



NOISE OVERSIGHT COMMITTEE

January 29, 2020

Audio recordings are made of this meeting

ITEM 1

REVIEW AND APPROVAL OF NOVEMBER 20TH MEETING MINUTES



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



ITEM 2

REVIEW OF MONTHLY OPERATIONS REPORTS



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



MSP OPERATIONS

NOVEMBER 2019

31,426

Operations

1,938

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

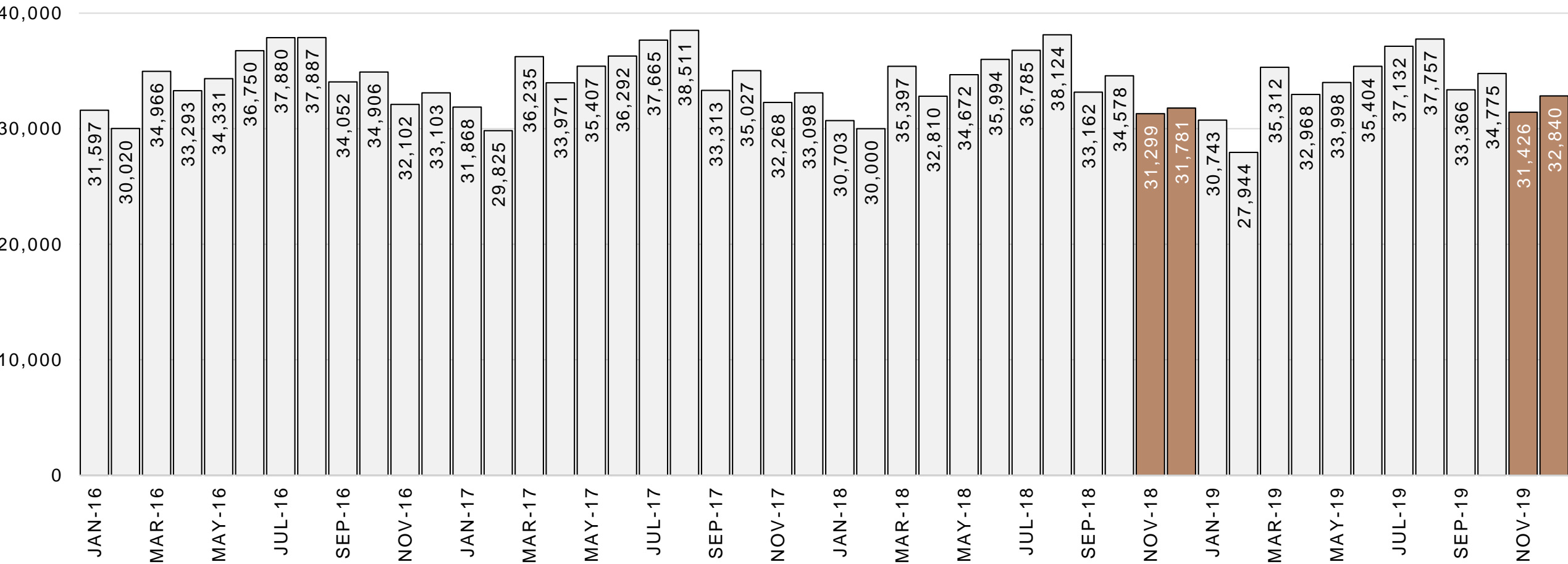
DECEMBER 2019

32,840

Operations

2,314

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



MSP OPERATIONS

NOVEMBER 2019

31,426

Operations

1,938

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

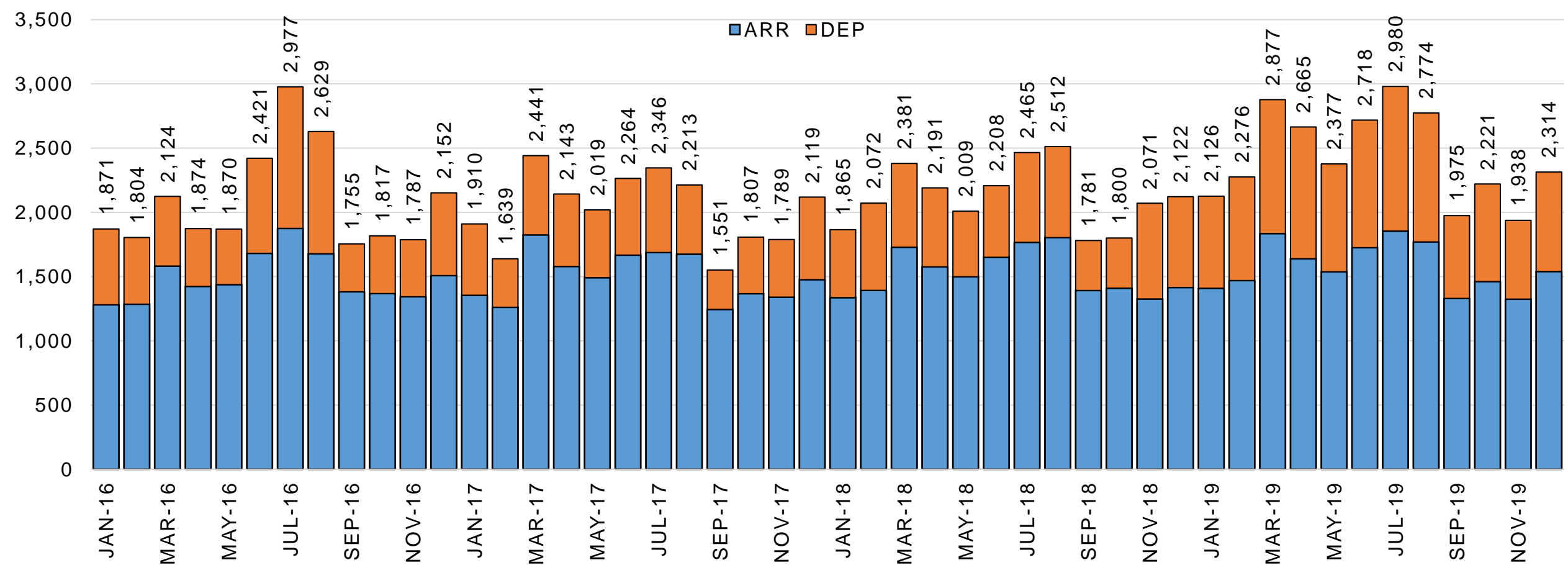
DECEMBER 2019

32,840

Operations

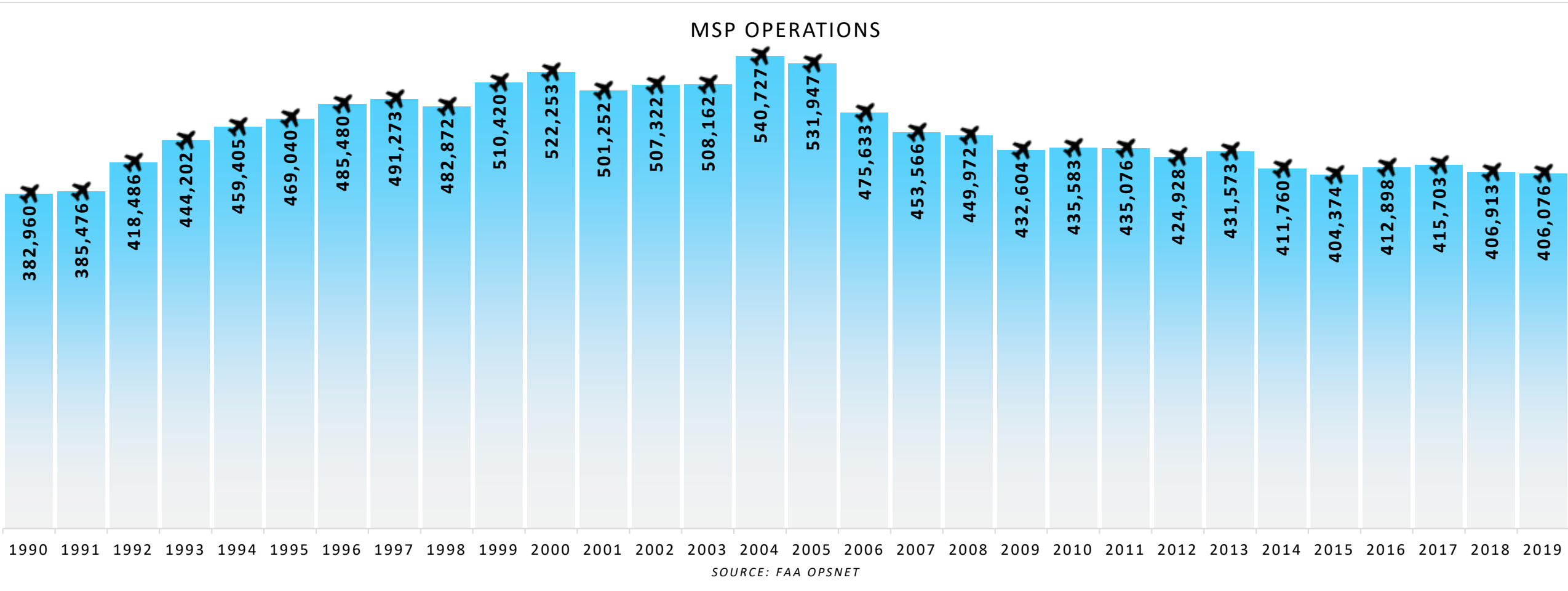
2,314

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



MSP OPERATIONS

2018	2019
405,305	403,665
MSP Operations (MACNOMS)	MSP Operations (MACNOMS)



RUNWAY USE

NOVEMBER 2019

DECEMBER 2019

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
44%	36%	11%

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
35%	45%	12%

2018

2019

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
34.2%	46%	11.8%

NORTH FLOWS	SOUTH FLOWS	MIXED FLOWS
35.7%	44%	13.3%

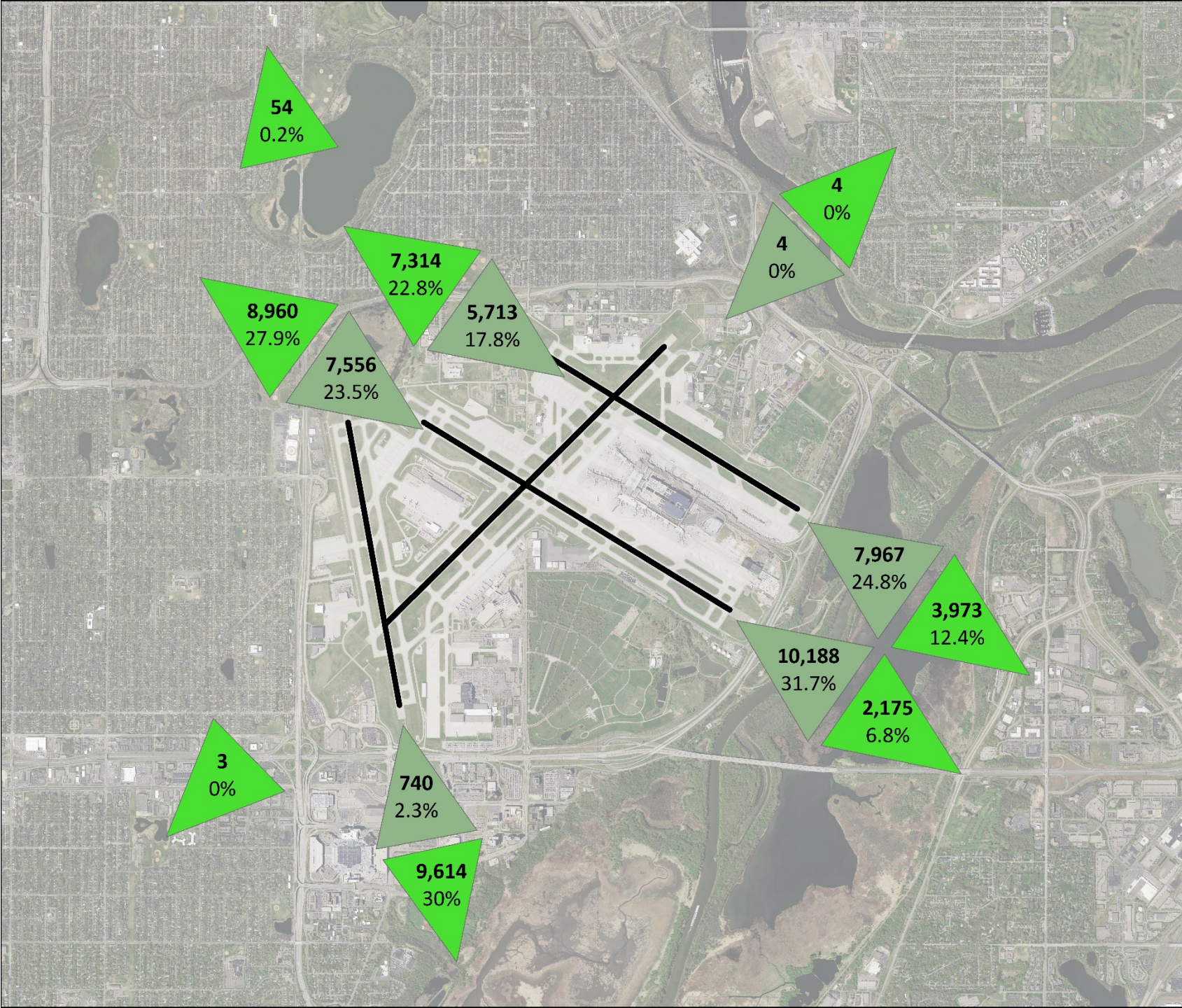
North Flow

South Flow

Mixed Flow



NOV – DEC RUNWAY USE



64,265
OPERATIONS IN NOV – DEC

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
37.8%	16.1%	0%	46%

32,168
ARRIVALS

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
56.4%	2.3%	0%	41.2%

32,097
DEPARTURES

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
19.2%	30%	0%	50.7%

RUNWAY USE CHANGE

403,665
OPERATIONS IN 2019

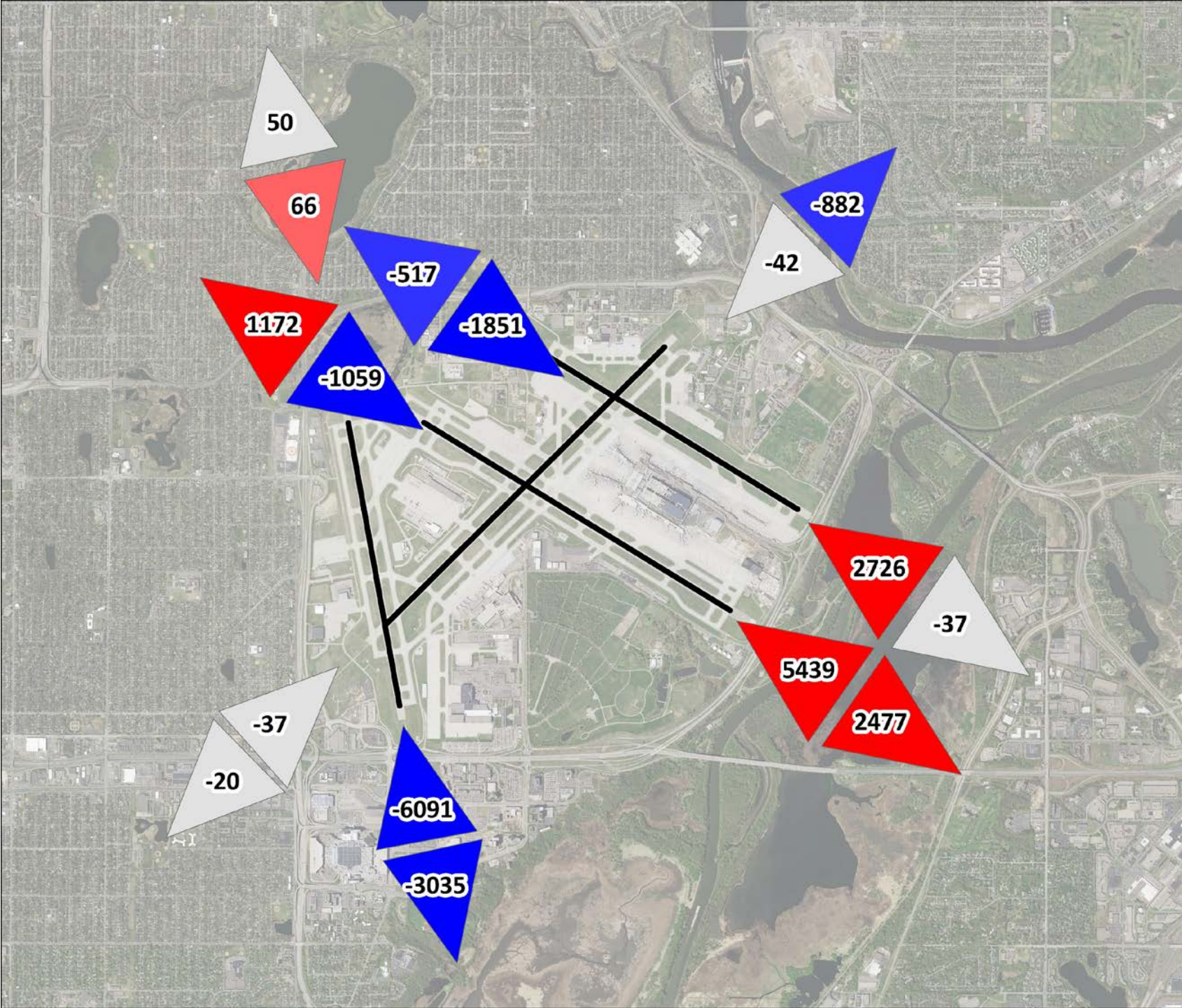
PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
37%	17%	0%	46%

201,955
ARRIVALS

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
51.5%	2.5%	0.1%	45.8%

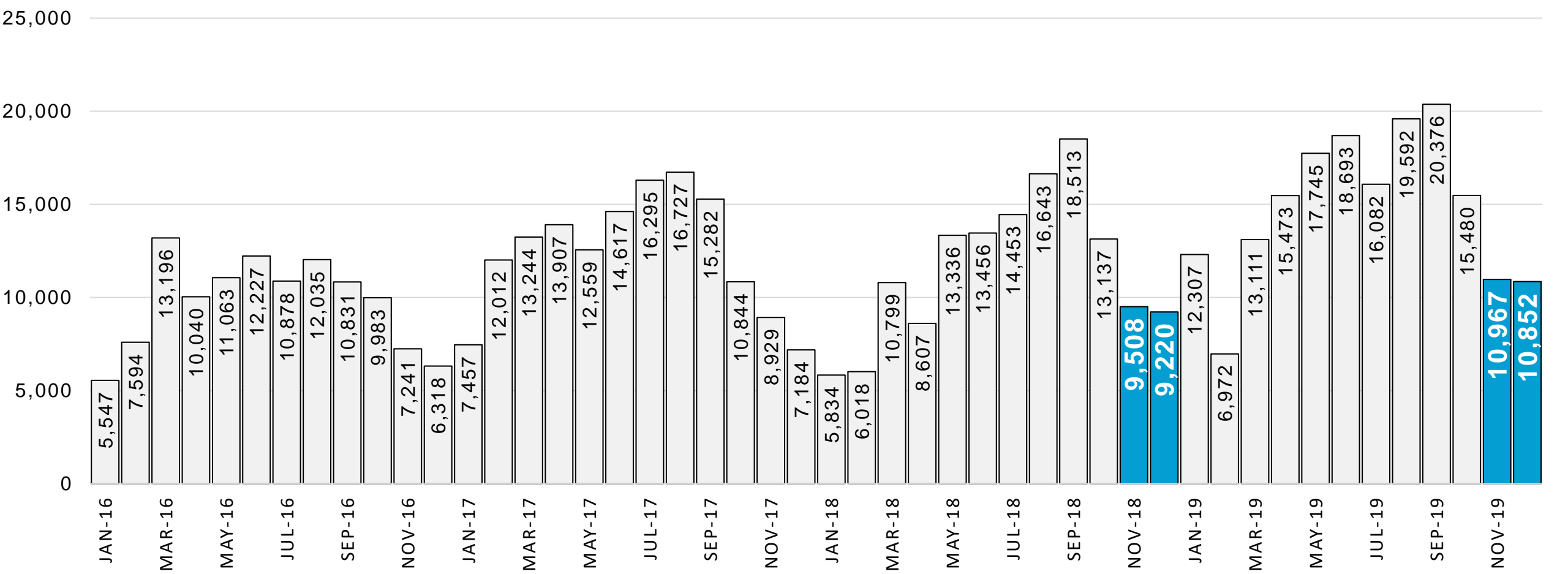
201,710
DEPARTURES

PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4
22.2%	32.4%	0.1%	45.2%



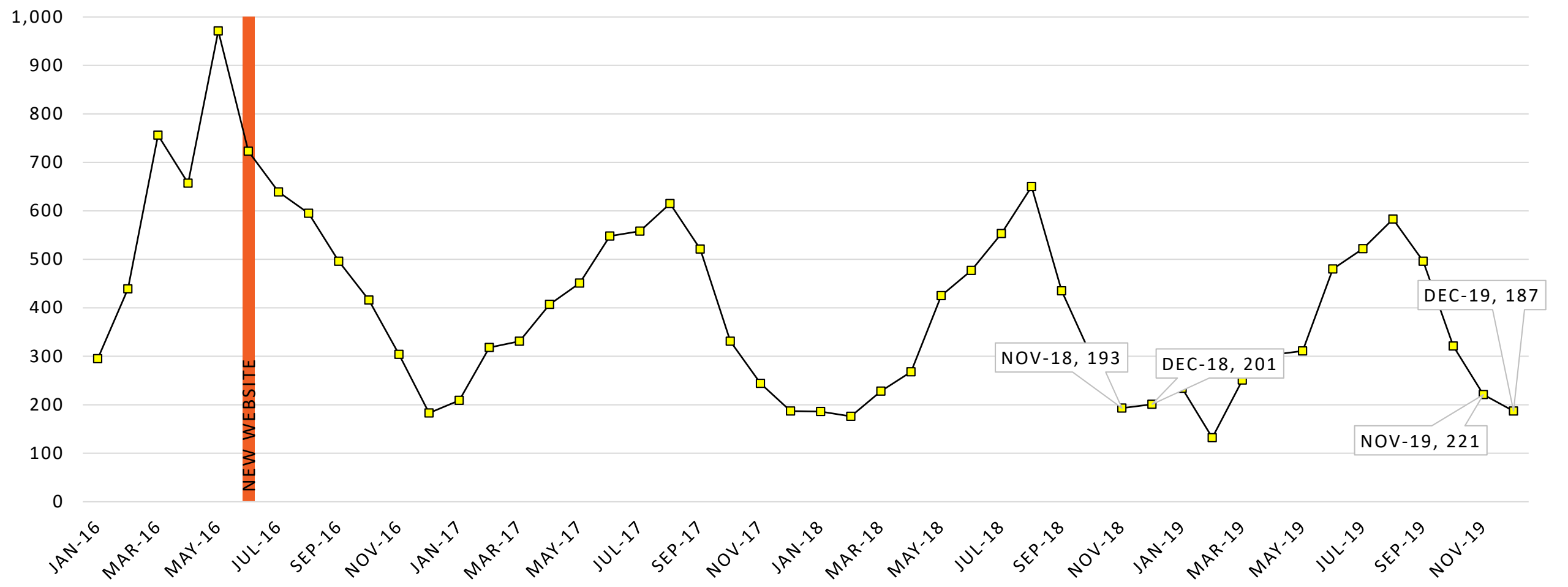
MSP COMPLAINTS

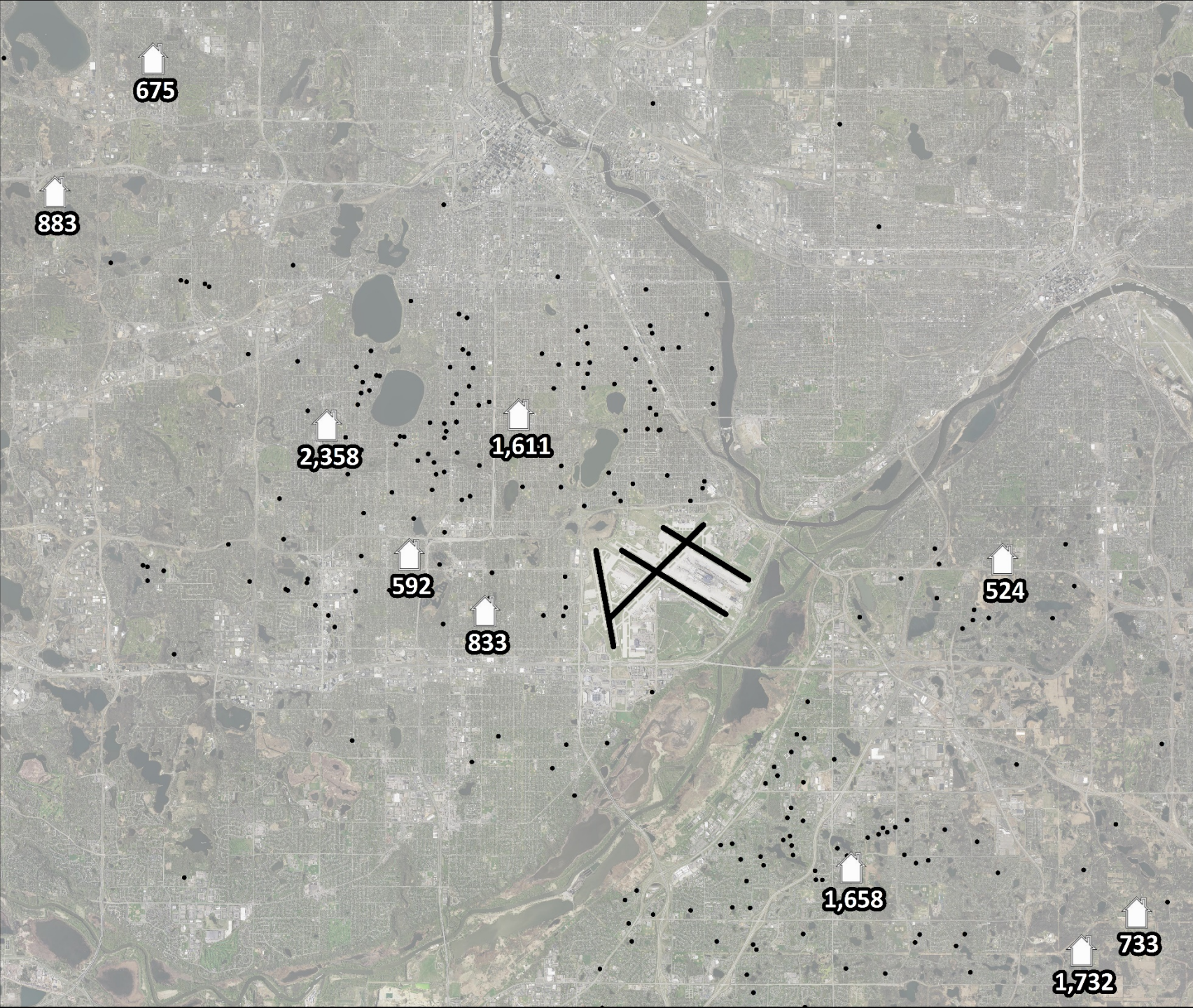
NOVEMBER 2019				DECEMBER 2019			
COMPLAINTS	LOCATIONS			COMPLAINTS	LOCATIONS		
10,967	221			10,852	187		
Operations per Complaint	New Locations	Average	Median	Operations per Complaint	New Locations	Average	Median
2.0	10	50	6	3	7	58	6



MSP COMPLAINTS

NOVEMBER 2019				DECEMBER 2019			
COMPLAINTS	LOCATIONS			COMPLAINTS	LOCATIONS		
10,967	221			10,852	187		
Operations per Complaint	New Locations	Average	Median	Operations per Complaint	New Locations	Average	Median
2.0	10	50	6	3	7	58	6





TOP 10 LOCATIONS

FILED
11,559
(53%)
COMPLAINTS DURING NOV & DEC

7 OF 10
LOCATIONS WERE IN THE TOP 10
FOR SEP – OCT DATA

171
(62%)
LOCATIONS FILED 10 OR LESS
COMPLAINTS

MSP COMPLAINTS

2019		
COMPLAINTS	LOCATIONS	AVERAGE
177,650	1,406	126

2018		
COMPLAINTS	LOCATIONS	AVERAGE
139,524	1,484	94



TOP 10 LOCATIONS

FILED
86,005
 (48.4%)
 COMPLAINTS DURING 2019

7 OF 10
 LOCATIONS WERE IN THE TOP 10
 FOR 2018 DATA

968
 (69%)
 LOCATIONS FILED 10 OR FEWER
 COMPLAINTS

2019 COMPLAINTS BY NOC CITY

TOP 3 NON-NOC CITIES

MINNETONKA

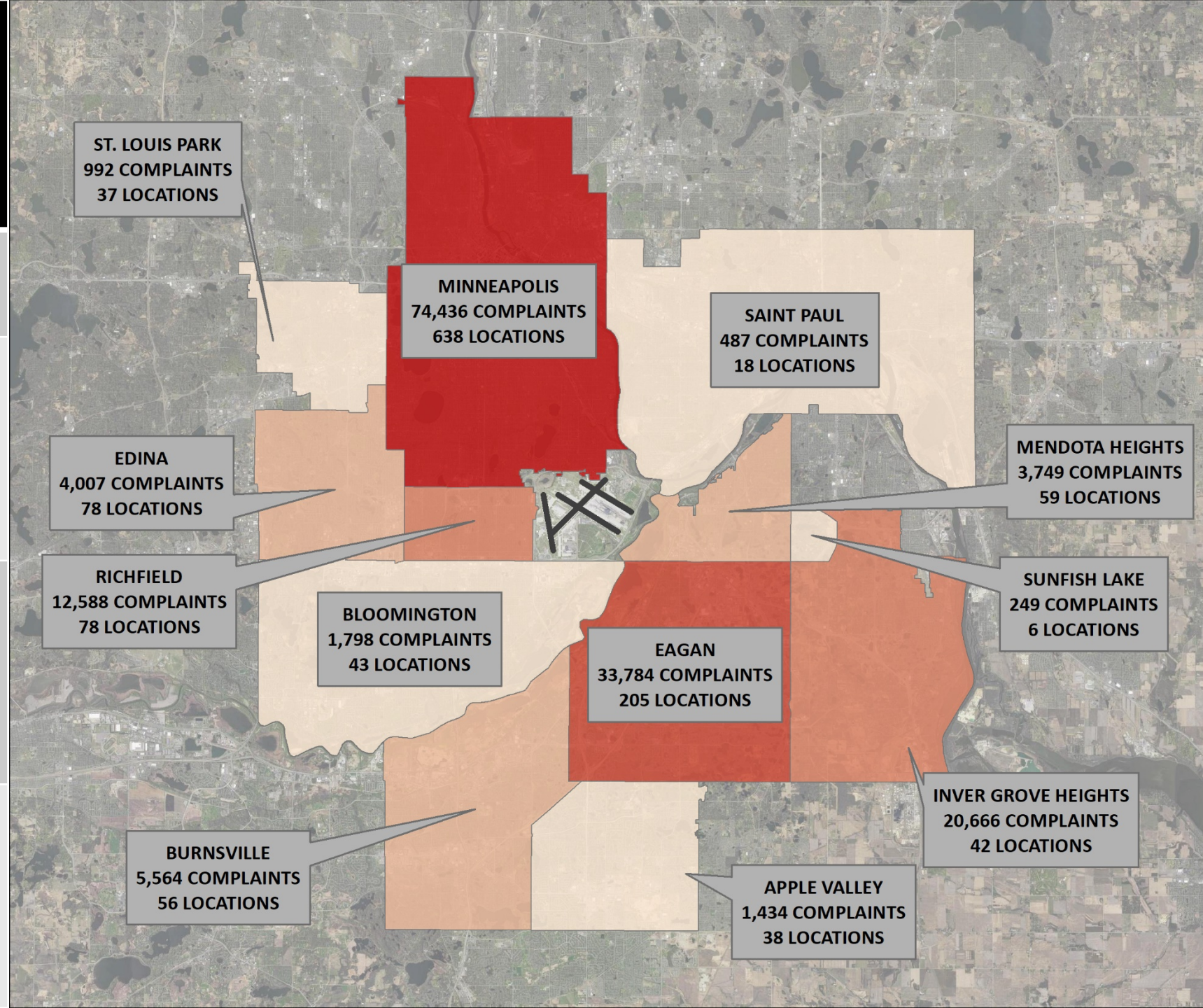
7,585 Complaints
19 Locations

GOLDEN VALLEY

5,439 Complaints
4 Locations

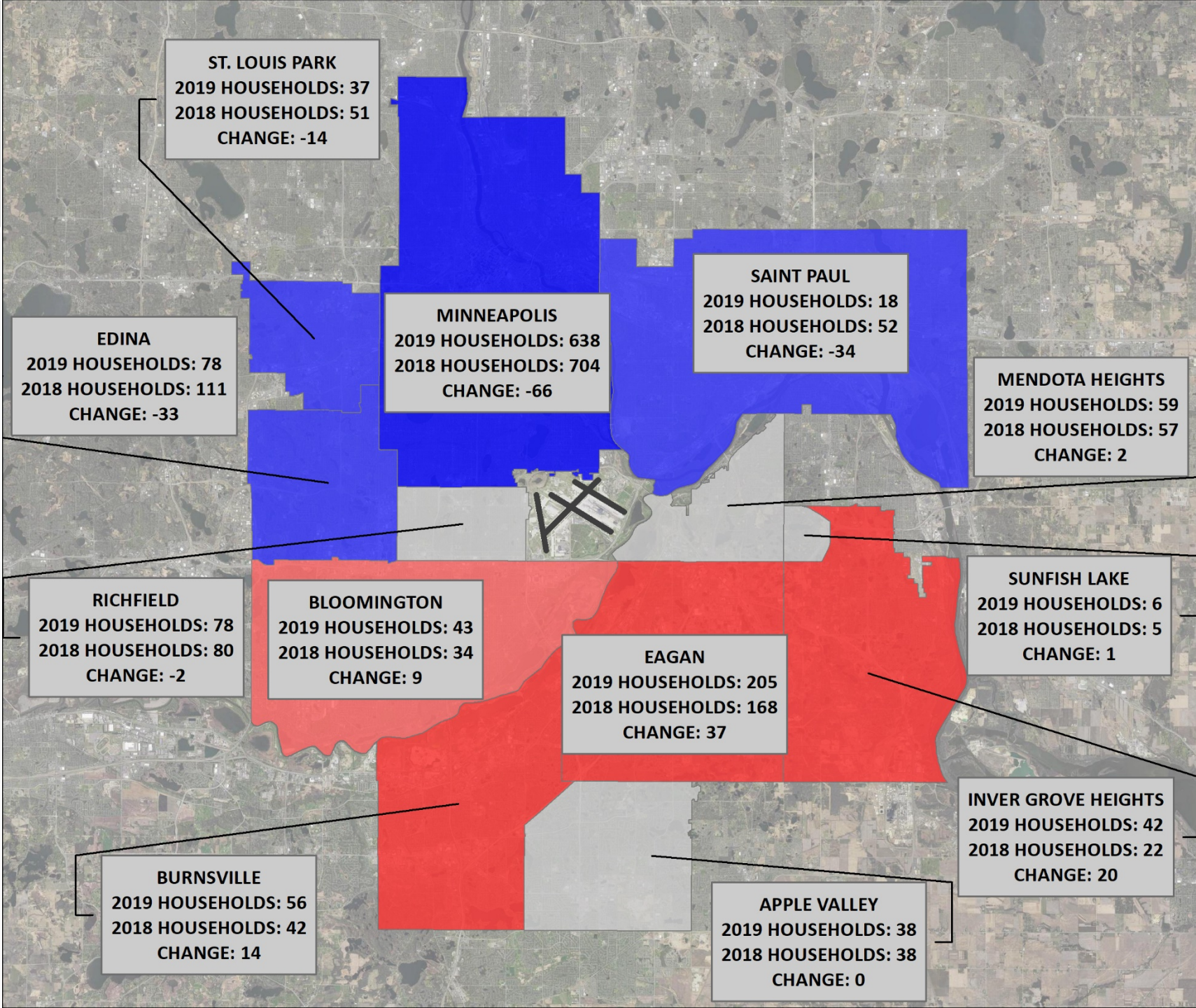
COTTAGE GROVE

1,306 Complaints
2 Locations



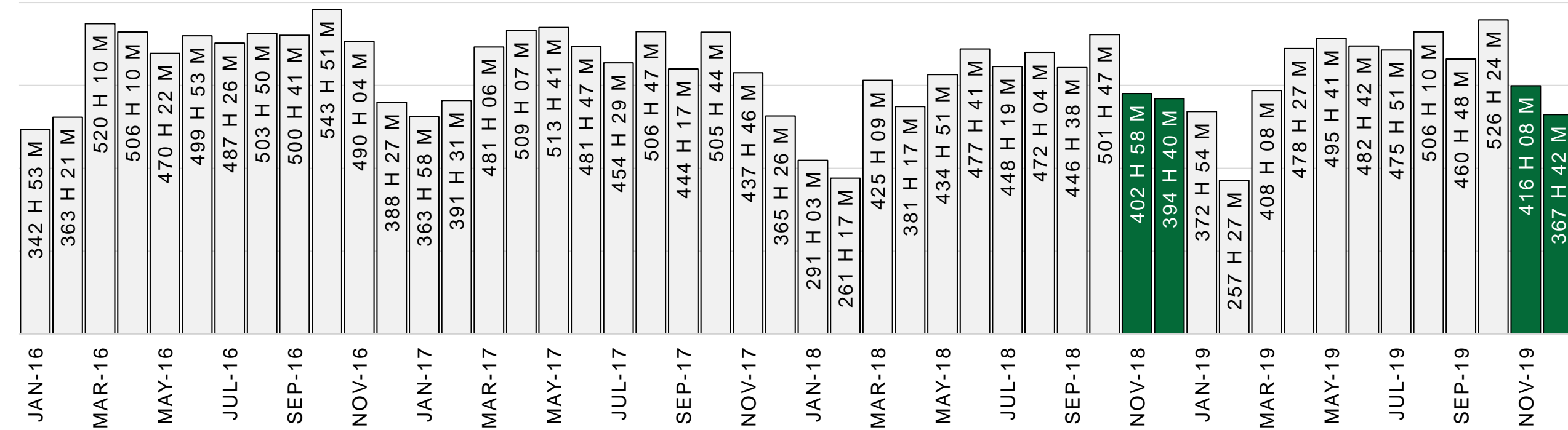
COMPLAINT LOCATIONS BY NOC CITY

ALL NON-NOC CITIES +/- 5 Locations



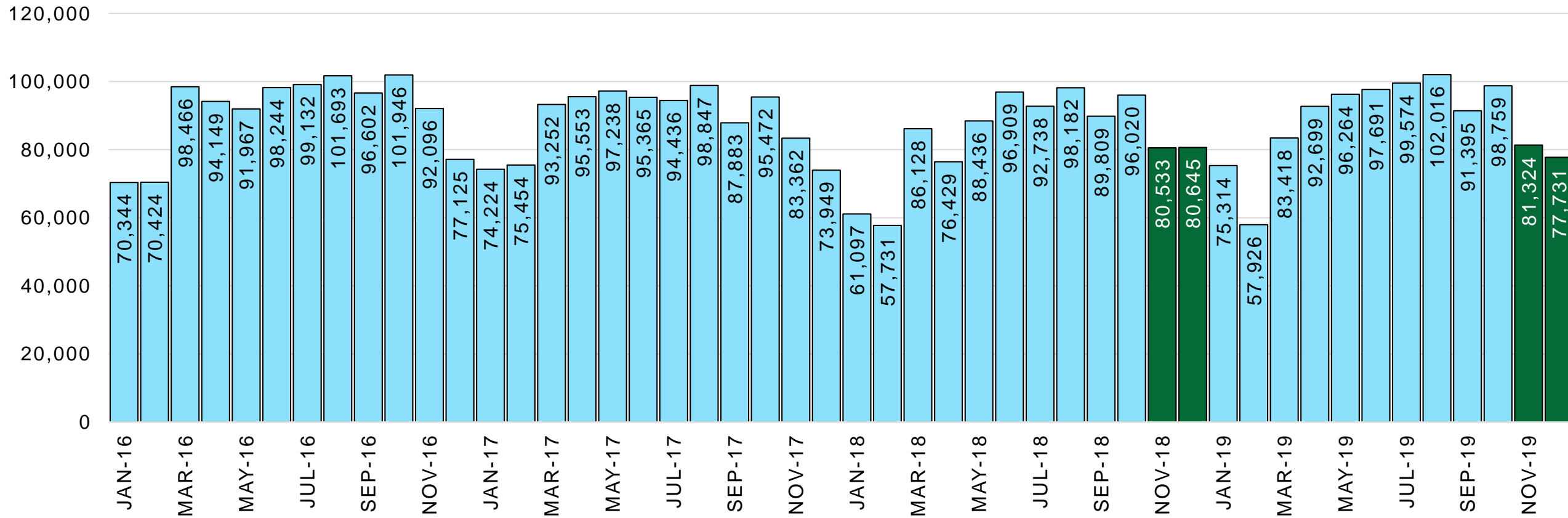
SOUND MONITORING

NOVEMBER 2019			DECEMBER 2019		
Time Above	48_s TA ⁶⁵ per operation	416^h 8^m TA ⁶⁵	Time Above	40_s TA ⁶⁵ per operation	367^h 42^m TA ⁶⁵
Count Above	2.59 N ⁶⁵ per operation	81,324 N ⁶⁵	Count Above	2.37 N ⁶⁵ per operation	77,731 N ⁶⁵



SOUND MONITORING

NOVEMBER 2019			DECEMBER 2019		
Time Above	48_s TA ⁶⁵ per operation	416_h 8_m TA ⁶⁵	Time Above	40_s TA ⁶⁵ per operation	367_h 42_m TA ⁶⁵
Count Above	2.59 N ⁶⁵ per operation	81,324 N ⁶⁵	Count Above	2.37 N ⁶⁵ per operation	77,731 N ⁶⁵



SOUND MONITORING

2019		
Time Above	47_s TA ⁶⁵ per operation	5,248_h TA ⁶⁵
Count Above	2.61 N ⁶⁵ per operation	1,054,111 N ⁶⁵

2018		
Time Above	44_s TA ⁶⁵ per operation	4,938_h TA ⁶⁵
Count Above	2.48 N ⁶⁵ per operation	1,004,657 N ⁶⁵

NOISE ABATEMENT

NOVEMBER 2019

DECEMBER 2019

Runway 17 **99.5%**

Runway 17 **99.5%**

Corridor **86.9%**

Corridor **96.7%**

Cross Day **25.7%**

Cross Day **25.3%**

Cross Night **38%**

Cross Night **47.7%**

RUS

53.8%

Arrive – **65%**

Depart – **42%**

RUS

54.1%

Arrive – **53%**

Depart – **55%**

NOISE ABATEMENT

2018

Runway 17	99.4%
-----------	-------

Corridor	94.4%
----------	-------

Cross Day	34.5%
-----------	-------

Cross Night	40.7%
-------------	-------

RUS	53.8%
-----	-------

2019

Runway 17	99.5%
-----------	-------

Corridor	92.5%
----------	-------

Cross Day	28.8%
-----------	-------

Cross Night	44.1%
-------------	-------

RUS	54.4%
-----	-------

ITEM 3

PUBLIC COMMENT PERIOD



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



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
JANUARY 29, 2020



ITEM 4

VOR MINIMUM OPERATIONAL NETWORK



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



Minneapolis (MSP) VOR/DME Partial Decommissioning Overview

Presented to:
By:
Date:

MSP NOC
Rebecca MacPherson
January 29, 2020



**Federal Aviation
Administration**



What's being done?

- On Sept. 8, 2022, the MSP VOR/DME will be partially decommissioned.
- **Decommissioned:** the portion of the VOR/DME that provides pilots with:
 - A lateral navigation capability.
- **Not decommissioned:** the current DME portion of the VOR/DME will remain in service.
 - This equipment will continue to provide range information to pilots when procedurally required and GPS equipment is not used or the GPS signal is not available.



Why Decommission the MSP VOR?

- **This VOR, and many others, will be decommissioned as part of the FAA's NextGen program where GPS based Area Navigation (RNAV) and Performance Based Navigation (PBN) will replace the legacy ground based system.**
 - Reliance on the Minimum Operational Network (MON) as the nationwide backup in case of GPS interruption. The MON renders much of the current network of VORs obsolete.
 - Decommissioning superfluous VORs will reduce cost, increase reliability and maintainability of the existing VOR based airway navigation system. Current ground lease costs, repair parts, routine and restorative maintenance costs as well as costs associated with manpower necessary to maintain the system are unsustainable.
 - Decreases redundancy. Given the proliferation of GPS equipment in aircraft and the wide use of this technology during flight procedures, much of the existing ground-based navigation network is redundant and unused during normal operations.
- **The MSP VOR is not part of the MON.**

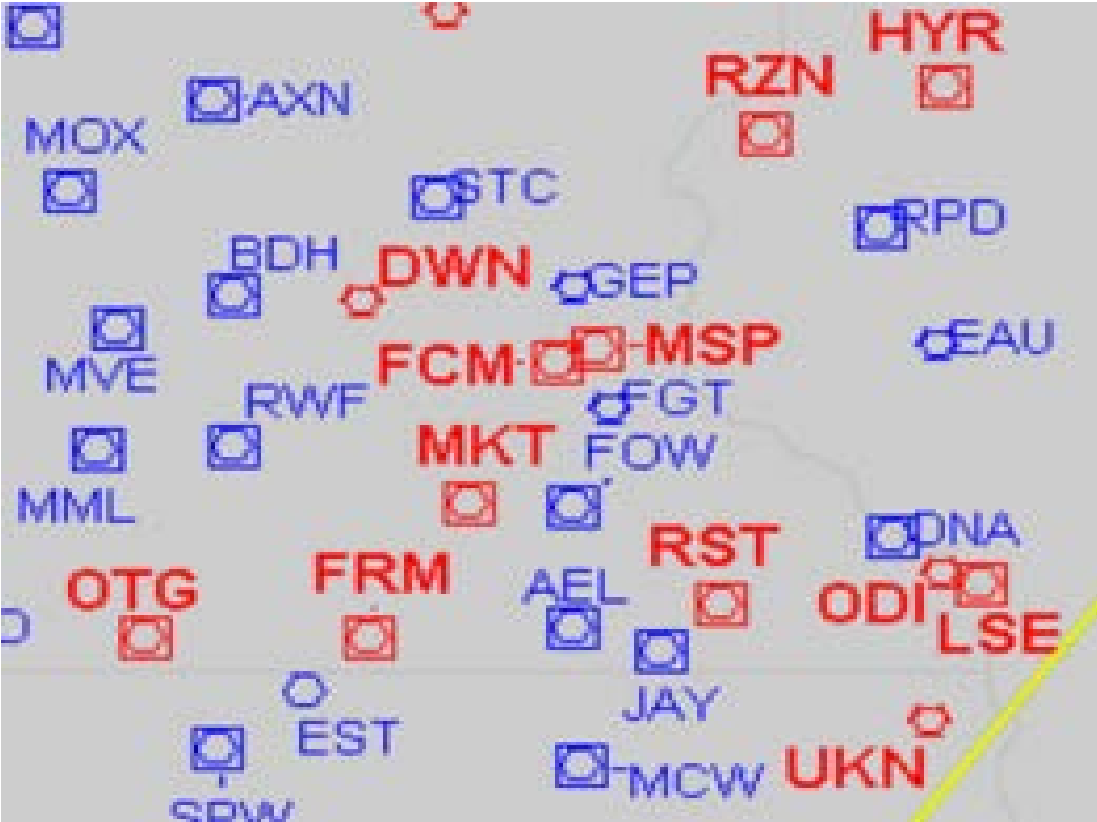


What is the MON?

- The MON will be a streamlined network of VORs made up of what will be left of the current national inventory of ground-based navigation equipment (VORs) once NextGen is fully implemented.
- The MON will allow aircraft to fly at an altitude of at least 5,000 feet, coast to coast, to an airports of safe landing using ground-based navigation such as an Instrument Landing System or VOR, in case of widespread GPS system disruption.
- The MON provides navigation services so that an aircraft will never be more than 100 miles away from a point of safe landing.
- The MON network will not be a primary method of day-to-day navigation. Its sole purpose is to provide an orderly, reliable and safe way to get flying aircraft out of the National Airspace System (NAS) and into a suitable airport in the event of a widespread GPS system disruption.



Impact of the MON on Minneapolis Metro Area VORs.



RED – Decommission
BLUE – Remain

This box identifies VORs that are within 150 miles of MSP.



What's the Effect of the Partial Decommissioning of MSP and the Other VORs Identified?

- New GPS based instrument procedures will be established that will use existing VOR based navigation ground tracks. Preliminary analysis indicates that new procedures will mimic existing procedures around MSP and will not be noticeable from the ground.
- Some instrument flight procedures will be cancelled due to the decommissioning of the VORs.
- Not all VORs programmed for decommissioning will be turned off at the same time, although actions will be taken to avoid revisiting existing instrument flight procedures multiple times.



ITEM 5

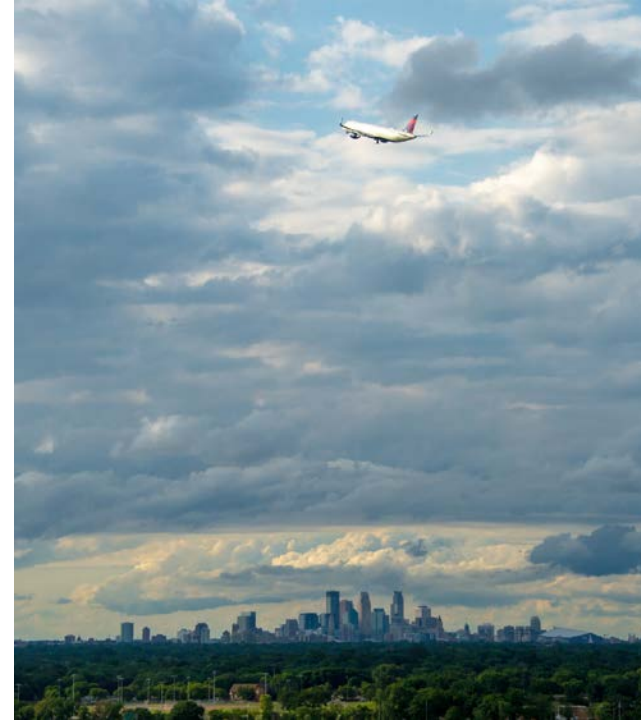
AIRLINE POLICIES AND PROCEDURES



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



Airline Policies and Procedures



Departure Altitudes
and Flight Paths



Noise Abatement
Procedure Training

A Day in the Life of an
Airline Pilot



ITEM 6

MSP FLEET MIX AND NIGHTTIME OPERATIONS ASSESSMENT



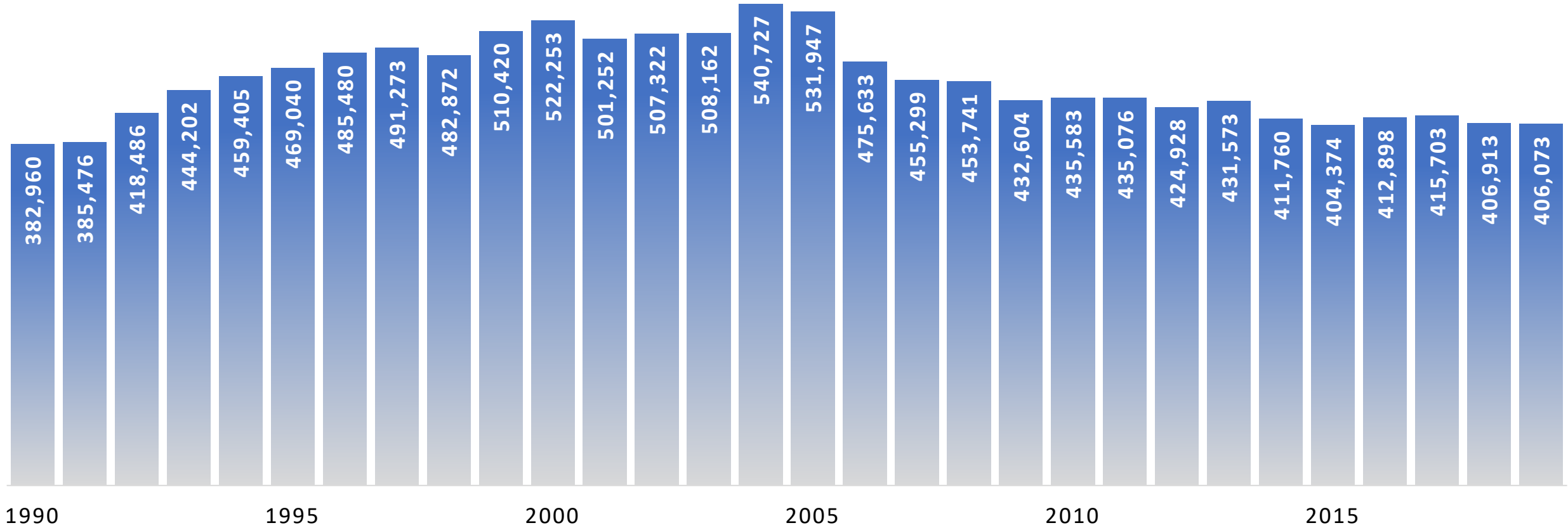
**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report

MSP OPERATIONS

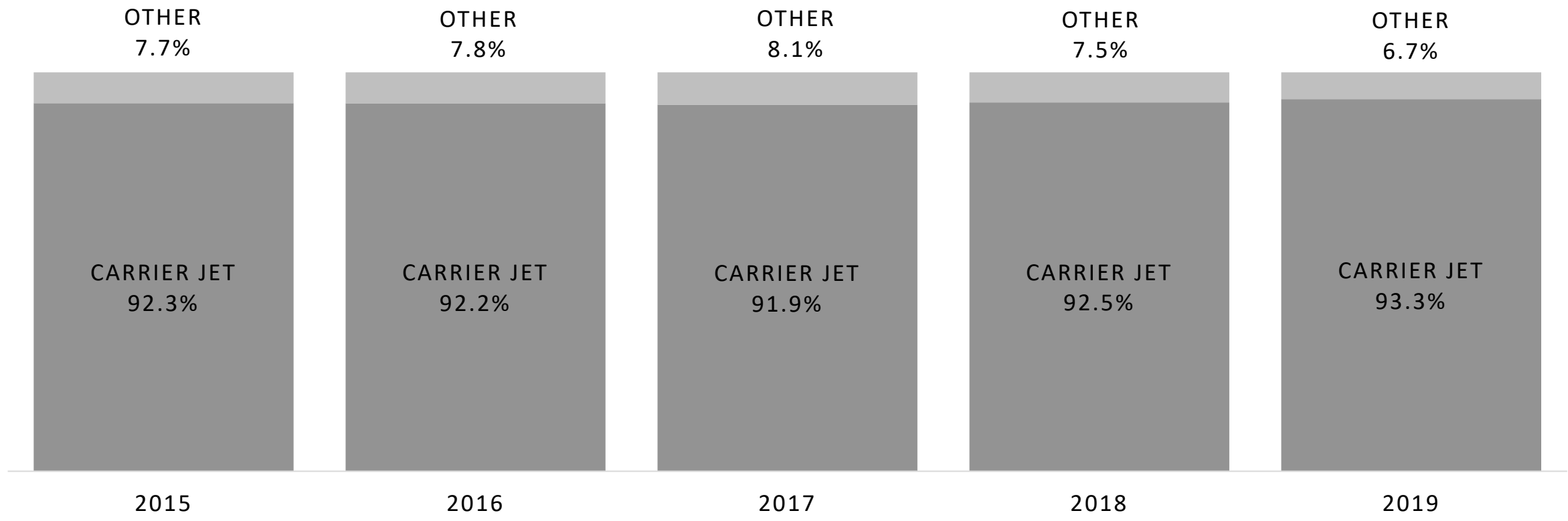
SOURCE: FAA OPSNET



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



MSP OPERATIONS



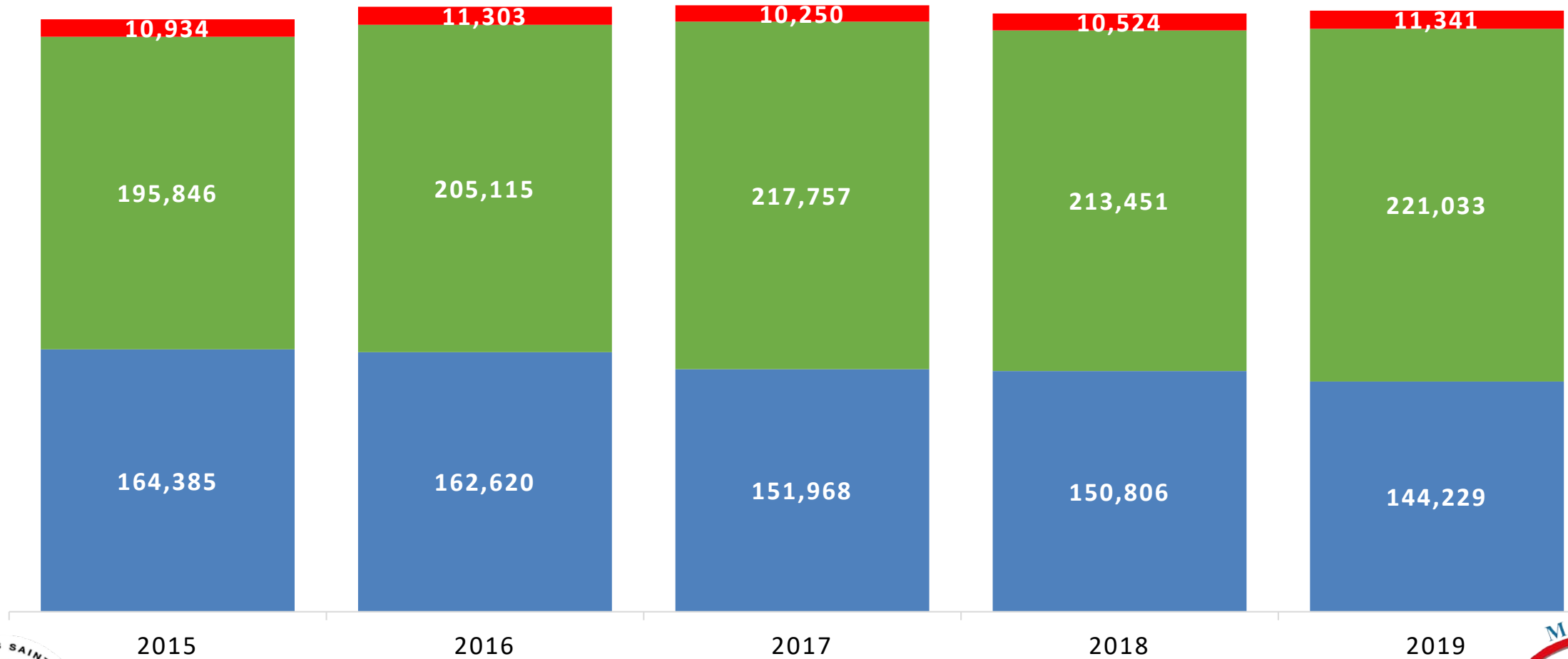
**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report

MSP OPERATIONS

■ RJ ■ NARROWBODY ■ WIDEBODY

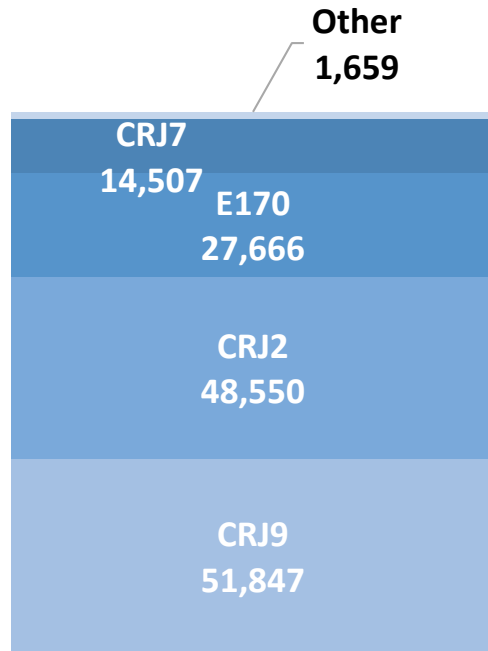


**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**

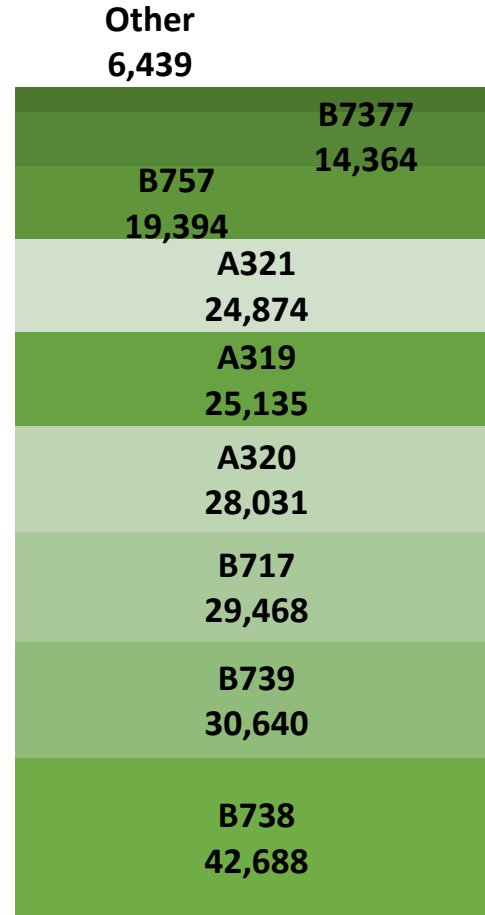


Item 6: MSP Fleet Mix and Nighttime Operations Report

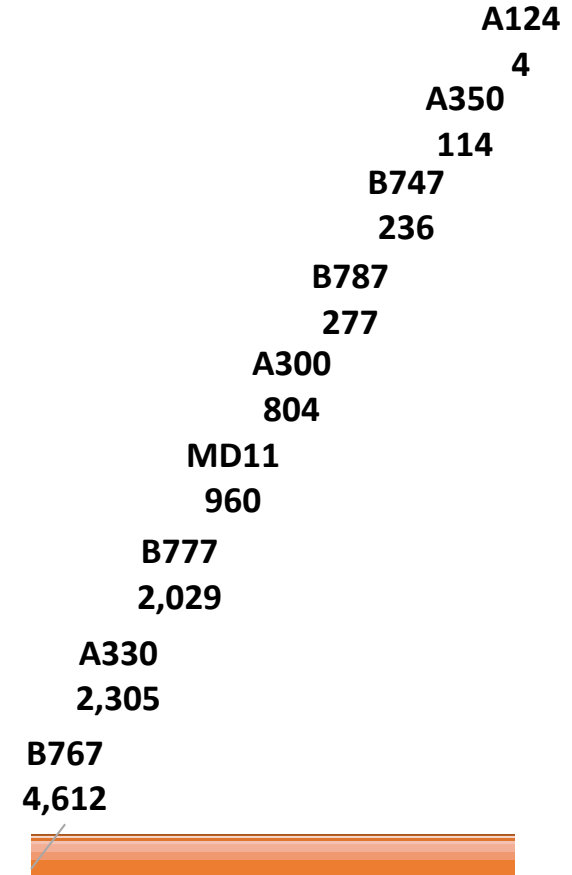
REGIONAL JET



NARROWBODY



WIDEBODY

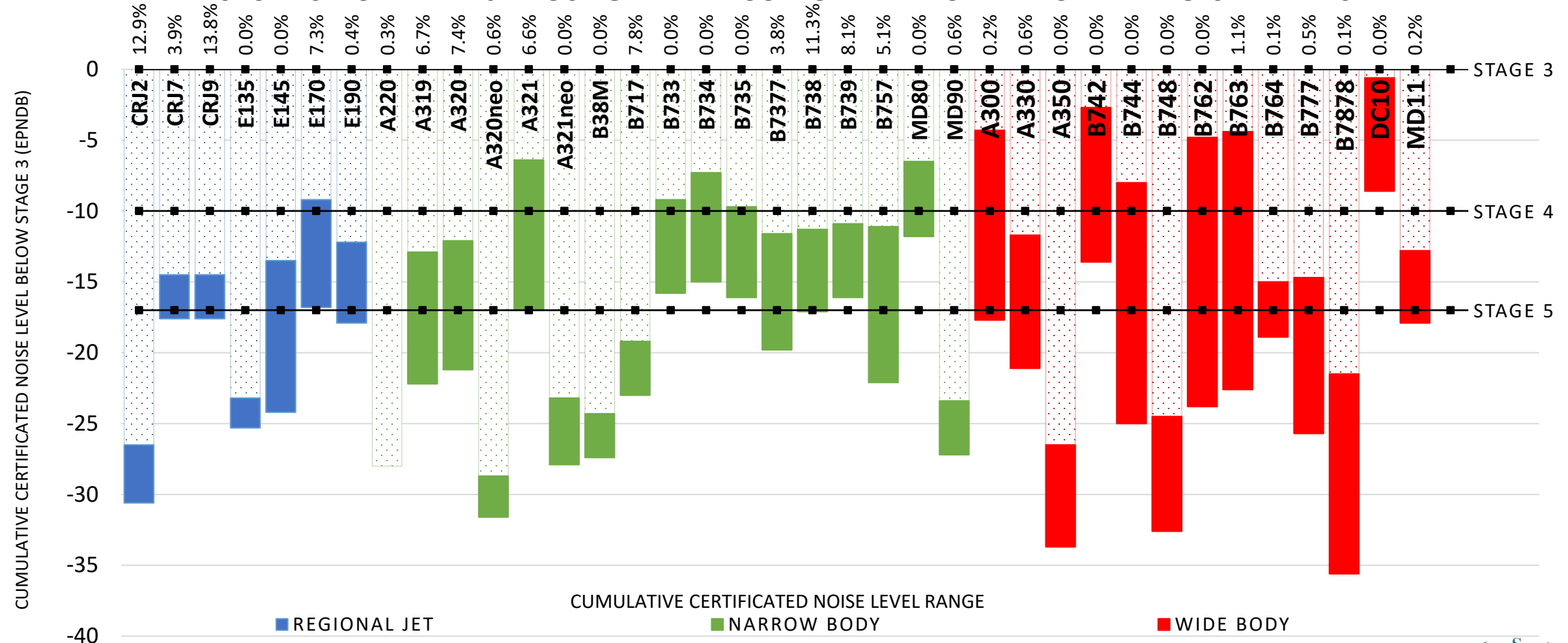


**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report

2019 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)

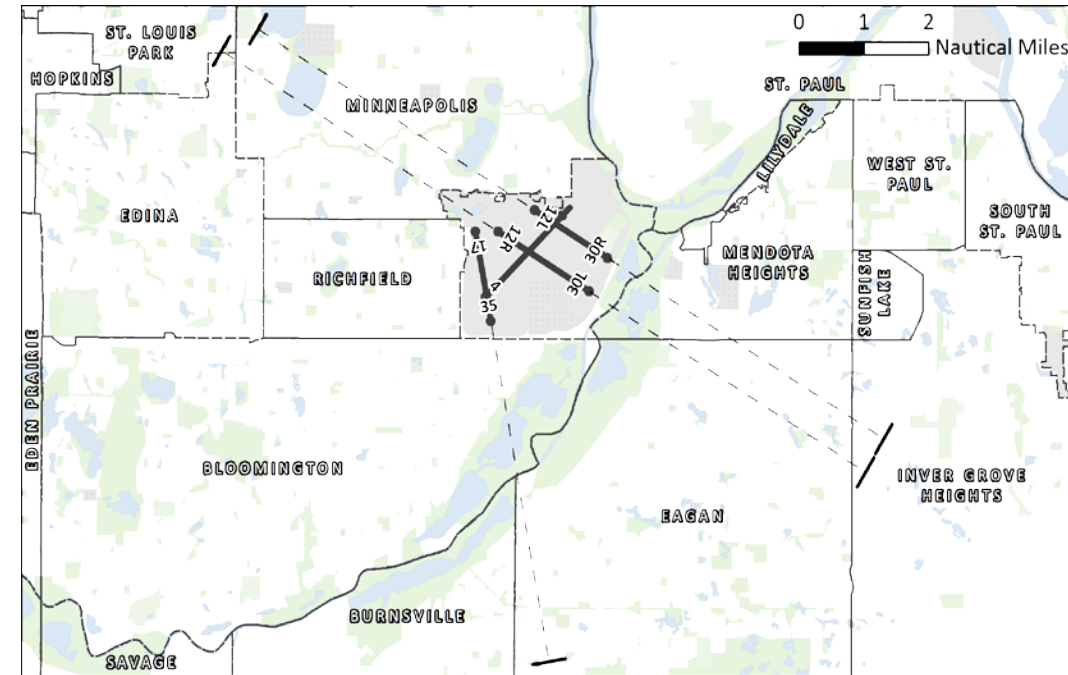
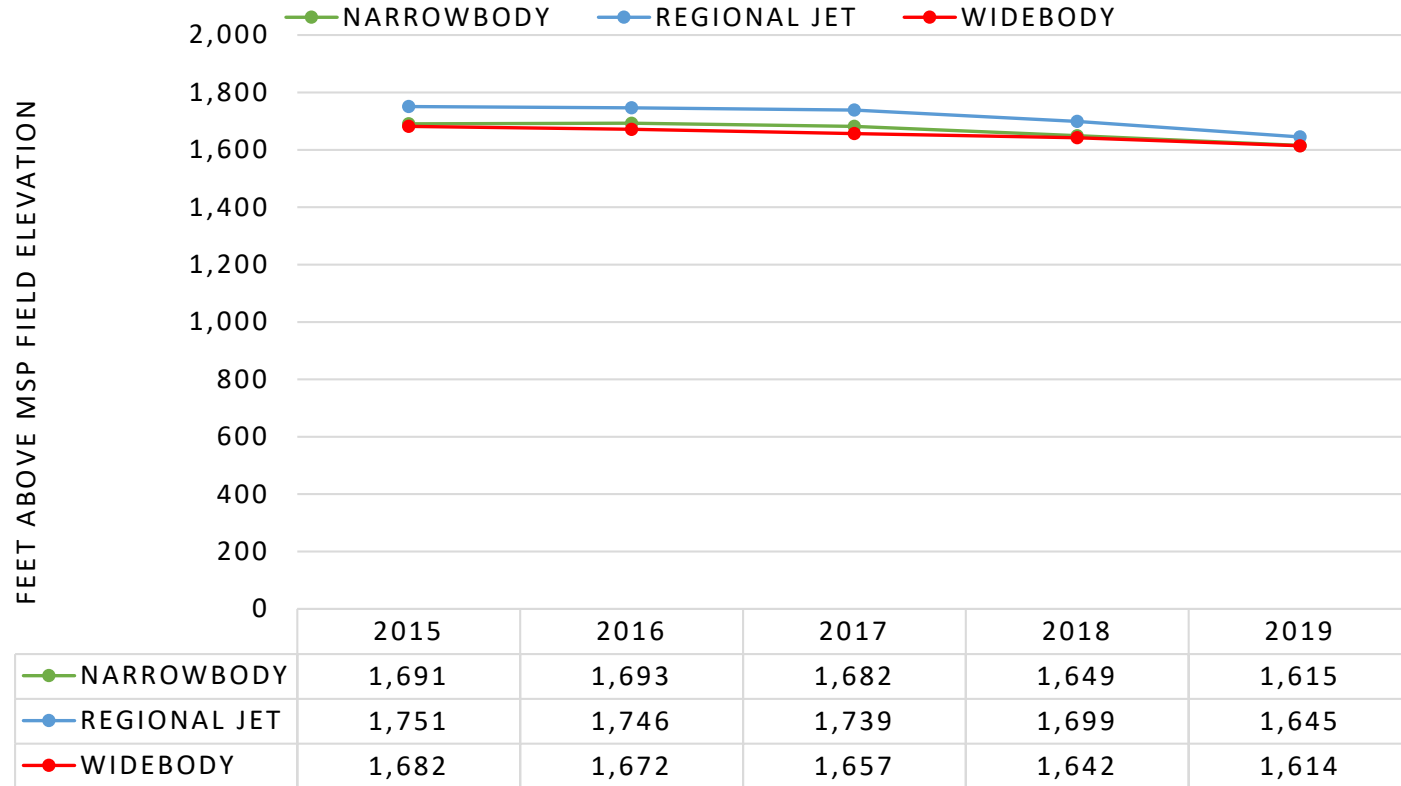


NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



Item 6: MSP Fleet Mix and Nighttime Operations Report

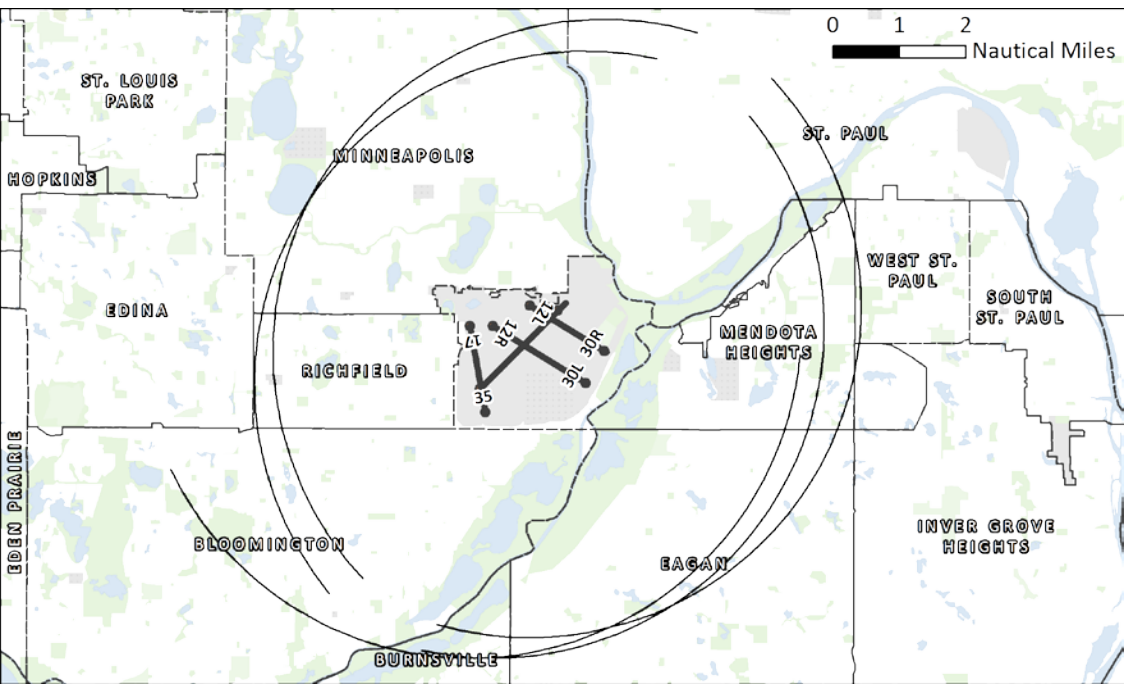
AVERAGE ALTITUDE FOR AIRCRAFT ARRIVING TO MSP



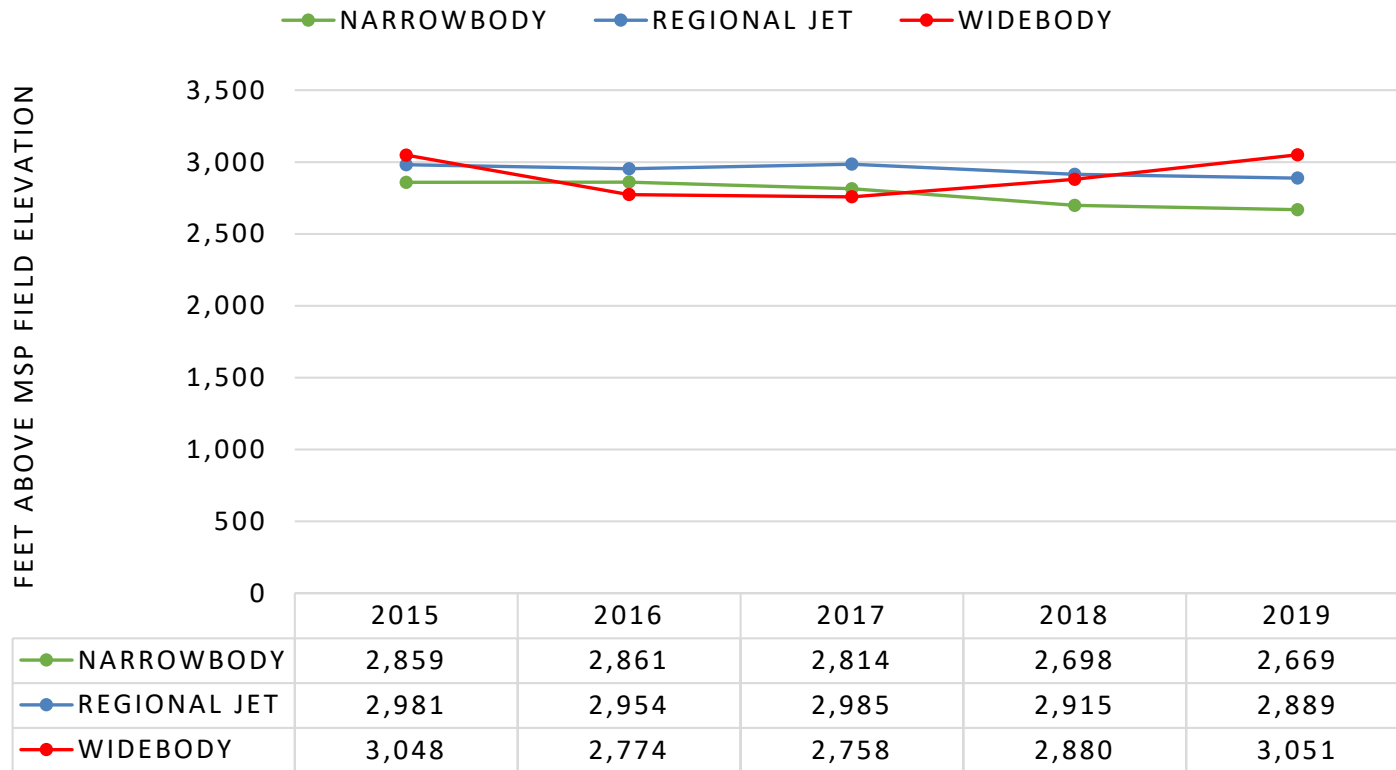
**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report



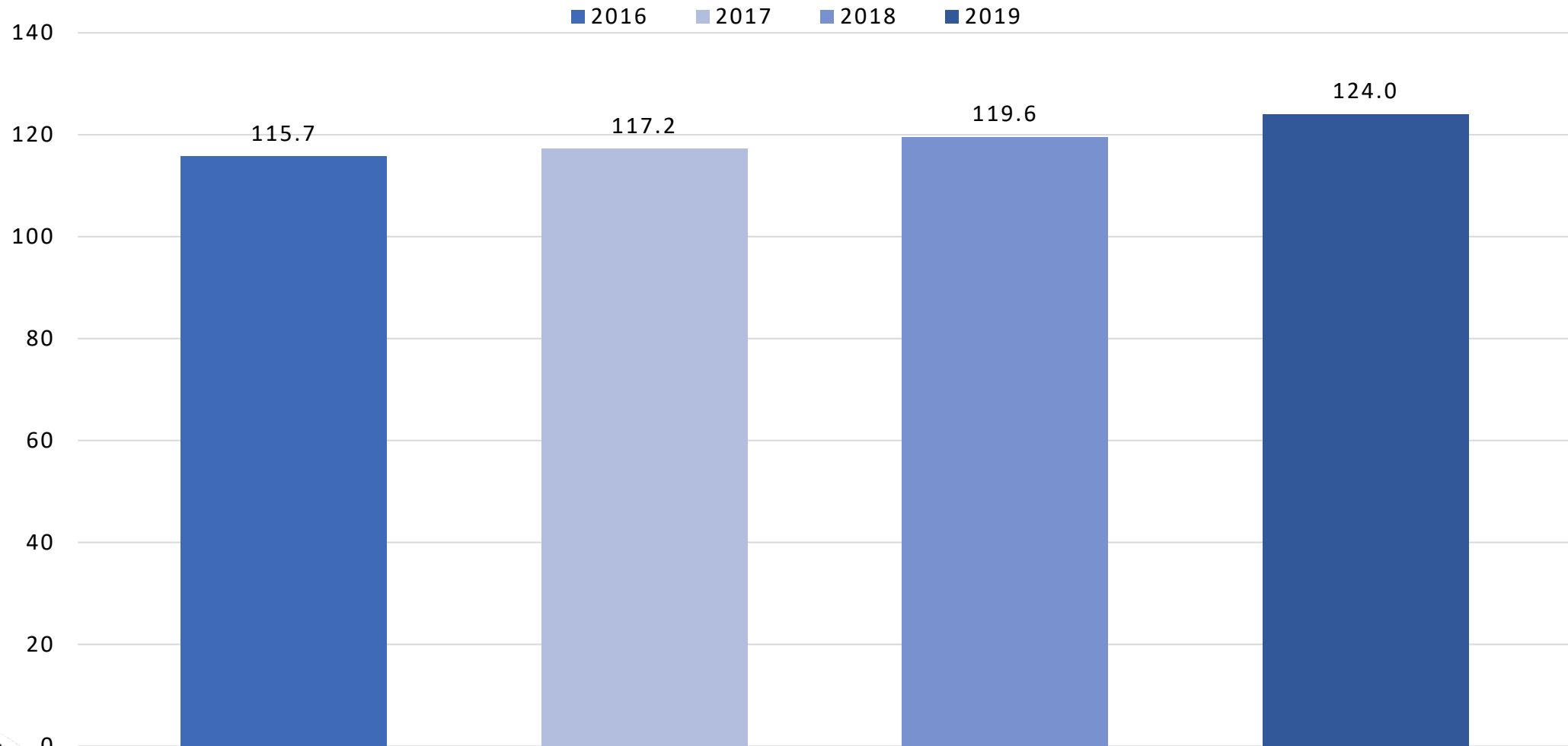
AVERAGE ALTITUDE FOR AIRCRAFT DEPARTING FROM MSP



**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



AVERAGE SCHEDULED SEATS PER FLIGHT



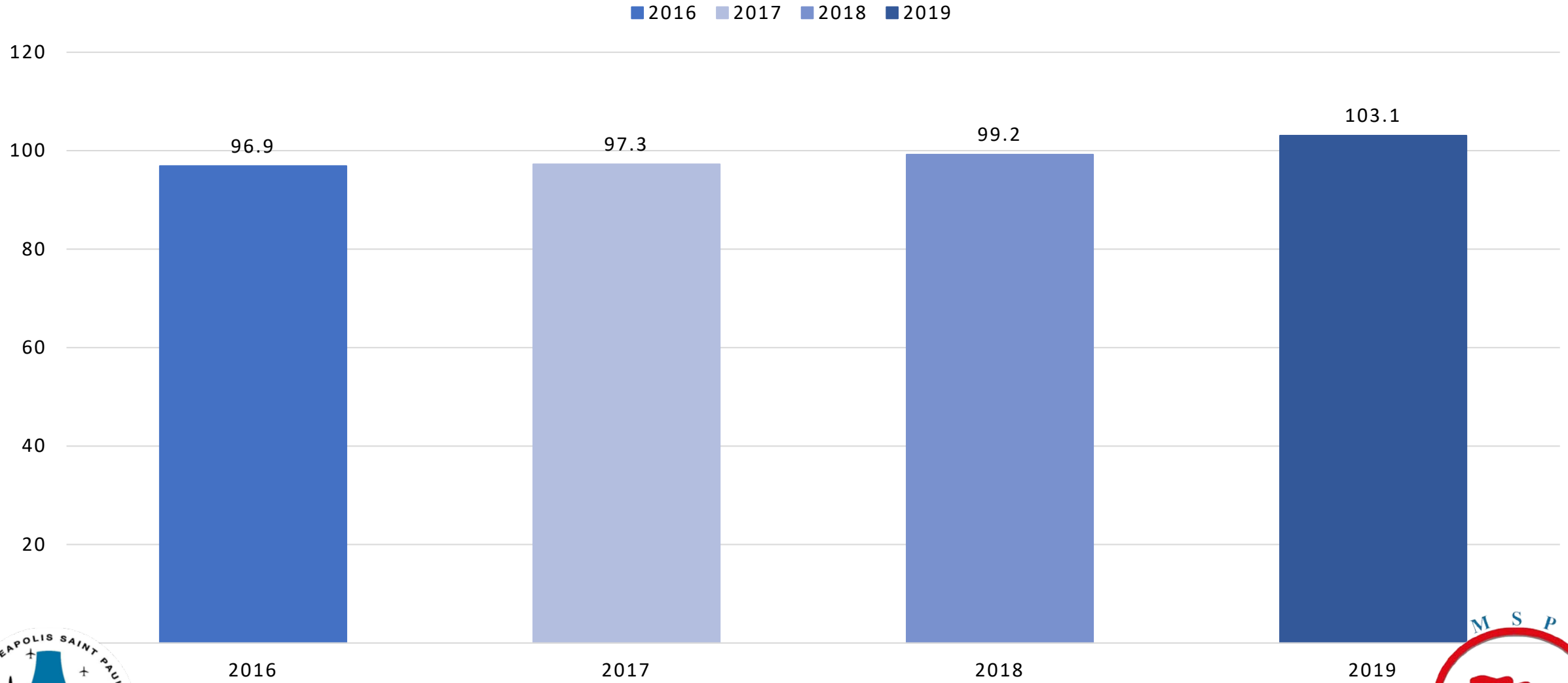
SOURCE: OAG

NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



Item 6: MSP Fleet Mix and Nighttime Operations Report

AVERAGE PASSENGERS PER FLIGHT

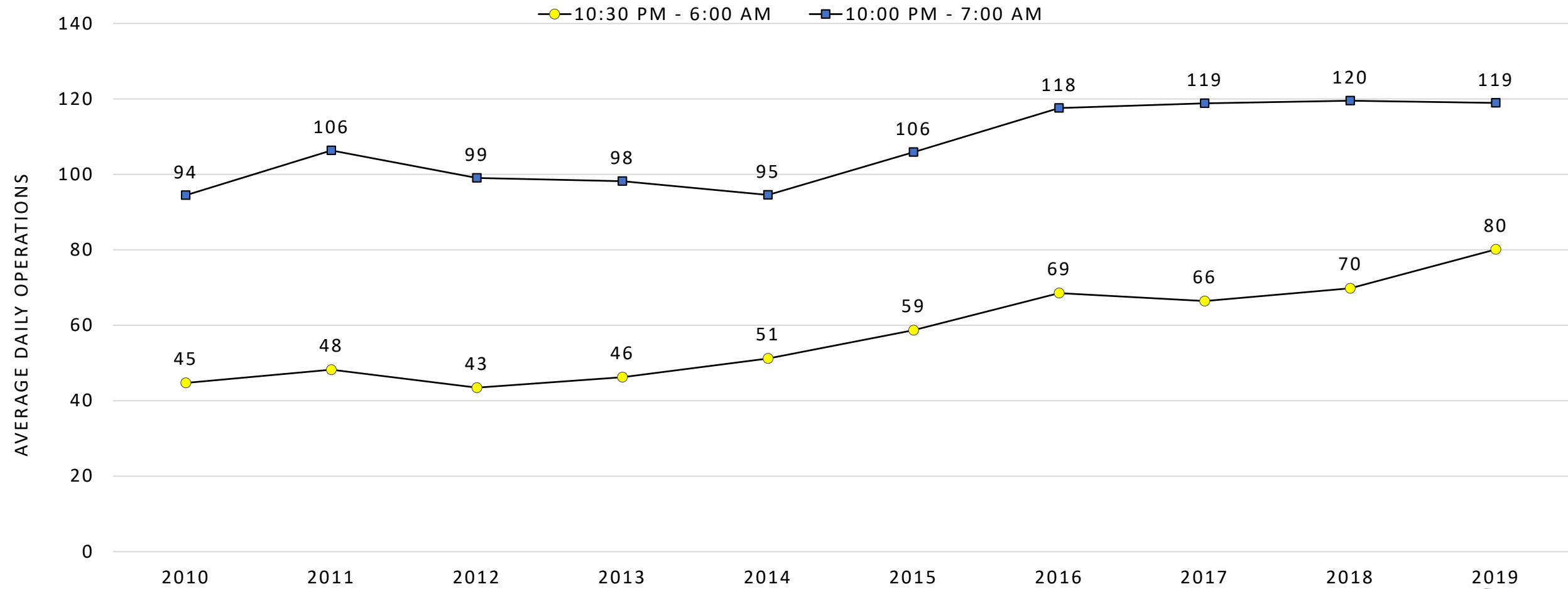


NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



Item 6: MSP Fleet Mix and Nighttime Operations Report

AVERAGE DAILY NIGHTTIME OPERATIONS

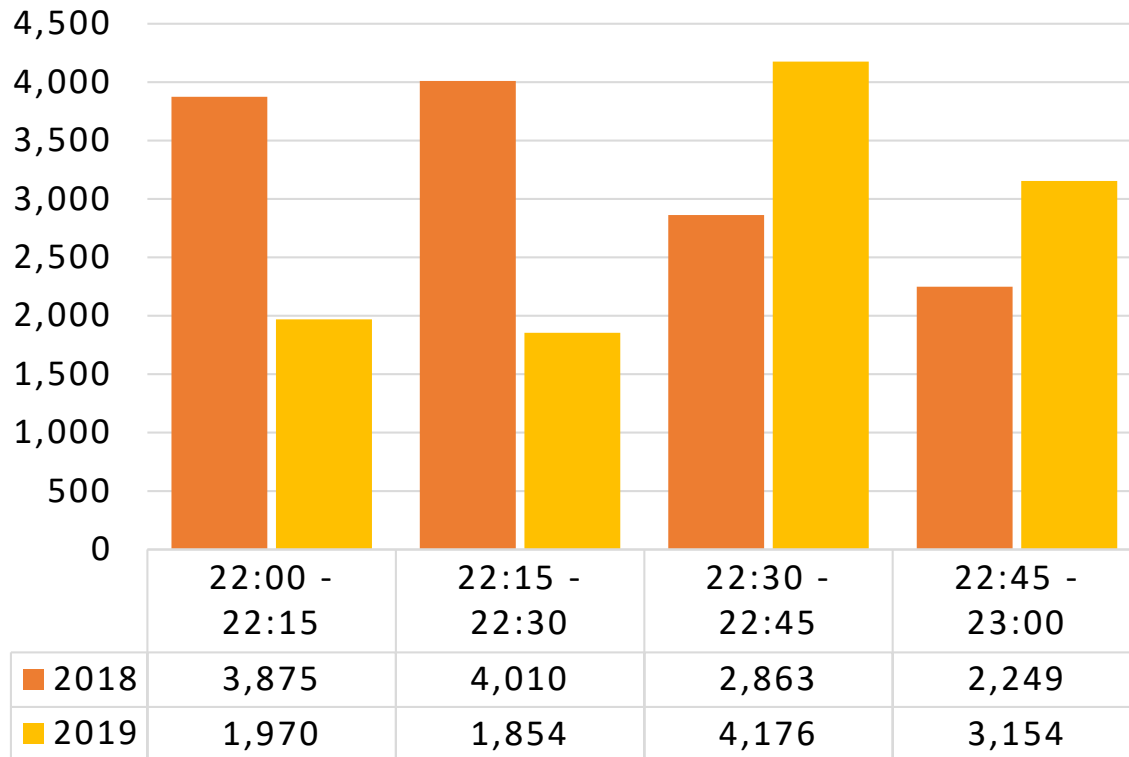


**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report

MSP 10:00 PM OPERATIONS



Time	2018	2019	Difference
23:00	7,440	7,610	170
0:00	2,692	3,224	532
1:00	913	1,050	137
2:00	407	575	168
3:00	610	659	49
4:00	1,617	1,968	351
5:00	6,686	6,825	139
6:00*	10,263	10,347	84
Annual Total	30,628	32,258	1,630

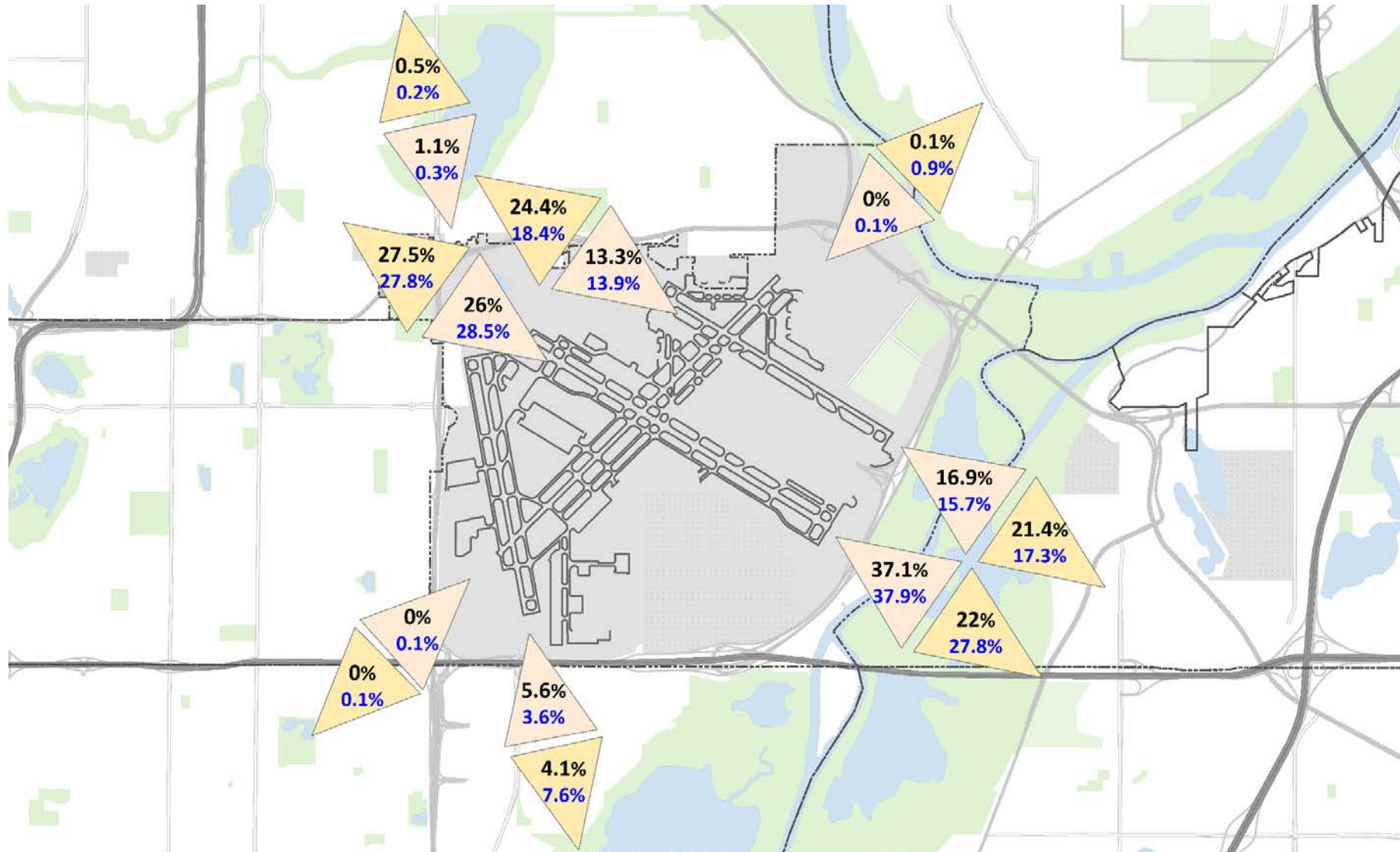


**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report

NIGHTTIME OPERATIONS BY RUNWAY (10:30 PM – 6:00 AM)



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020



2019 NIGHTTIME OPERATIONS BY AIRLINE

AIRLINE	ID	COUNT	PERCENT OF AIRLINE OPERATIONS' OCCURRING AT NIGHT	PERCENT OF CONTRIBUTION TO NIGHTTIME TOTAL
DELTA	DAL	8,370	5.60%	30.16%
SKYWEST AIRLINES	SKW	4,541	4.70%	16.37%
SUN COUNTRY	SCX	3,781	17.80%	13.63%
SOUTHWEST	SWA	1,958	12.50%	7.06%
AMERICAN	AAL	1,640	11.80%	5.91%
UPS	UPS	1,254	37.20%	4.52%
SPIRIT	NKS	1,093	14.20%	3.94%
REPUBLIC AIRLINES	RPA	899	8.50%	3.24%
UNITED	UAL	859	12.20%	3.10%
FEDEX	FDX	855	27.30%	3.08%
ATLAS AIR (USA)	GTI	590	77.00%	2.13%
JETBLUE AIRWAYS	JBU	533	26.50%	1.92%
FRONTIER AIRLINES	FFT	511	16.10%	1.84%
ENDEAVOR AIR	EDV	487	1.80%	1.76%
GULF & CARIBBEAN CARGO	TSU	377	98.20%	1.36%

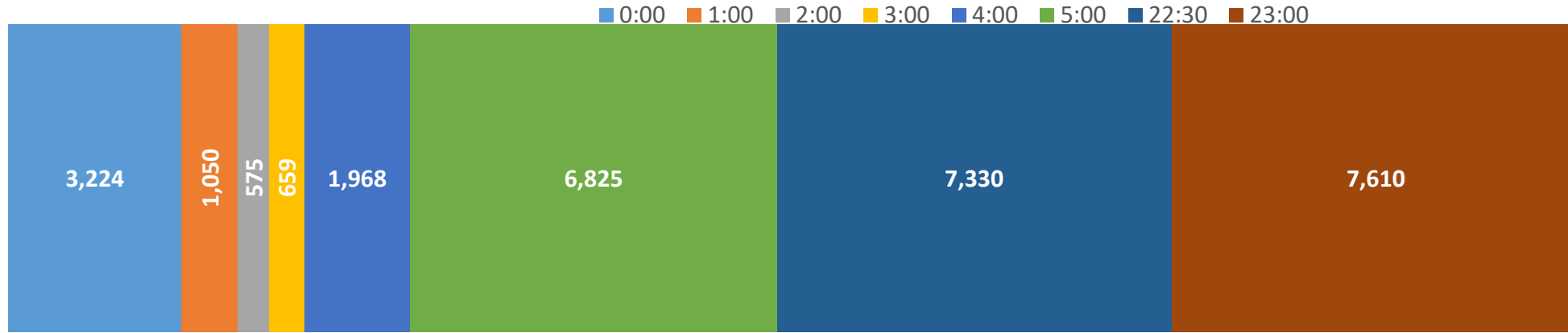


**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**

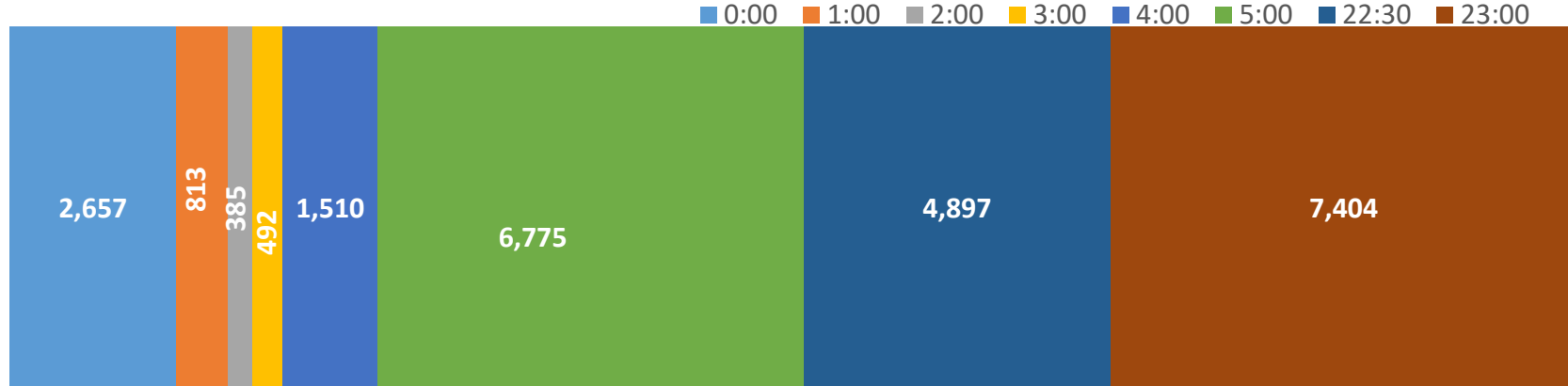


Item 6: MSP Fleet Mix and Nighttime Operations Report

2019 NIGHTTIME OPERATIONS BY HOUR



2016 – 2018 OPERATIONS BY HOUR



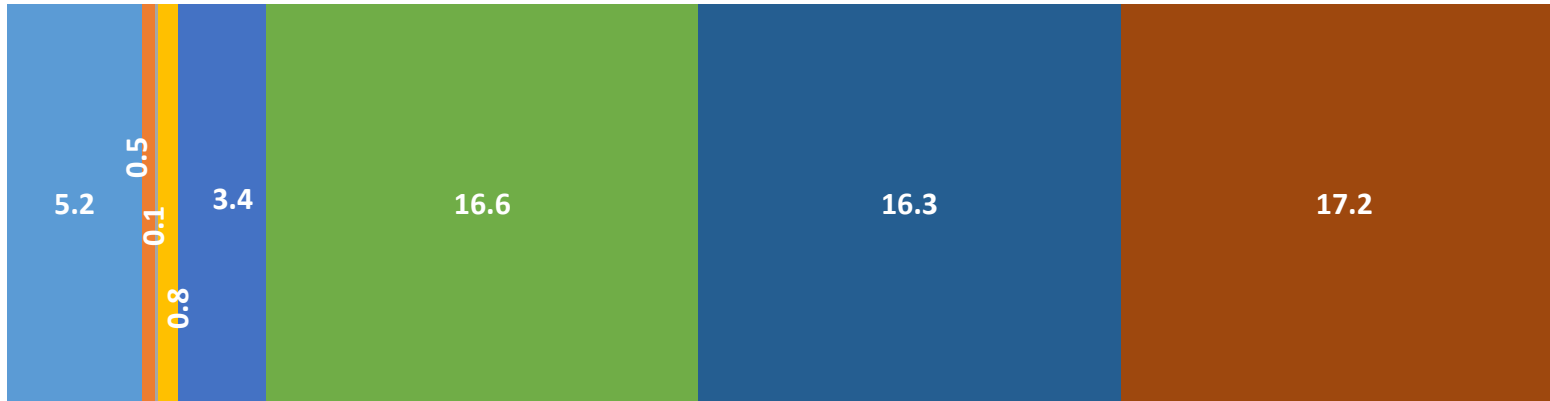
**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



Item 6: MSP Fleet Mix and Nighttime Operations Report

2019 SCHEDULED OPERATIONS BY HOUR

0:00 1:00 2:00 3:00 4:00 5:00 22:30 23:00



2019 ACTUAL OPERATIONS BY HOUR

0:00 1:00 2:00 3:00 4:00 5:00 22:30 23:00



**NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020**



ITEM 7

REVIEW OF WINTER LISTENING SESSION



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020




Winter Listening Session

- January 22, 2020, 7pm
- MAC General Offices
- Meeting Attendees
 - One resident from Eagan
 - NOC co-chair Jeff Hart
 - NOC members Loren Olson, Daniel O’Leary and Paul Borgstrom
 - MAC staff



Winter Listening Session – Topics Discussed

- 
- Balance between the airport as a community asset and the effect of noise on communities
 - Efforts by MAC, NOC, FAA and neighbors to address noise concerns
 - Variability and unpredictability of aircraft activity over Eagan
 - Air traffic control standard operating procedures
 - Education and engagement strategies for communities

ITEM 8

ANNOUNCEMENTS

March NOC Meeting

Wednesday, March 18, 2020 @ 1:30 PM

MAC General Offices

Lindbergh Conference Room



NOISE OVERSIGHT COMMITTEE
JANUARY 29, 2020

