



# NOISE OVERSIGHT COMMITTEE

July 21, 2021

*Audio recordings are made of this meeting*

# Agenda

## 1. Consent

1.1 – Introductions

1.2 – Approval of May 19, 2021 Meeting Minutes

1.3 – Reports

1.3.1 – Monthly Operations Reports: May and June 2021

1.3.2 – Status of Aviation Noise, Environment, and Health-Related Research Initiative

## 2. Public Comment Period

## 3. Business

3.1 – Nomination and Election of Co-Chairs

3.2 – MAC Residential Mitigation Program Update

## 4. Information

4.1 – Minnetonka Mobile Sound Study Report

4.2 – Meet the Fleet

## 5. Announcements

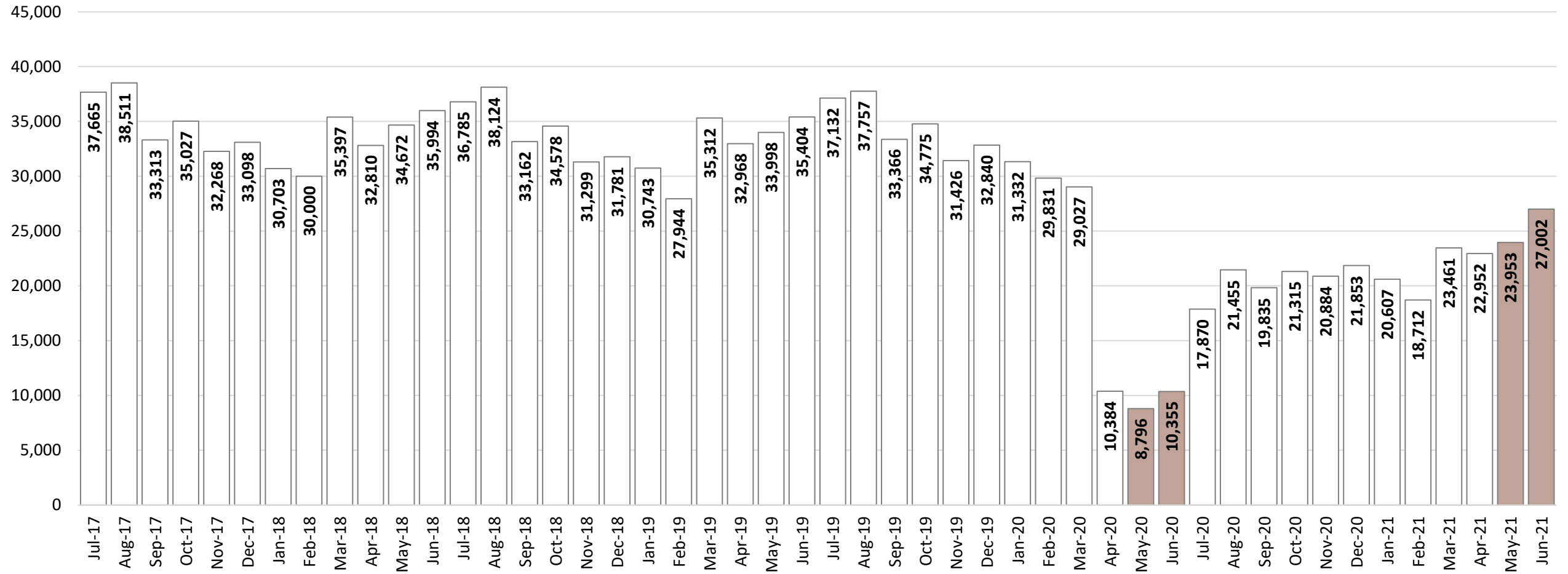
Adjourn



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**

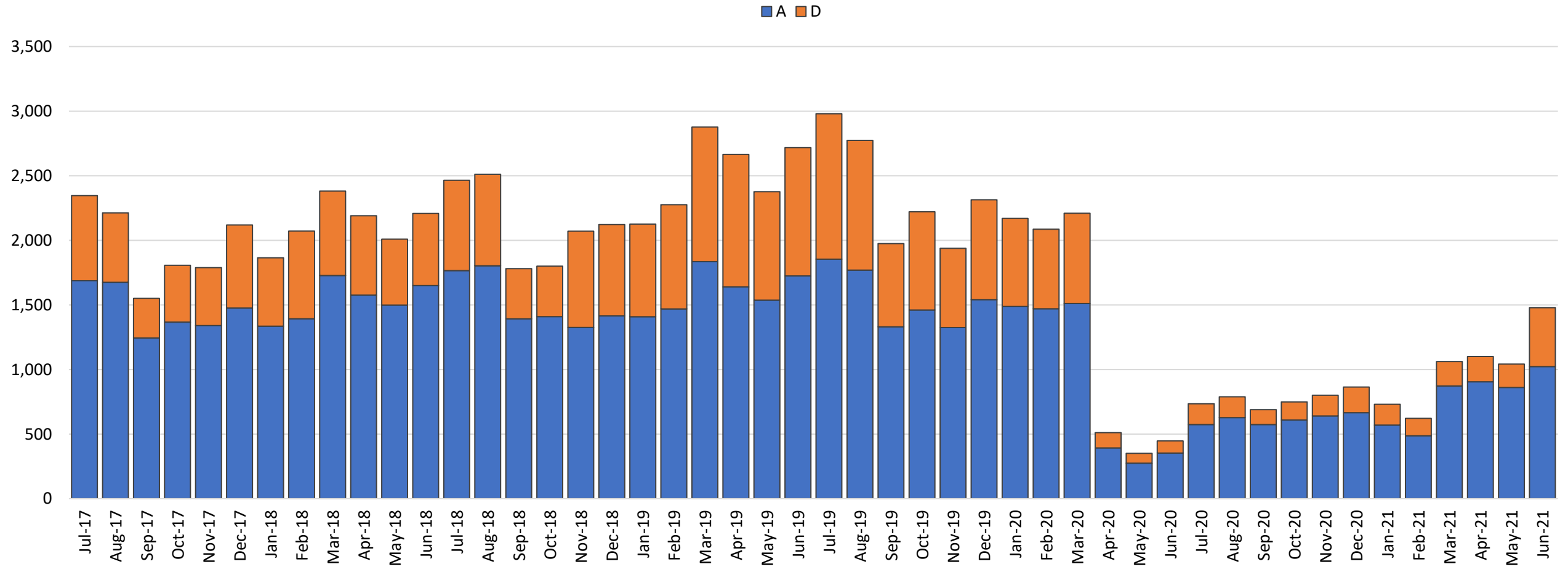
# MSP OPERATIONS

May 2021		June 2021	
<b>23,953</b>	<b>1,042</b>	<b>27,002</b>	<b>1,478</b>
Operations	Nighttime Operations (10:30 PM – 6:00 AM)	Operations	Nighttime Operations (10:30 PM – 6:00 AM)



# MSP OPERATIONS

May 2021		June 2021	
<b>23,953</b>	<b>1,042</b>	<b>27,002</b>	<b>1,478</b>
Operations	Nighttime Operations (10:30 PM – 6:00 AM)	Operations	Nighttime Operations (10:30 PM – 6:00 AM)





# RUNWAY USE

MAY 2021

JUNE 2021

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
29%	59%	5%

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
34%	43%	15%

2020 JAN – JUNE

2021 JAN – JUNE

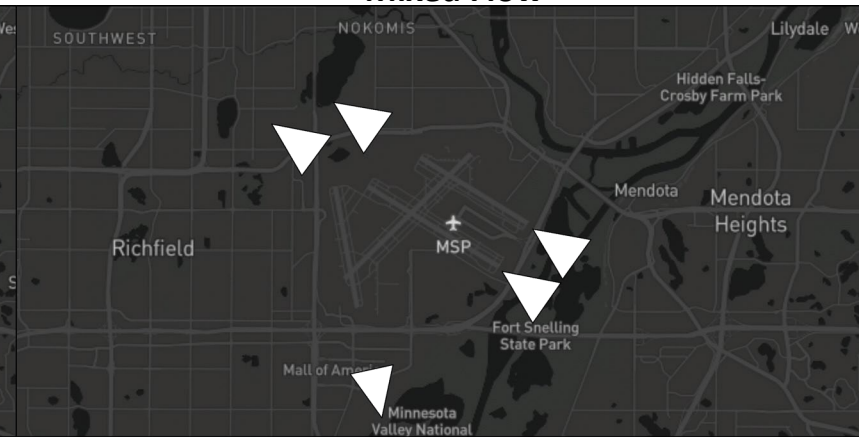
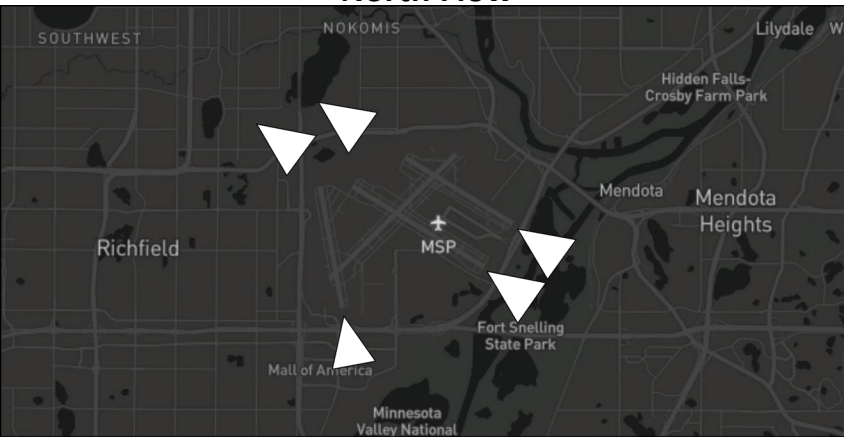
NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
41%	43%	8%

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
43%	43%	9%

**North Flow**

**South Flow**

**Mixed Flow**





# MAY – JUNE RUNWAY USE

**50,955**  
OPERATIONS IN MAY – JUNE

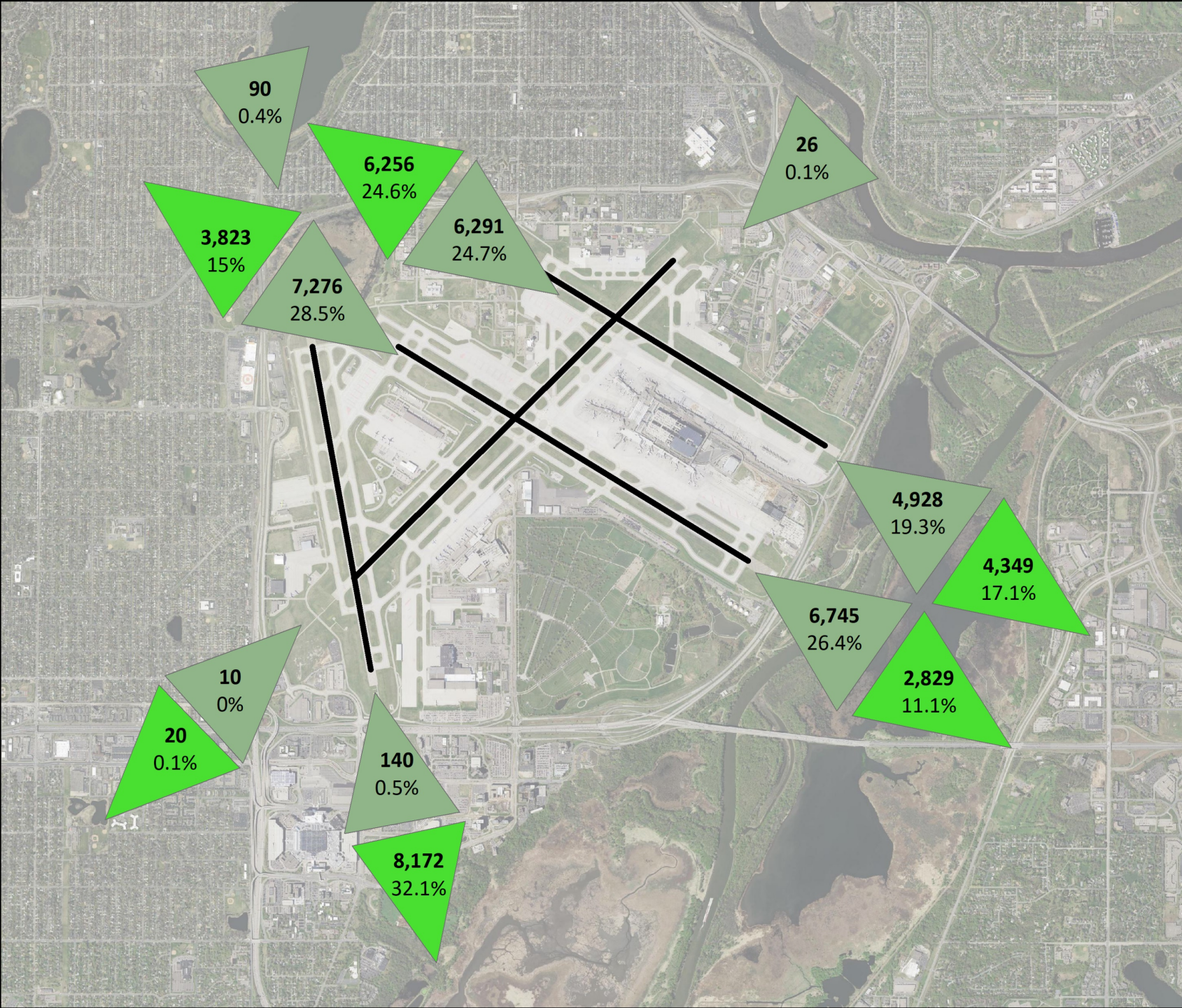
PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
<b>37%</b>	<b>16%</b>	<b>0%</b>	<b>46%</b>

**25,506**  
ARRIVALS

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
<b>46%</b>	<b>1%</b>	<b>0%</b>	<b>53%</b>

**25,449**  
DEPARTURES

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
<b>28%</b>	<b>32%</b>	<b>0%</b>	<b>40%</b>

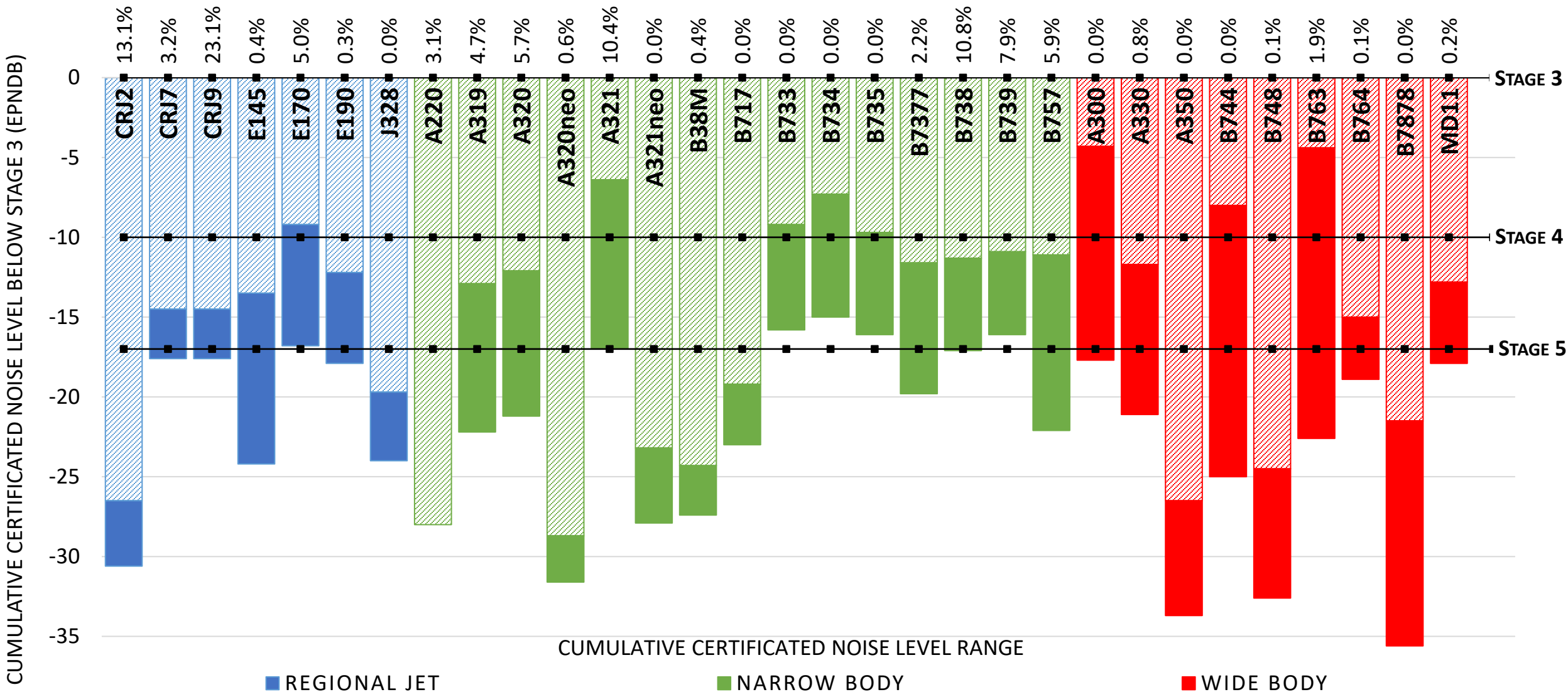




# MSP OPERATIONS

## 2021 MSP CARRIER JET USAGE WITH CUMULATIVE CERTIFICATED NOISE LEVELS

May - Jun



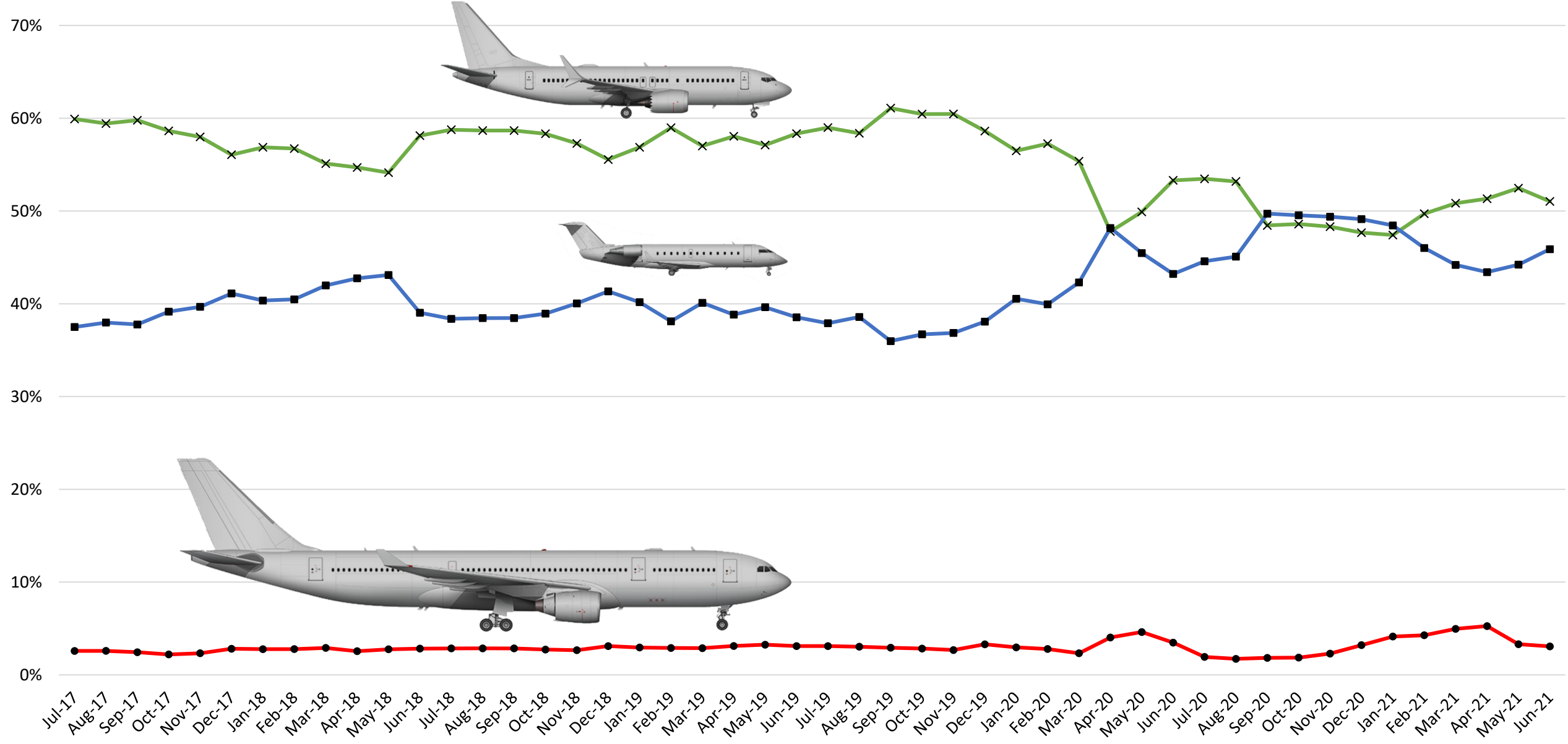
SOURCE: USAGE DATA: MACNOMS; NOISE CERTIFICATION DATA: EUROPEAN AVIATION SAFETY AGENCY

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

# MSP OPERATIONS

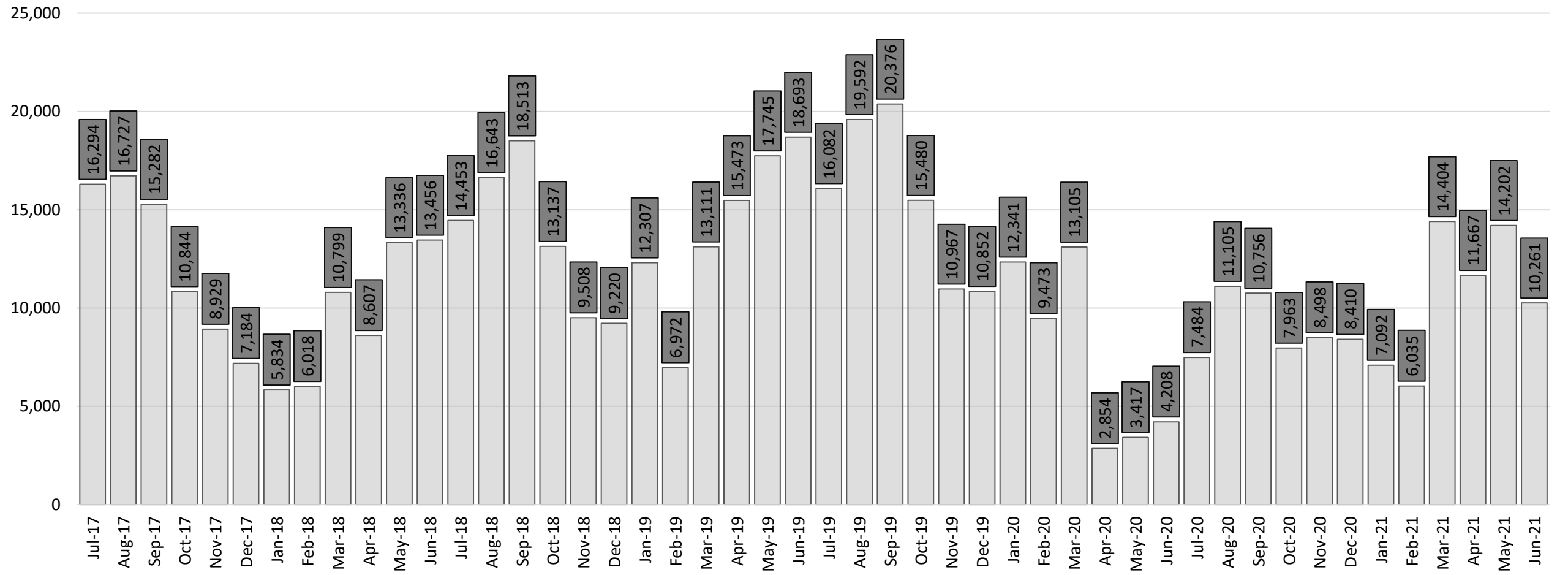
## CARRIER JET FLEET MIX

—x— NARROWBODY —■— RJ —●— WIDEBODY



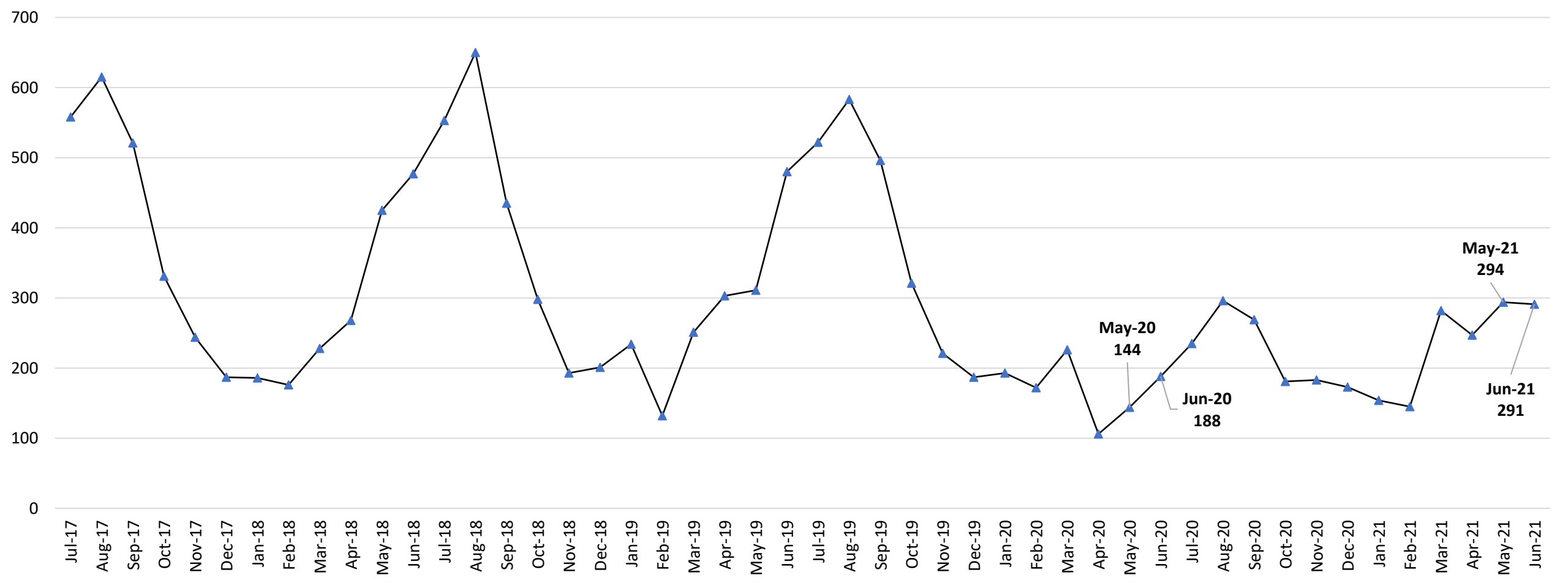
# MSP COMPLAINTS

May 2021				June 2021			
COMPLAINTS		LOCATIONS		COMPLAINTS		LOCATIONS	
14,202		294		10,261		291	
Ops per Complaint	New Locations	Average	Median	Ops per Complaint	New Locations	Average	Median
1.7	27	48	3	2.6	27	35	4

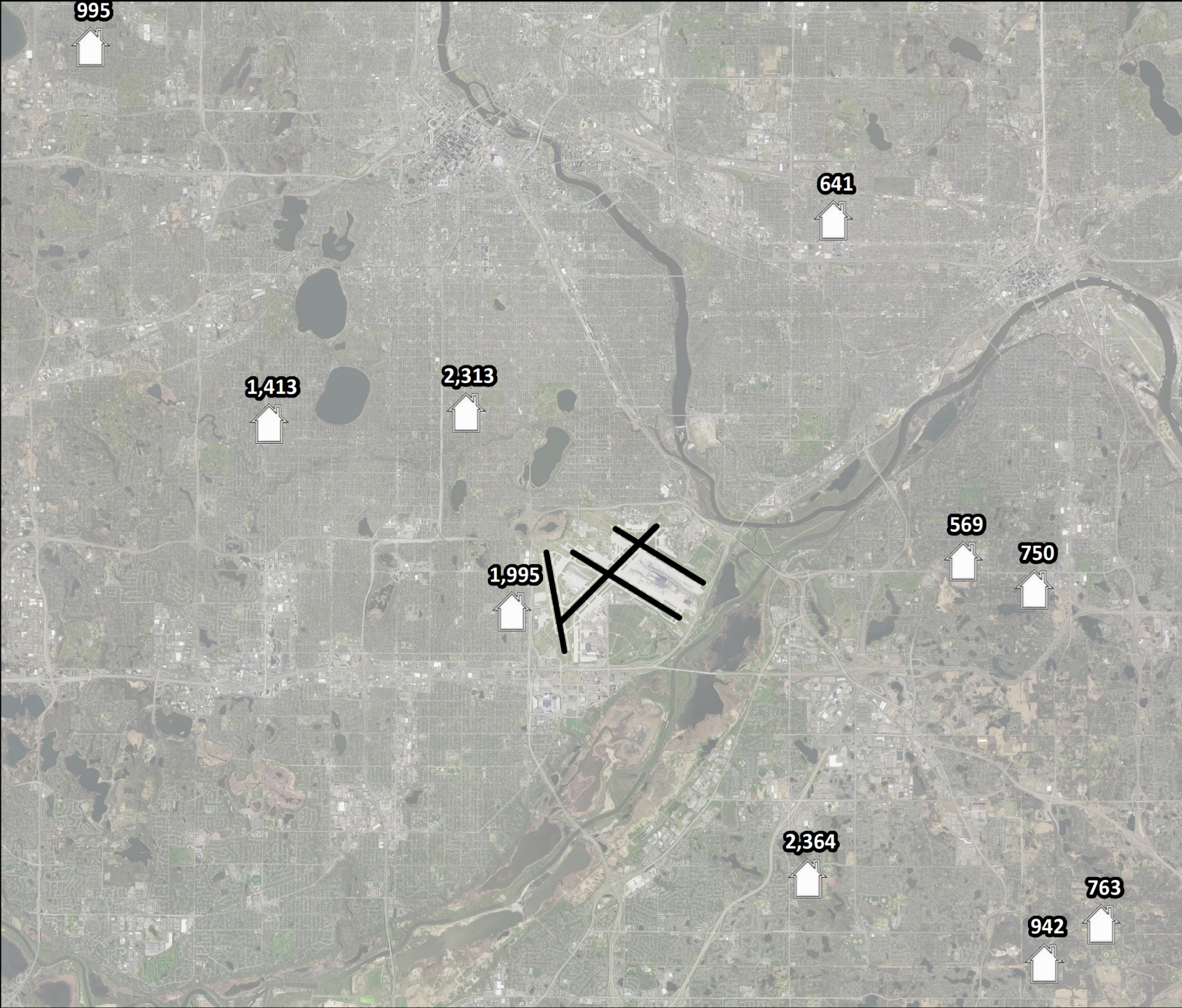


# MSP COMPLAINTS

May 2021				June 2021			
COMPLAINTS		LOCATIONS		COMPLAINTS		LOCATIONS	
14,202		294		10,261		291	
Ops per Complaint	New Locations	Average	Median	Ops per Complaint	New Locations	Average	Median
1.7	27	48	3	2.6	27	35	4







# TOP 10 LOCATIONS

FILED  
**12,745**  
(52%)  
COMPLAINTS DURING MAY & JUN

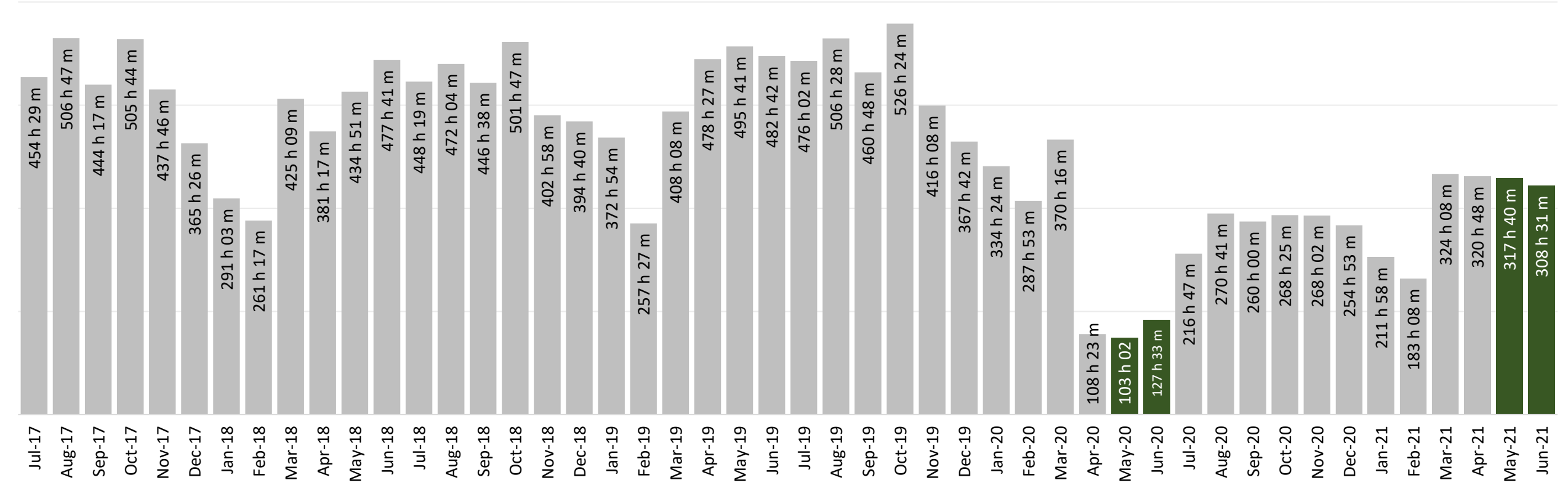
**6 OF 10**  
LOCATIONS WERE IN THE TOP 10  
FOR MAR – APR DATA

**280**  
(68%)  
LOCATIONS FILED 10 OR LESS  
COMPLAINTS



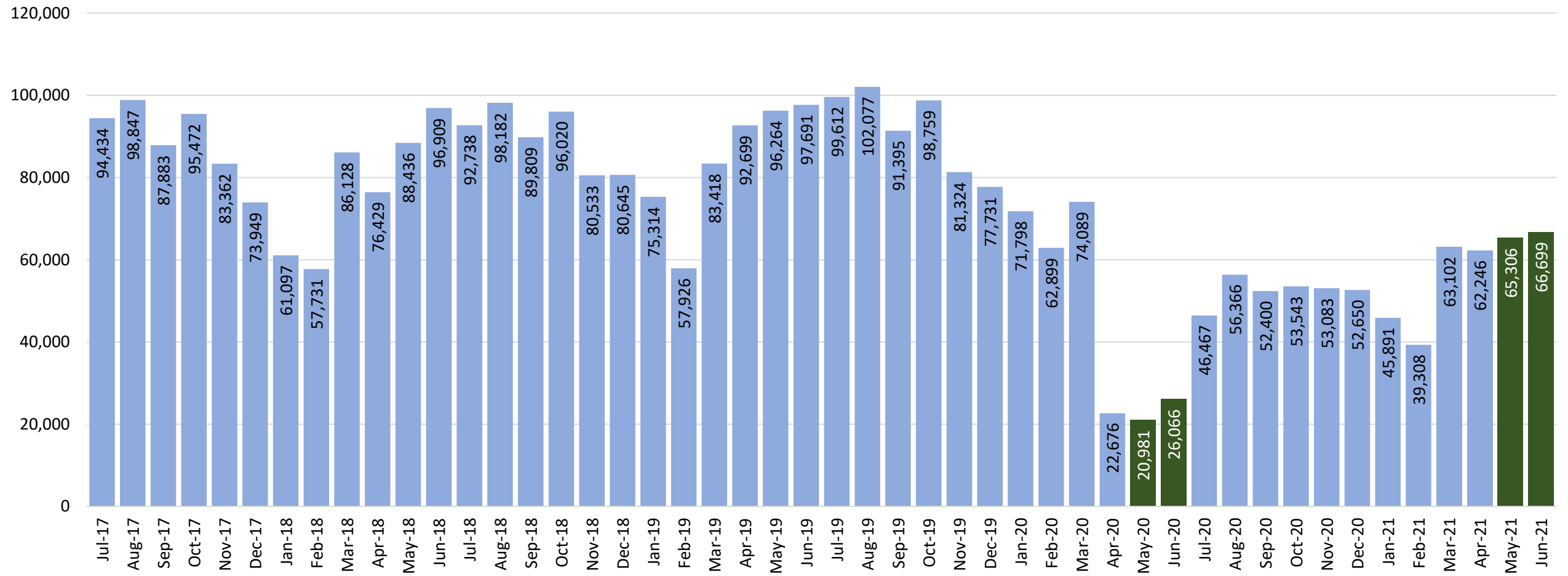
# SOUND MONITORING

May 2021			June 2021		
Time Above	48 TA <sup>65</sup> Per Operation	317 h 40 m TA <sup>65</sup>	Time Above	41 TA <sup>65</sup> Per Operation	308 h 31 m TA <sup>65</sup>
Count Above	2.73 N <sup>65</sup> Per Operation	65,306 N <sup>65</sup>	Count Above	2.47 N <sup>65</sup> Per Operation	66,699 N <sup>65</sup>



# SOUND MONITORING

May 2021			June 2021		
Time Above	48 TA <sup>65</sup> Per Operation	317 h 40 m TA <sup>65</sup>	Time Above	41 TA <sup>65</sup> Per Operation	308 h 31 m TA <sup>65</sup>
Count Above	2.73 N <sup>65</sup> Per Operation	65,306 N <sup>65</sup>	Count Above	2.47 N <sup>65</sup> Per Operation	66,699 N <sup>65</sup>



# NOISE ABATEMENT

May 2021

June 2021

Runway 17

**99.9%**

Runway 17

**99.0%**

Corridor

**90.8%**

Corridor

**97.0%**

Cross Day

**29.6%**

Cross Day

**38.7%**

Cross Night

**52.4%**

Cross Night

**45.5%**

RUS

**51.8%**

Arrive – **39%**

Depart – **65%**

RUS

**54.6%**

Arrive – **53%**

Depart – **56%**

# ITEM 2

## PUBLIC COMMENT PERIOD



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**

# ITEM 2

## PUBLIC COMMENT PERIOD

### Speaking at a Meeting

- Each speaker will have one opportunity to speak and is allotted three (3) minutes.
- When called upon to speak, speak clearly, 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**  
**JULY 21, 2021**



# 3.1 – NOMINATION AND ELECTION OF CO-CHAIRS



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**



# 3.2 – MAC RESIDENTIAL MITIGATION PROGRAM UPDATE



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**

# Residential Noise Mitigation Program

## RESIDENTIAL NOISE MITIGATION PROGRAM

- 1992 - 2006
- \$385.6 Million





# Original Consent Decree Program



## ORIGINAL (2007) CONSENT DECREE

- 2007 - 2014
- \$95.1 Million

# Amended Consent Decree Program

---

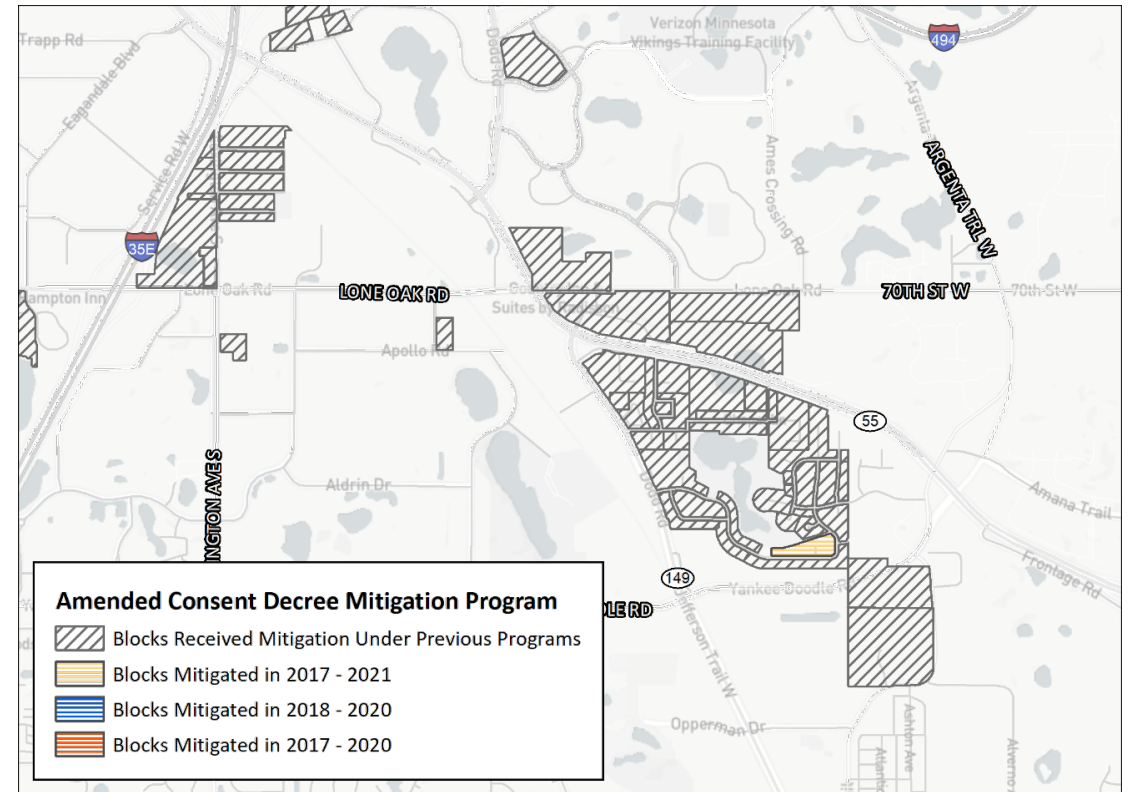
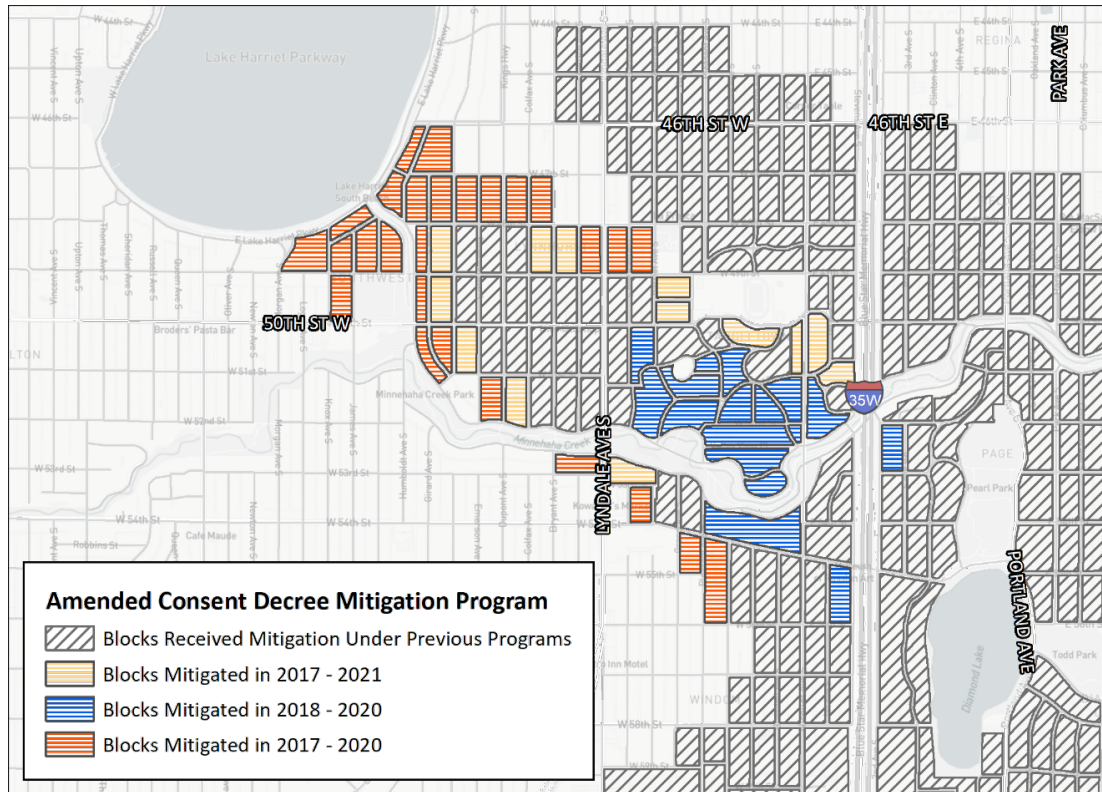
## AMENDED CONSENT DECREE

- 2017 - 2024
- \$28.8 Million\*

*\*Through April, 2021*



# Amended Consent Decree Program





# MSP Mitigation History

---

## RESIDENTIAL NOISE MITIGATION PROGRAM

- 1992 - 2006
- \$385.6 Million

## ORIGINAL (2007) CONSENT DECREE

- 2007 - 2014
- \$95.1 Million

## AMENDED CONSENT DECREE

- 2017 - 2024
- \$28.8 Million\*

*\*Through April, 2021*

# Expected Sequence



# Action Requested

---

- 1) THE NOC SUPPORTS CONTINUATION OF THE NOISE MITIGATION PROGRAM, IN A MANNER CONSISTENT WITH THE PROVISIONS OF THE CONSENT DECREE, OFFERING THE SAME LEVEL OF NOISE MITIGATION BASED ON ANNUAL NOISE CONTOURS; AND
- 2) FURTHER, THE NOC REQUESTS THAT MAC STAFF EXPLORE CONTINUATION OF THE PROGRAM WITH THE PARTIES TO THE CONSENT DECREE FOR FUTURE CONSIDERATION BY THE COMMISSION, COURT AND FAA.



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**

# 4.1 – MINNETONKA MOBILE SOUND STUDY REPORT



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**



# Study Scope

---

- Purpose
  - Collect aircraft sound measurements related to flight activity associated with the MSP over the northeastern portion of the City of Minnetonka, in accordance with established Mobile Sound Monitoring Guidelines.
  - Provide information related to the aircraft activity
- The Study will provide:
  - Information about MSP aircraft sound levels measured during the study for communication purposes
  - Analysis of measured aircraft and community sound levels in the vicinity of the mobile monitoring equipment
  - Analysis of modeled versus monitored sound data
- The Study will not provide:
  - Changes to annual day-night-level (DNL) aircraft noise contours
  - Residential sound mitigation eligibility

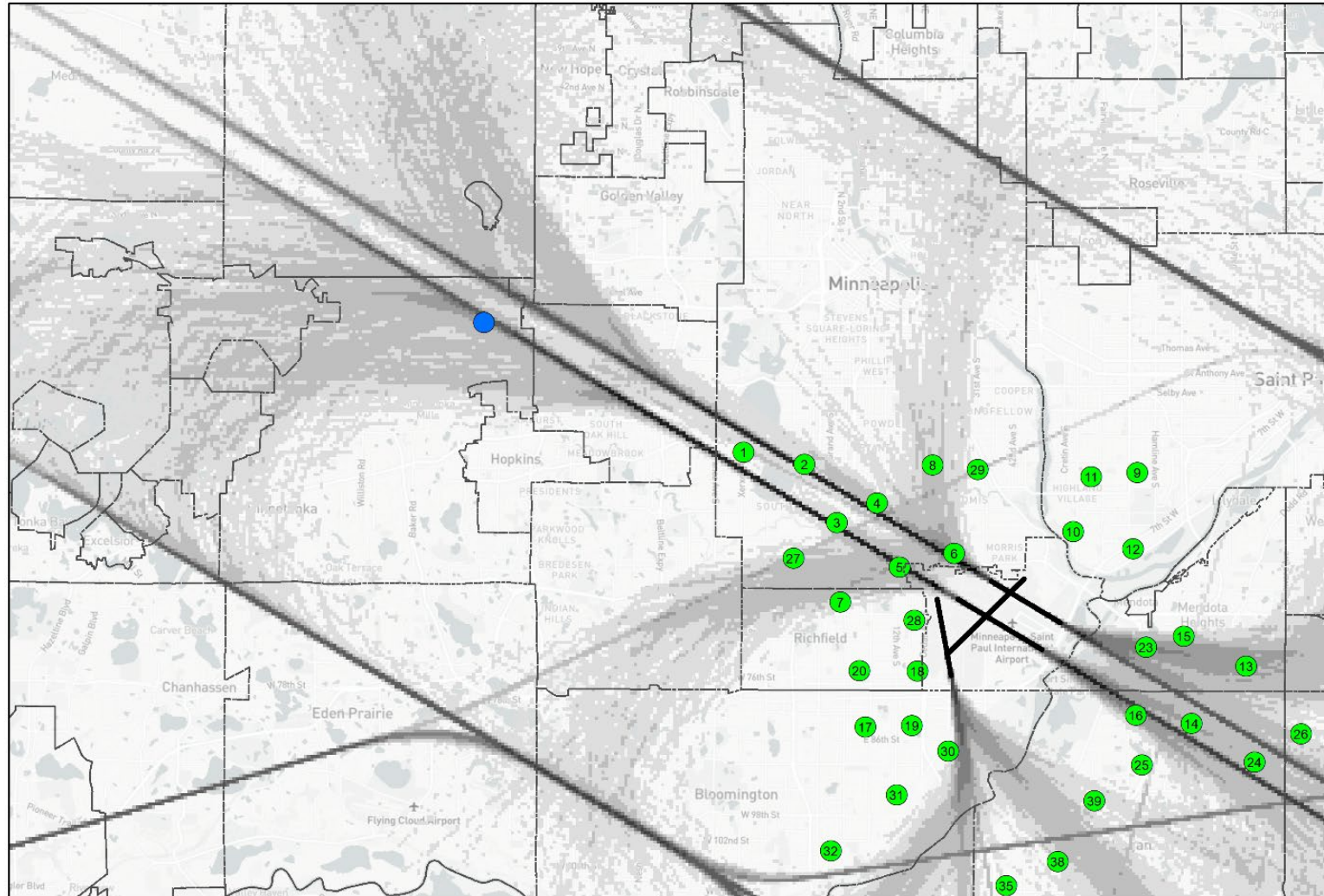
# Field Measurements



- Data were collected at Minnetonka Fire Station #2 site (1815 Hopkins Crossroad)
- Field-measured sound data were collected continuously for 10 consecutive days: May 22 to May 31
- Placement of equipment captured quality samples of MSP aircraft activity
- Recorded data were matched with MSP flights only



# Monitoring Sites

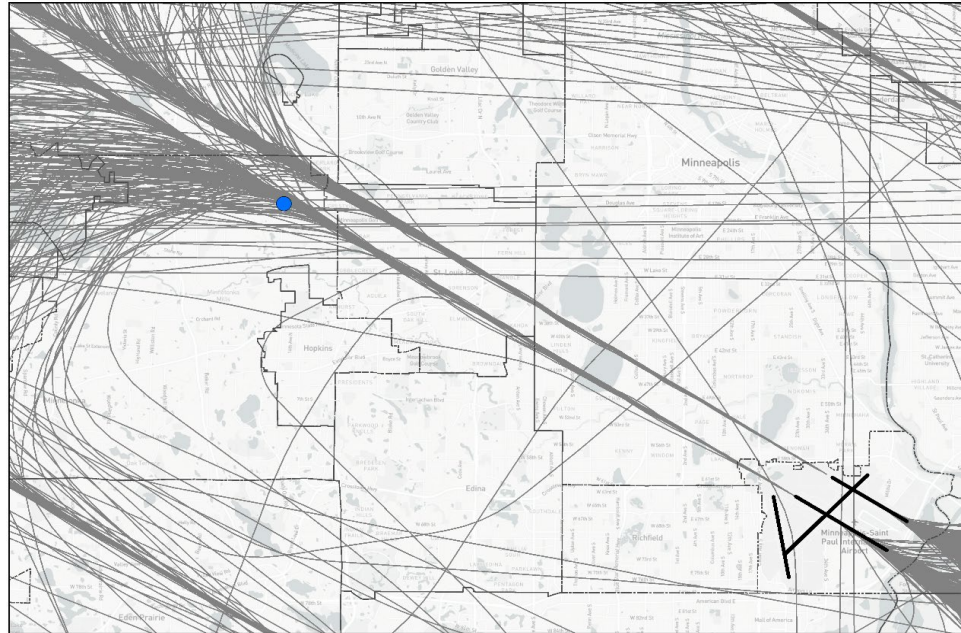


- Monitoring Site
- Permanent Sites

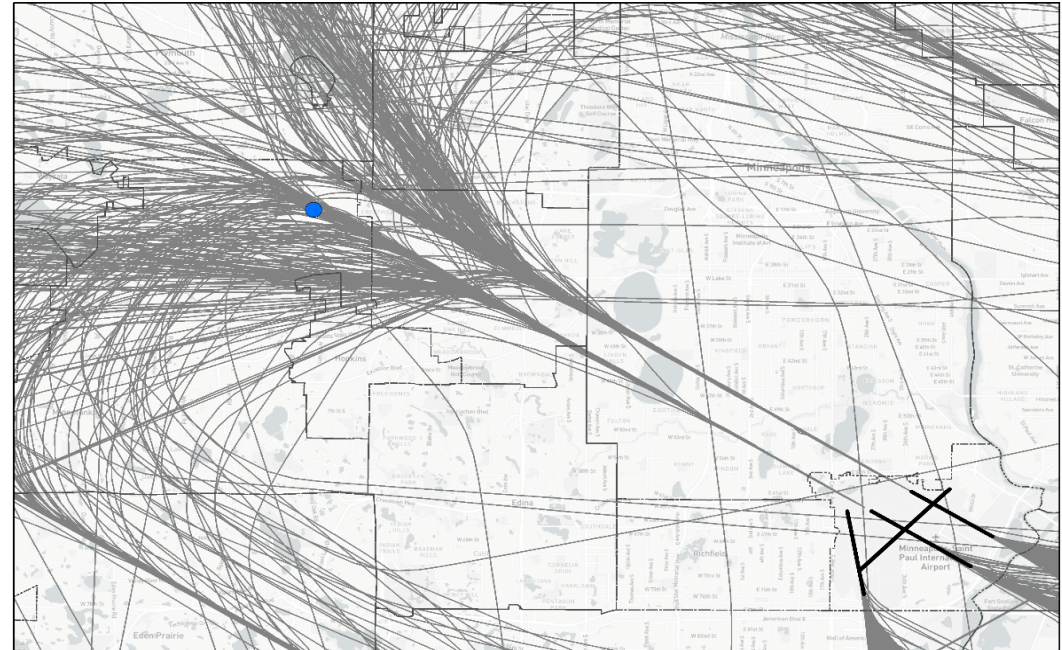
# Measured Data

Day	Number Above 65 dB	MSP Arrivals (Within 1 Mile of Site)	IMC (hours)	VMC (hours)	North/Mixed A Flow (hours)	South Flow (hours)
22-May	6	130	9.50	14.50	5	16
23-May	14	327	10.50	13.50	-	23
24-May	14	192	9.50	14.50	6	13
25-May	2	39	3.75	20.25	15	5
26-May	3	-	-	24.00	18	-
27-May	57	414	16.75	7.25	1	19
28-May	7	207	0.75	23.25	1	20
29-May	16	148	-	24.00	3	18
30-May	20	316	14.00	10.00	-	23
31-May	5	39	4.50	19.50	16	4
<b>Total</b>	<b>144</b>	<b>1,812</b>	<b>69</b>	<b>171</b>	<b>65</b>	<b>141</b>

# Instrument versus Visual Approach



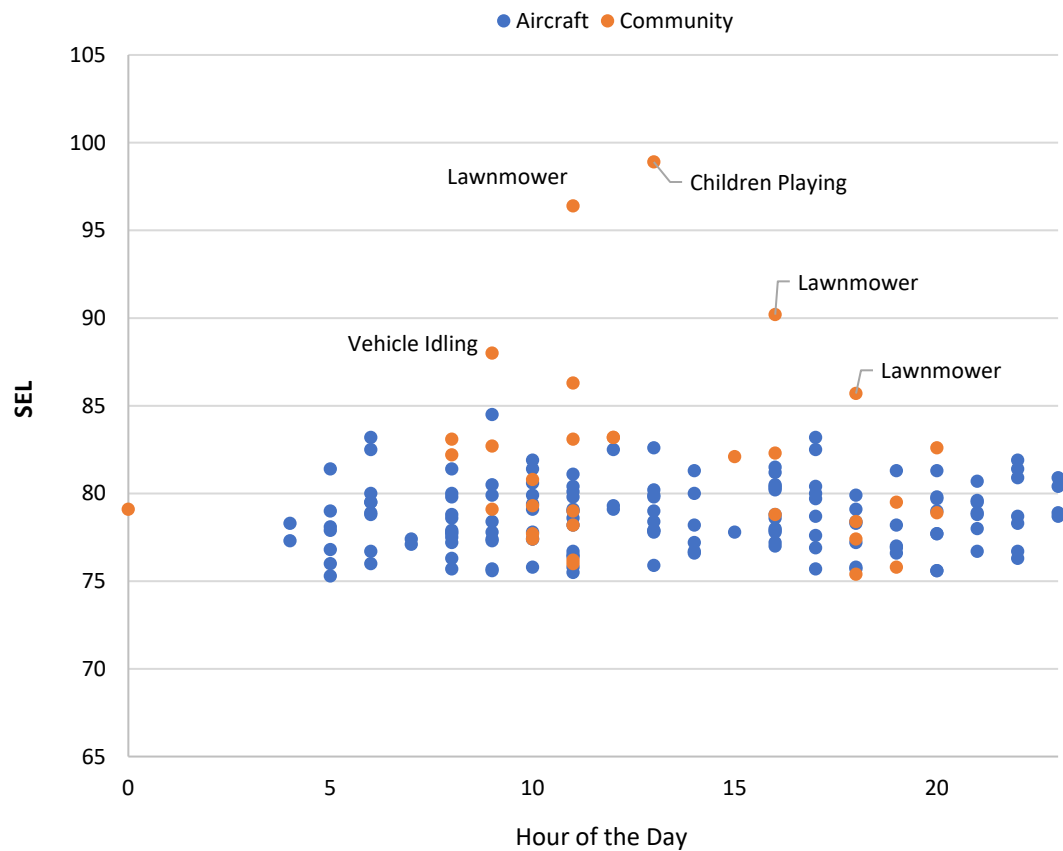
**MSP Operations  
May 27, 2021**



**MSP Operations  
May 29, 2021**



# Measured Data



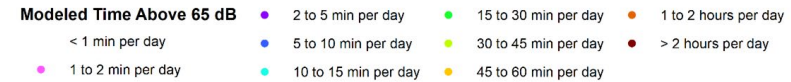
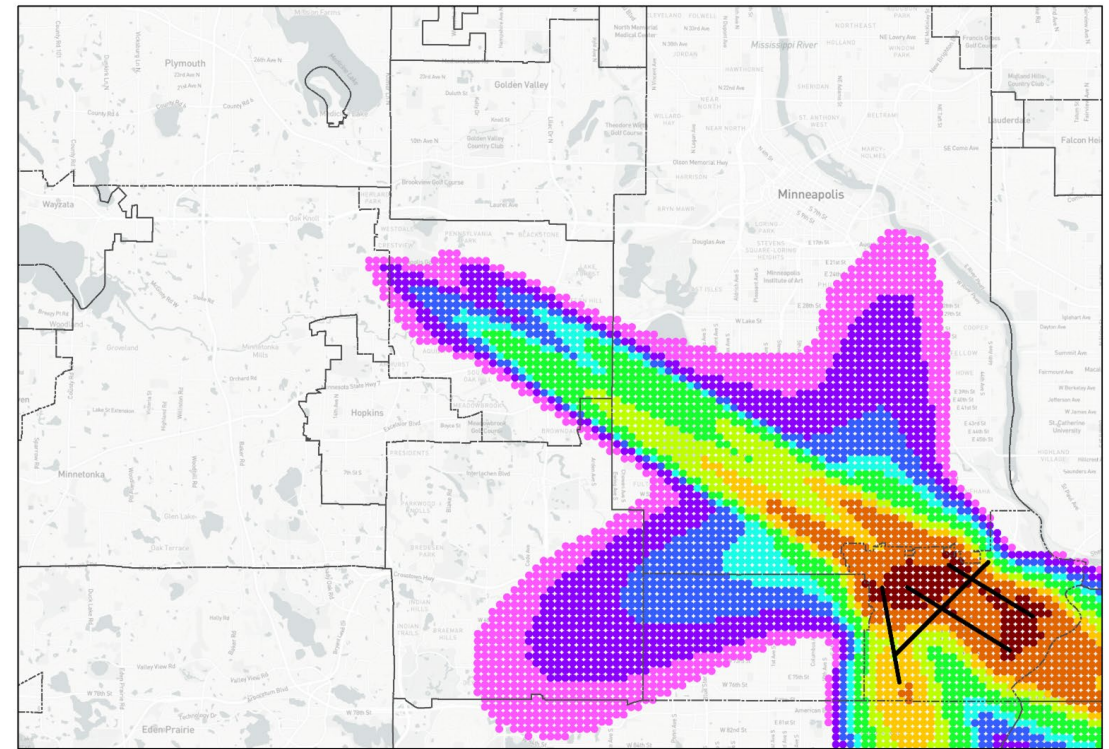
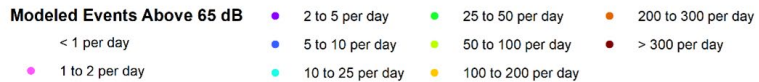
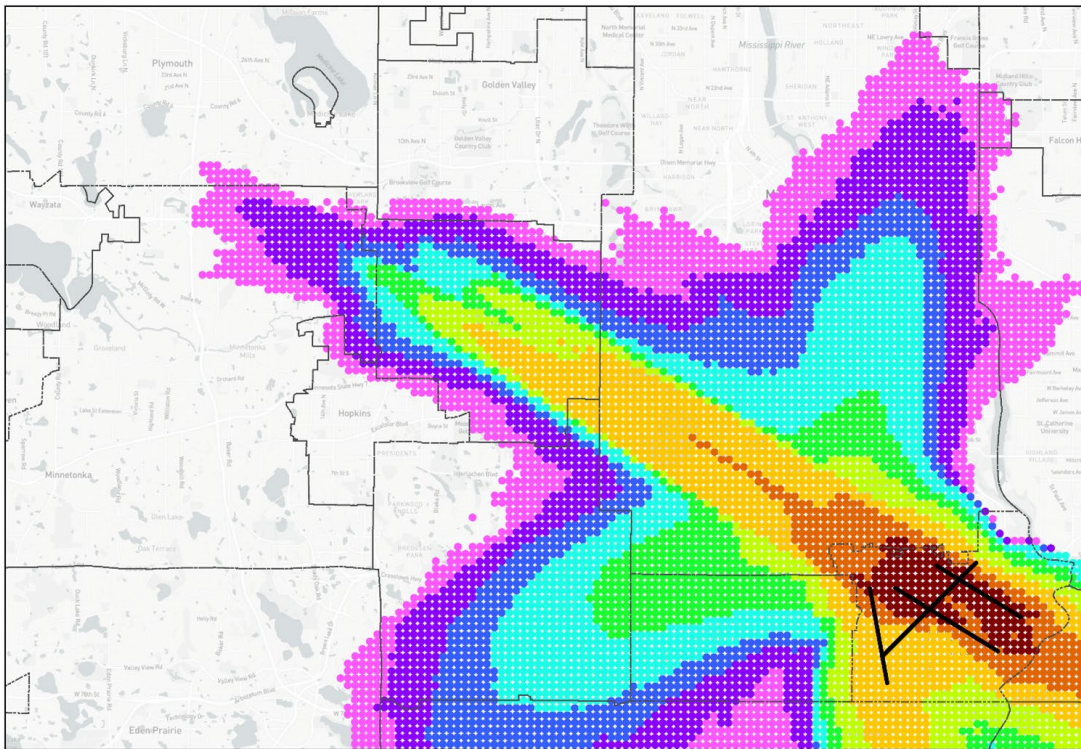
Date/Time	Flight Number	Aircraft	Operation	Runway	LA <sub>max</sub> (dB)	Duration (seconds)	3D Distance (ft)
5/27/2021 9:53	SWQ3615	B734	A	12L	76.5	18	2,015
5/27/2021 11:13	DAL2025	A220	A	12R	75.6	9	2,875
5/28/2021 6:40	DAL2114	A319	A	12L	74.3	14	2,598
5/30/2021 22:06	AAL1578	B738	A	12R	73.5	15	2,172
5/27/2021 13:37	SCX270	B738	A	12R	73.1	17	2,161
5/23/2021 17:32	UPS560	A300	A	12R	73.1	16	2,185
5/27/2021 23:53	AAL2402	B738	A	12L	73	18	3,011
5/28/2021 10:09	NKS570	A320	A	12R	72.6	11	2,750
5/27/2021 16:27	DAL654	A319	A	12R	72.5	16	2,479
5/27/2021 17:17	UPS2560	B748	A	12R	72.4	29	3,032

# Modeling

---

- FAA-approved modeling software used to calculate MSP aircraft sound exposure during the study period
- Utilized available MSP flight track data and certificated noise levels for aircraft types operating during the study period
- Calculated sound exposure across a 20 by 12 nautical mile diameter grid of equally spaced analysis locations
- Counted the number of events above 65 dB (Number Above)
- Calculated the amount time that sound levels exceeded 65 dB (Time Above)
- Considered average weather conditions during the study period
- Considered terrain

# Modeled Data





# 4.2 – MEET THE FLEET



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**



# Meet the Fleet

---



CRJ-900  
Endeavor Air



# Meet the Fleet – CRJ-900

The screenshot shows the MAC website with a navigation bar at the top containing 'MSP Airport', 'General Aviation', 'Noise Program', and 'Airport Authority'. A search bar is present with the text 'Ask us a question' and an example: 'Example: Why do the aircraft fly so low?'. Below the navigation, there are several menu items: 'TOOLS & REPORTS', 'FOR OUR NEIGHBORS', 'NOISE MITIGATION PROGRAM', 'FOR PILOTS', 'OTHER MAC AIRPORTS', and 'AIRCRAFT NOISE BASICS'. The 'FOR OUR NEIGHBORS' menu is open, showing options like 'File a Noise Complaint', 'MSP Noise Oversight Committee (NOC) Meetings', 'MSP Listening Sessions', 'MSP Noise Abatement Efforts', 'Real Estate Professional and Homebuyer Information', 'Noise Contours & Land-use Zoning', 'Mobile Sound Monitoring', 'Presentations and Videos for Our Neighbors', and 'Meet the Fleet'. The 'Meet the Fleet' link is circled in yellow. Below the menu, there are sections for 'Latest News', 'Stay Informed' (with an email sign-up form), and 'Other Links'.

The screenshot shows the MSP Airport YouTube channel page. The channel name is 'MSP Airport' with 935 subscribers. The video 'Meet the Fleet - CRJ900' is highlighted with a yellow circle. The video has 471 views and was uploaded 1 week ago. Other videos in the 'Uploads' section include 'Creating The Aurora', 'Meet MSP Airport's New Delivery Robot', 'Airport Careers: Fire Department', 'Airport Careers: Field Maintenance', and 'Interact with The Aurora at MSP Airport'. The page also features a search bar, a 'SUBSCRIBE' button, and navigation tabs for 'HOME', 'VIDEOS', 'PLAYLISTS', 'CHANNELS', 'DISCUSSION', and 'ABOUT'.



# ITEM 5

## ANNOUNCEMENTS

### Summer Listening Session

Wednesday, July 28, 2021 @ 6 PM

Virtual via Teams

### September NOC Meeting

Wednesday, September 15, 2021 @ 1:30 PM

MAC General Offices

Lindberg Conference Room



**NOISE OVERSIGHT COMMITTEE**  
**JULY 21, 2021**