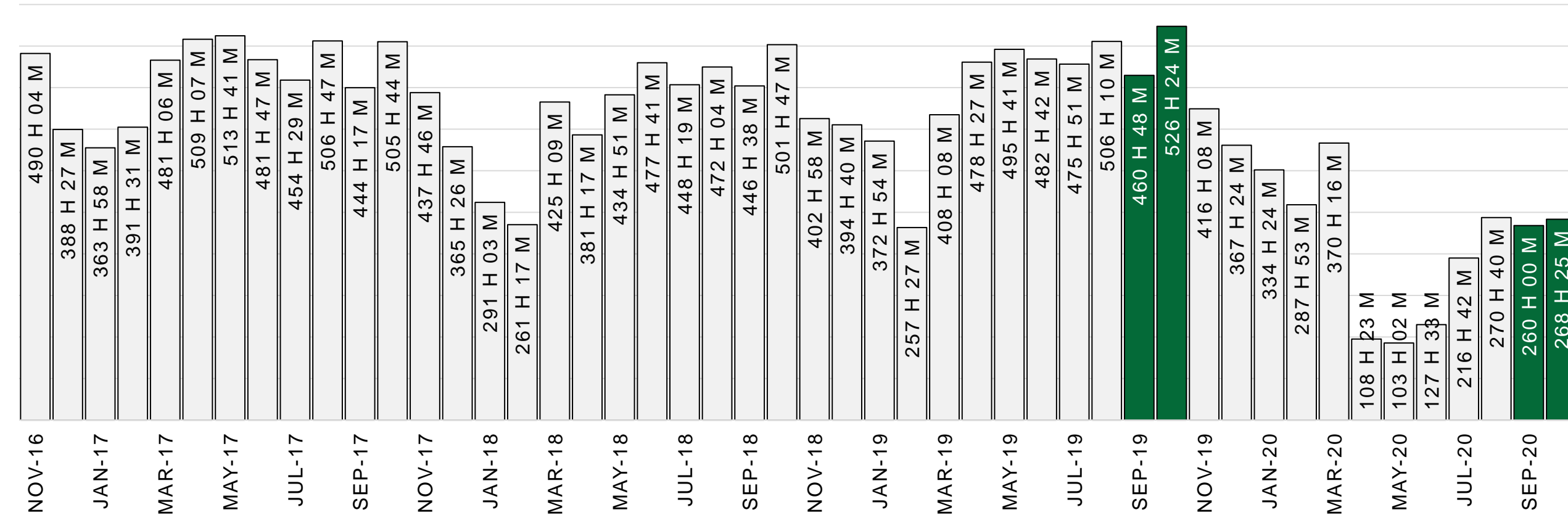
FILED  
**11,643**  
(62%)  
COMPLAINTS DURING SEPT & OCT

**7 OF 10**  
HOUSEHOLDS WERE IN THE TOP 10  
FOR JULY – AUG

**205**  
(65%)  
HOUSEHOLDS FILED 10 OR FEWER  
COMPLAINTS

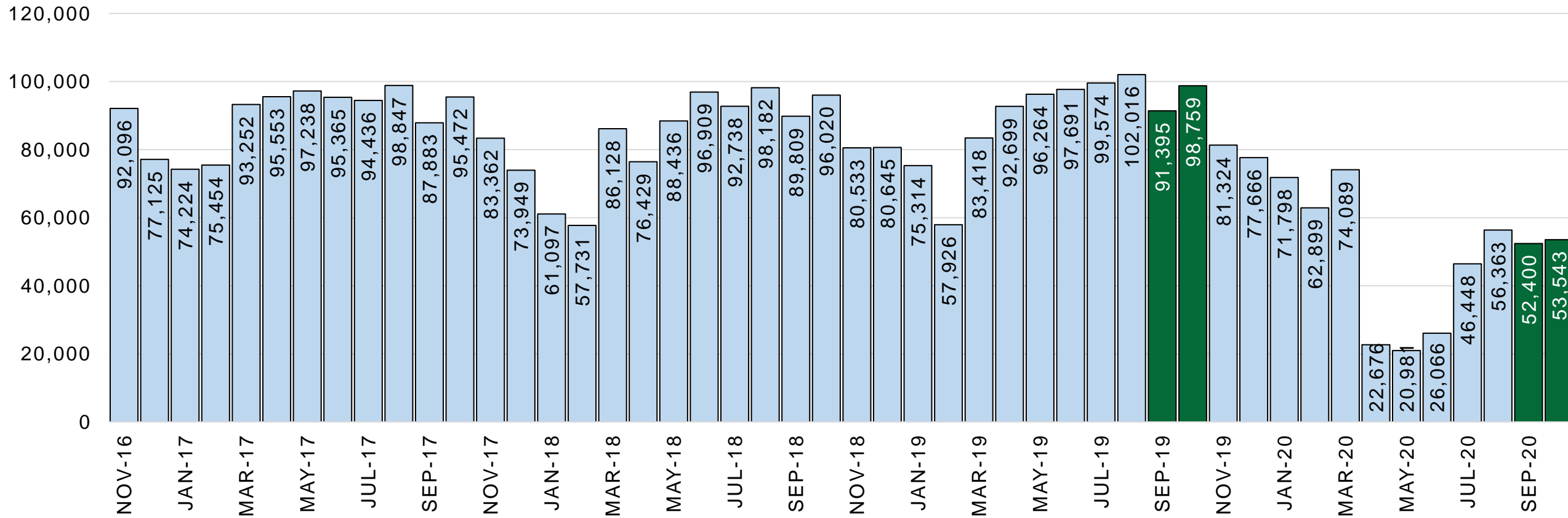
# SOUND MONITORING

SEPT 2020			OCT 2020		
Time Above	47 <sub>s</sub> TA <sup>65</sup> per operation	260 <sup>h</sup> 4 <sup>s</sup> TA <sup>65</sup>	Time Above	45 <sub>s</sub> TA <sup>65</sup> per operation	268 <sup>h</sup> 25 <sup>m</sup> TA <sup>65</sup>
Count Above	2.64 N <sup>65</sup> per operation	52,400 N <sup>65</sup>	Count Above	2.51 N <sup>65</sup> per operation	53,543 N <sup>65</sup>

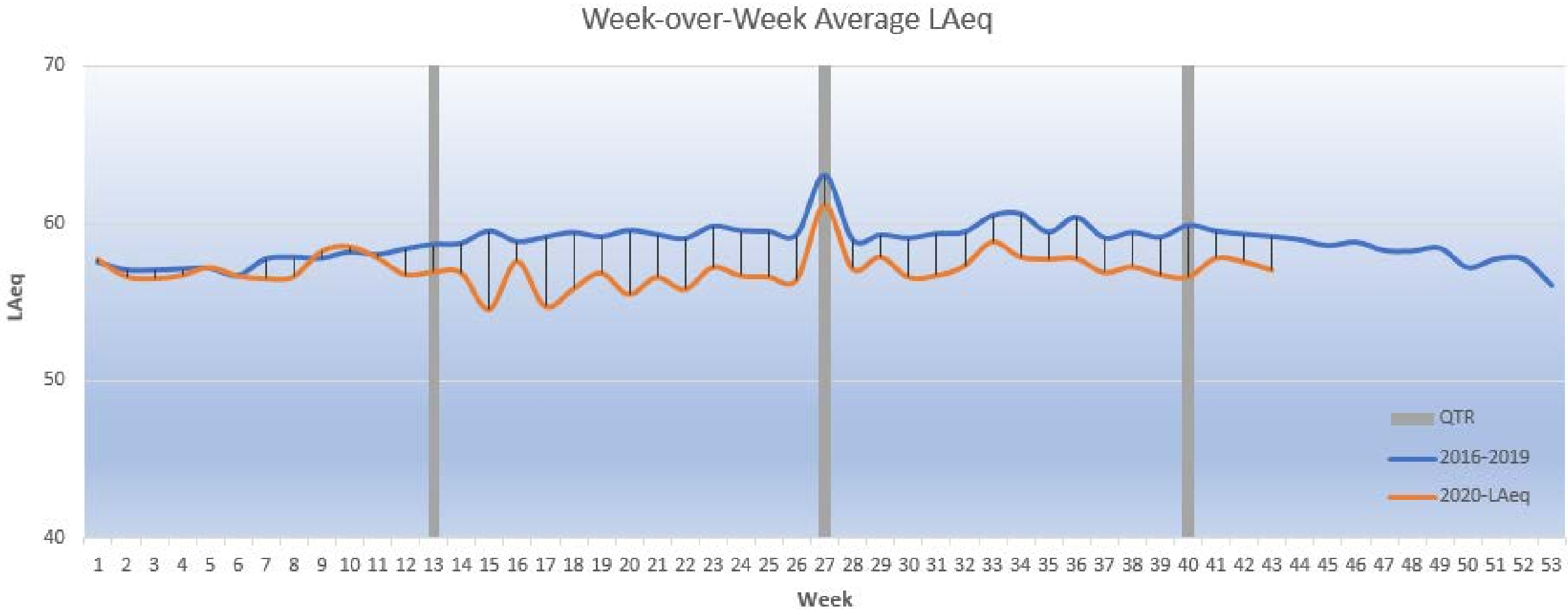


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Count Above	<b>2.64</b> N <sup>65</sup> per operation	<b>52,400</b> N <sup>65</sup>	Count Above	<b>2.51</b> N <sup>65</sup> per operation	<b>53,543</b> N <sup>65</sup>



# SOUND MONITORING



Note: Higher LA<sub>eq</sub> values during week 16 and week 27 are due to severe weather week tornado siren drills and Fourth of July fireworks (also evident in the 4-year average), respectively.



# NOISE ABATEMENT

SEPT 2020

OCT 2020

Runway 17	100%
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Runway 17	100%
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Corridor	95.1%
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Corridor	91.7%
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Cross Day	22%
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Cross Day	18.2%
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Cross Night	38.1%
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Cross Night	54.1%
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RUS

50.6%

Arrive – 50%

Depart – 52%

RUS

51%

Arrive – 68%

Depart – 34%

# 3.1 – 2021 NOC WORK PLAN, NOC 2020 ACCOMPLISHMENTS AND 2021 NOC MEETING DATES



**NOISE OVERSIGHT COMMITTEE  
NOVEMBER 18, 2020**

# Draft NOC 2021 Work Plan

## 1. RESIDENTIAL NOISE MITIGATION PROGRAM

- a. Review Residential Noise Mitigation Program Implementation Status

## 2. MSP COMMUNITY RELATIONS SPECIFIC EFFORTS

- a. 2020 Annual Noise Contour Report, and First and Second Amendments to the Consent Decree Noise Mitigation Program Eligibility
- b. MSP Fleet Mix and Nighttime Operations Assessment
- c. MSP Annual Aircraft Noise Complaint Summary
- d. Status of Aviation-Related Research Initiatives
- e. Update on Converging Runway Operations at MSP

- f. Update on the MSP Long Term Plan Update and Associated Stakeholder Engagement

- g. Update on the FAA's Survey to Re-Evaluate Noise Measurement Methods

- h. Minnetonka Monitoring

- i. Update on Eagan Request to FAA

- j. Guest Speaker: Brian Ryks, MAC Executive Director

- k. MSP Air Service Updates

## 3. CONTINUE REVIEW OF PUBLIC INPUT

# 2021 Meeting Dates

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- January 20, 2020 at 1:30 PM
- March 17, 2020 at 1:30 PM
- May 19, 2020 at 1:30 PM
- July 21, 2020 at 1:30 PM
- September 15, 2020 at 1:30 PM
- \*November 17, 2020 at 6:00 PM\*



# 2020 NOC Accomplishments

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1. Received ongoing review of MSP monthly operations reports which include aircraft noise complaints, operations, runway use, noise events, and compliance with noise abatement procedures.
2. 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 2021 Work Plan.
3. 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.
4. Received an overview from FAA on the VOR Minimum Operational Network Project.
5. Heard from NOC Chief Pilots regarding standard departure procedures, noise abatement training and missed approach procedures.
6. Completed the MSP Complaint Data Assessment.
7. Reviewed Eagan City Council flight procedure change request response from FAA. Considered proposed modifications to the request after investigating the potential impact to noise exposure and airport capacity. Communicated endorsement of one proposal to MAC Board.
8. Pursuant to the Second Amendment to the Consent Decree, reviewed the MSP 2019 Annual Noise Contour Report published February 2020. The report noted that based on the 406,073 total operations at MSP in 2019, the actual 60 dB DNL contour is 29% smaller than the 2007 forecast contour, and the 65 dB DNL contour is 39% smaller.

# 2020 NOC Accomplishments

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9. Received regular updates from the FAA on Converging Runway Operations (CRO).
10. Received updates from MAC on on-going development of the MSP Long Term Plan and associated Stakeholder Engagement Program.
11. Reviewed aviation-related research initiatives from FAA Center of Excellence/ASCENT, TRB, and other researchers.
12. Reviewed and adopted Flight Procedure Change Request Guidelines.
13. Heard from the MAC Executive Director and CEO, Bryan Ryks on updates on the organization, recent accolades, trends in passengers and operations, and future development at MSP.
14. Completed the Runways 30L and 30R Departure Operations Report
15. Received a briefing from FAA on the agency's policy for Community Involvement in FAA NextGen projects.
16. Received a briefing from FAA on the agency's new Noise Complaint Initiative.
17. Completed the Runways 12L and 12R Nighttime Arrivals Operations Report.
18. Reviewed status of the MSP Residential Noise Mitigation Program Implementation.
19. Received an update on the FAA's efforts to re-evaluate noise measurement methods at U.S. airports.

# Action Requested

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APPROVE AND RECOMMEND TO THE MAC PLANNING, DEVELOPMENT AND ENVIRONMENT COMMITTEE THE FINAL 2021 MSP NOC WORK PLAN AND APPROVE THE LIST OF 2020 ACCOMPLISHMENTS AND 2021 MEETING DATES.



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# 4.1 – UPDATE ON THE FAA’S SURVEY TO RE-EVALUATE NOISE MEASUREMENT METHODS



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**NOVEMBER 18, 2020**



# Background

1



# NOC Meeting Updates

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- January 20, 2016
- May 16, 2018
- November 20, 2019
- November 18, 2020

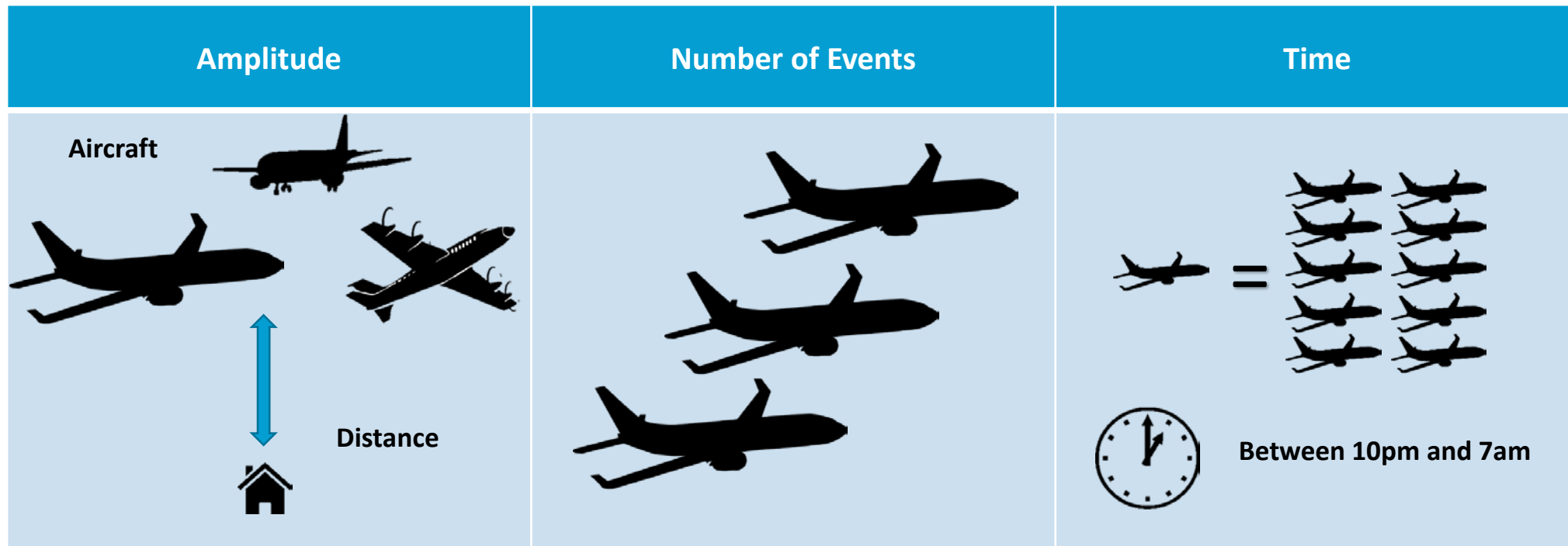


# Day-Night Average Sound Level (DNL)

- Aviation Safety and Noise Abatement Act (1979)
  1. A single system of measuring noise, for which there is a **highly reliable relationship** between projected **noise exposure** and **surveyed reactions of people** to noise, to be uniformly applied in measuring noise at airports and the areas surrounding such airports; and
  2. A **single system** for determining the exposure of individuals to noise which results from the operations of an airport and which includes, but is not limited to, **noise intensity**, **duration**, and **time of occurrence**
- 1981 – DNL adopted by FAA
  - Used in 14 CFR Part 150
  - Used in NEPA evaluations

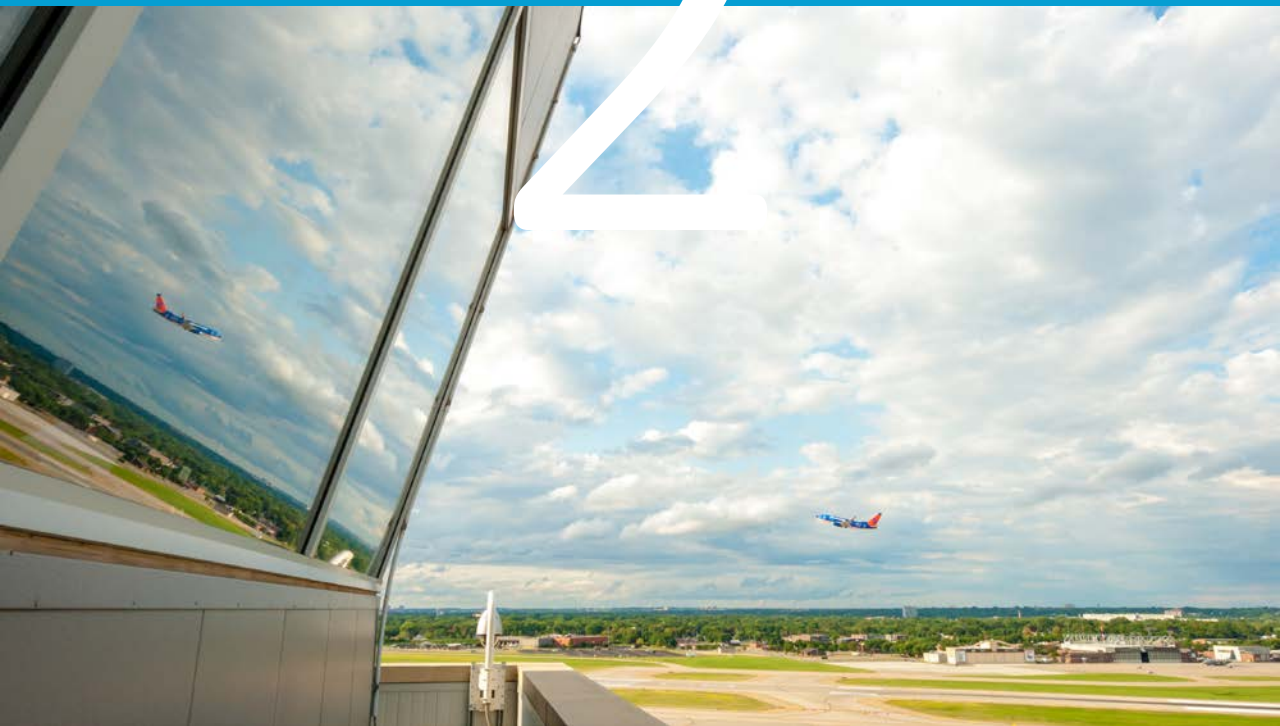
# Day-Night Average Sound Level (DNL)

- DNL is the FAA-mandated metric for assessing aircraft noise impacts around U.S. airports
- DNL is a daily average of aircraft noise events levels with a 10dB penalty applied to nighttime flights between 10:00 PM and 7:00 AM. This 10dB penalty is the equivalent to counting one nighttime flight as 10 flights.



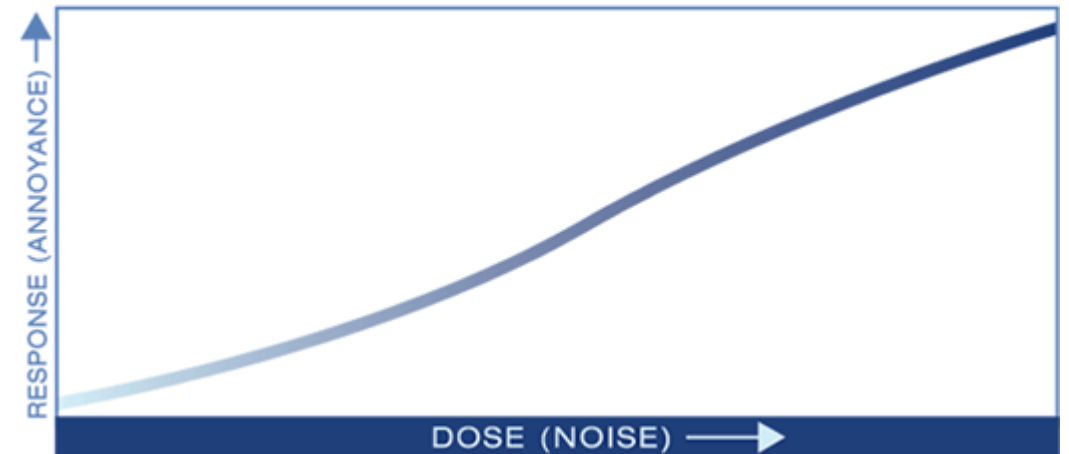
# FAA Study

2



# FAA Study

- May 2015
  - FAA announced it would begin updating the dose-response relationship between noise exposure and the percentage of people who are highly annoyed
  - This study was a part of a larger effort by the FAA, which includes studying the relationship between noise and sleep disturbance, cardiovascular health, and children's cognitive learning



# FAA Study

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## The survey

- A 12-question survey called the “Neighborhood Environmental Survey” was sent to residents around 20 airports throughout 2016 and early 2017
- The FAA is not releasing the airports involved in the survey
- The methodology behind the wording of the question, the position of the question within the survey and the selection of respondents were derived from and/or vetted through the International Committee on the Biological Effects of Noise (ICBEN), BTS, OMB, social scientists and a pilot project through ACRP
- Airports were selected using specific criteria – 100 annual jet operations, 100 households in 65 DNL and 60-65 DNL
- The 20 final airports were determined using Balanced Sampling, which ensures the cohort of airports matches the overall 95 airports on the following factors:
  - Geographic balance, Average temperature, Number of operations, % of nighttime operations, Fleetmix, Population in the vicinity of the airports

# FAA Study

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## The survey

- Residents were selected by running noise contours in 5 dB bands from DNL 50-70 using flight data for the 20 airports
- Their response goal was to have at least 100 respondents per contour band for a total of 500 respondents per airport and a grand total of 10,000 respondents
- FAA has a section of their website with information on the fundamentals of noise and sound, community response to noise and history of noise:

[https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/history/](https://www.faa.gov/regulations_policies/policy_guidance/noise/history/)



# Update



# FAA Reauthorization 2018

- October 2018
- Section 187 – Aircraft Noise Exposure
  - a) Review - The Administrator of the Federal Aviation Administration shall conclude the Administrator's ongoing review of the relationship between aircraft noise exposure and its effects on communities around airports.
  - b) Report
    - 1) In general - **Not later than 2 years after the date of enactment of this Act**, the Administrator shall submit to Congress a report containing the results of the review.
    - 2) Preliminary recommendations - The report shall contain such preliminary **recommendations** as the Administrator determines appropriate **for revising the land use compatibility guidelines in part 150** of title 14, Code of Federal Regulations, based on the results of the review and in coordination with other agencies

# ITEM 5

## ANNOUNCEMENTS

### January NOC Meeting

Wednesday, January 20, 2021 @ 1:30 PM

Virtual Teleconference

### Winter Listening Session

Wednesday, January 27, 2021 @ 6 PM

Virtual Teleconference



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**NOVEMBER 18, 2020**