



**2022 ANNUAL MSP FLEET MIX AND
NIGHTTIME OPERATIONS REPORT**
JANUARY 2023

COMMUNITY RELATIONS OFFICE

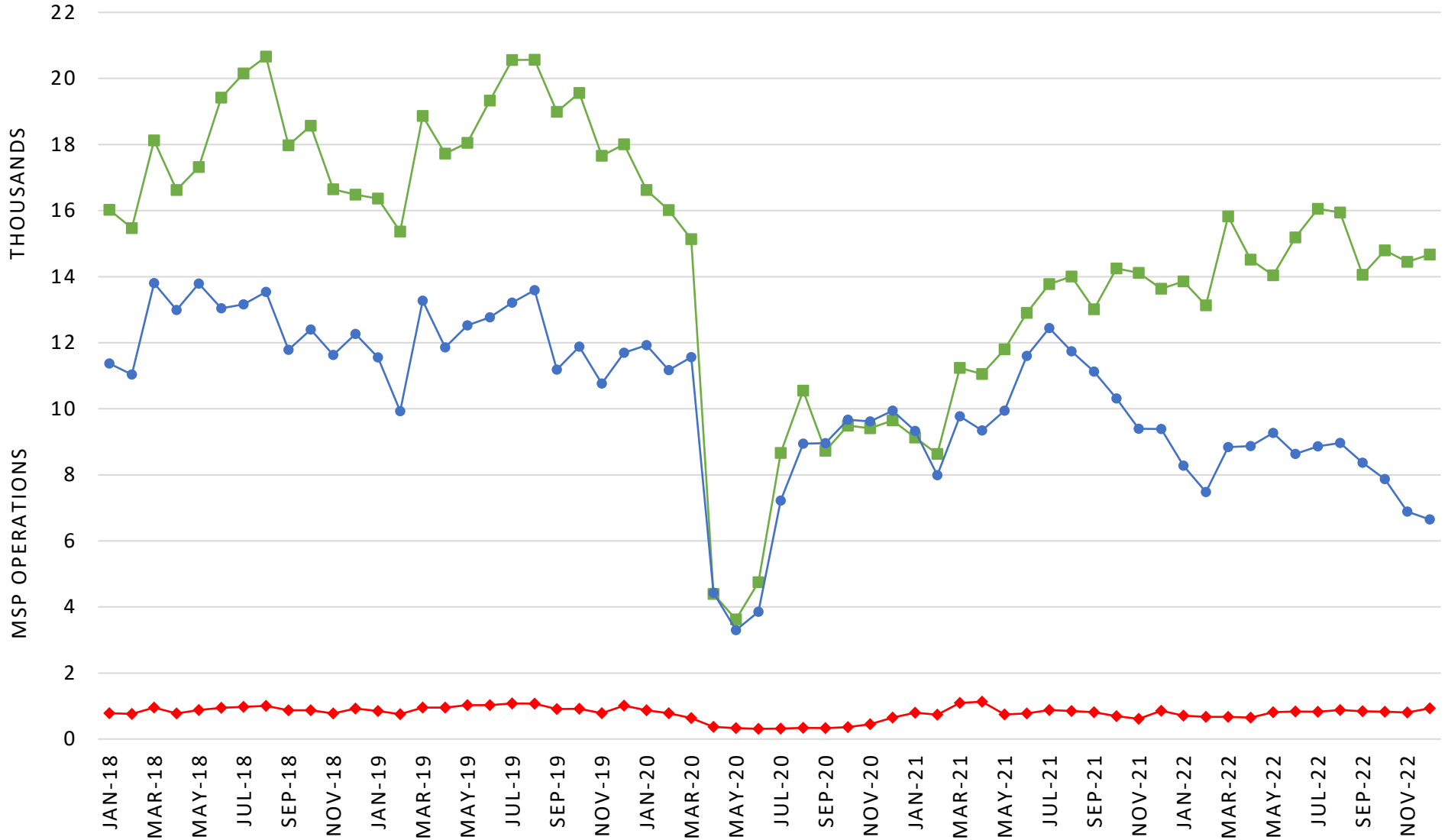
2022 ANNUAL MSP FLEET MIX AND NIGHTTIME OPERATIONS REPORT

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MSP FLEET MIX REPORT

MONTHLY CARRIER JET COUNTS BY TYPE

NARROWBODY WIDEBODY RJ



HUSHKIT BY YEAR: 2018 - 32, 2019 - 18, 2020 - 8, 2021 - 68, 2022 - 10

MSP FLEET MIX REPORT
WIDEBODY JET ACTIVITY



WIDEBODY	TYPE	2018	2019	2020	2021	2022
	A124	0.0%	0.0%	0.0%	0.0%	0.0%
	A300	0.1%	0.2%	0.4%	0.1%	0.0%
	A310	0.0%	0.0%	0.0%	0.0%	0.0%
	A330	0.7%	0.6%	0.3%	1.0%	1.2%
	A340	0.0%	0.0%	0.0%	0.0%	0.0%
	A350	0.0%	0.0%	0.1%	0.0%	0.1%
	B742	0.0%	0.0%	0.0%	0.0%	0.0%
	B744	0.0%	0.0%	0.0%	0.1%	0.1%
	B748	0.0%	0.0%	0.0%	0.1%	0.1%
	B762	0.0%	0.0%	0.0%	0.0%	0.0%
	B763	0.8%	1.1%	1.1%	1.8%	1.5%
	B764	0.0%	0.1%	0.0%	0.2%	0.1%
	B767	0.0%	0.0%	0.0%	0.0%	0.0%
	B777	0.4%	0.5%	0.1%	0.0%	0.1%
	B7878	0.0%	0.1%	0.0%	0.1%	0.0%
	DC10	0.2%	0.0%	0.1%	0.0%	0.0%
MD11	0.3%	0.2%	0.4%	0.2%	0.1%	
Total	2.8%	3.0%	2.6%	3.6%	3.3%	

MSP FLEET MIX REPORT
NARROWBODY JET ACTIVITY



NARROWBODY	TYPE	2018	2019	2020	2021	2022
	A220	0.0%	0.3%	0.9%	2.0%	1.9%
	A319	6.4%	6.7%	7.0%	6.6%	9.2%
	A20N	0.0%	0.0%	0.3%	0.5%	0.6%
	A320	6.9%	8.1%	5.7%	6.0%	6.2%
	A21N	0.0%	0.0%	0.0%	0.0%	0.1%
	A321	2.2%	6.6%	9.6%	10.4%	12.5%
	B717	5.9%	7.8%	2.4%	0.4%	2.4%
	B72Q	0.0%	0.0%	0.0%	0.0%	0.0%
	B733	0.0%	0.0%	0.0%	0.0%	0.0%
	B734	0.0%	0.0%	0.1%	0.1%	0.3%
	B735	0.0%	0.0%	0.0%	0.0%	0.0%
	B7377	4.7%	3.8%	2.6%	2.1%	2.5%
	B738	10.1%	11.3%	10.8%	11.1%	12.6%
	B739	7.5%	8.1%	8.0%	8.7%	9.4%
	B38M	0.1%	0.0%	0.0%	0.3%	0.5%
	B73Q	0.0%	0.0%	0.0%	0.0%	0.0%
	B757	6.1%	5.1%	5.0%	4.6%	3.8%
	DC9Q	0.0%	0.0%	0.0%	0.0%	0.0%
	MD80	0.3%	0.0%	0.0%	0.0%	0.0%
	MD90	6.8%	0.6%	0.0%	0.0%	0.0%
TOTAL	57.0%	58.7%	52.4%	52.7%	61.9%	

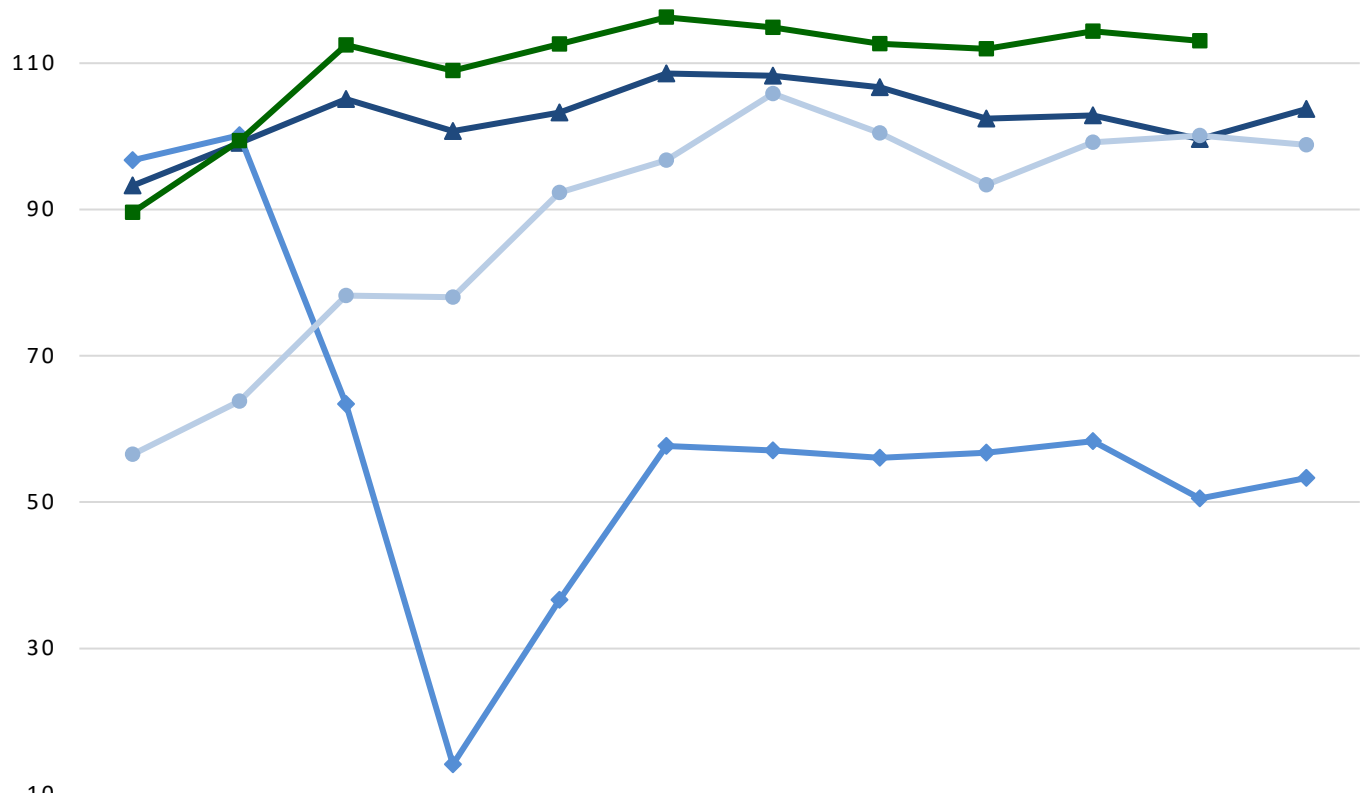
MSP FLEET MIX REPORT
REGIONAL JET ACTIVITY



REGIONAL JET	TYPE	2018	2019	2020	2021	2022
	CRJ	0.0%	0.0%	0.0%	0.0%	0.0%
	CRJ1	0.0%	0.0%	0.0%	0.0%	0.0%
	CRJ2	14.3%	12.9%	10.8%	11.9%	8.5%
	CRJ7	7.0%	3.9%	2.9%	2.3%	1.7%
	CRJ9	13.0%	13.8%	20.2%	21.3%	12.4%
	E135	0.0%	0.0%	0.0%	0.0%	0.1%
	E145	0.0%	0.0%	0.4%	0.2%	0.3%
	E170	5.5%	7.3%	10.6%	7.3%	10.7%
	E190	0.3%	0.4%	0.1%	0.3%	0.4%
	J328	0.0%	0.0%	0.0%	0.4%	0.5%
TOTAL	40.2%	38.3%	45.0%	43.7%	34.7%	

MSP FLEET MIX REPORT

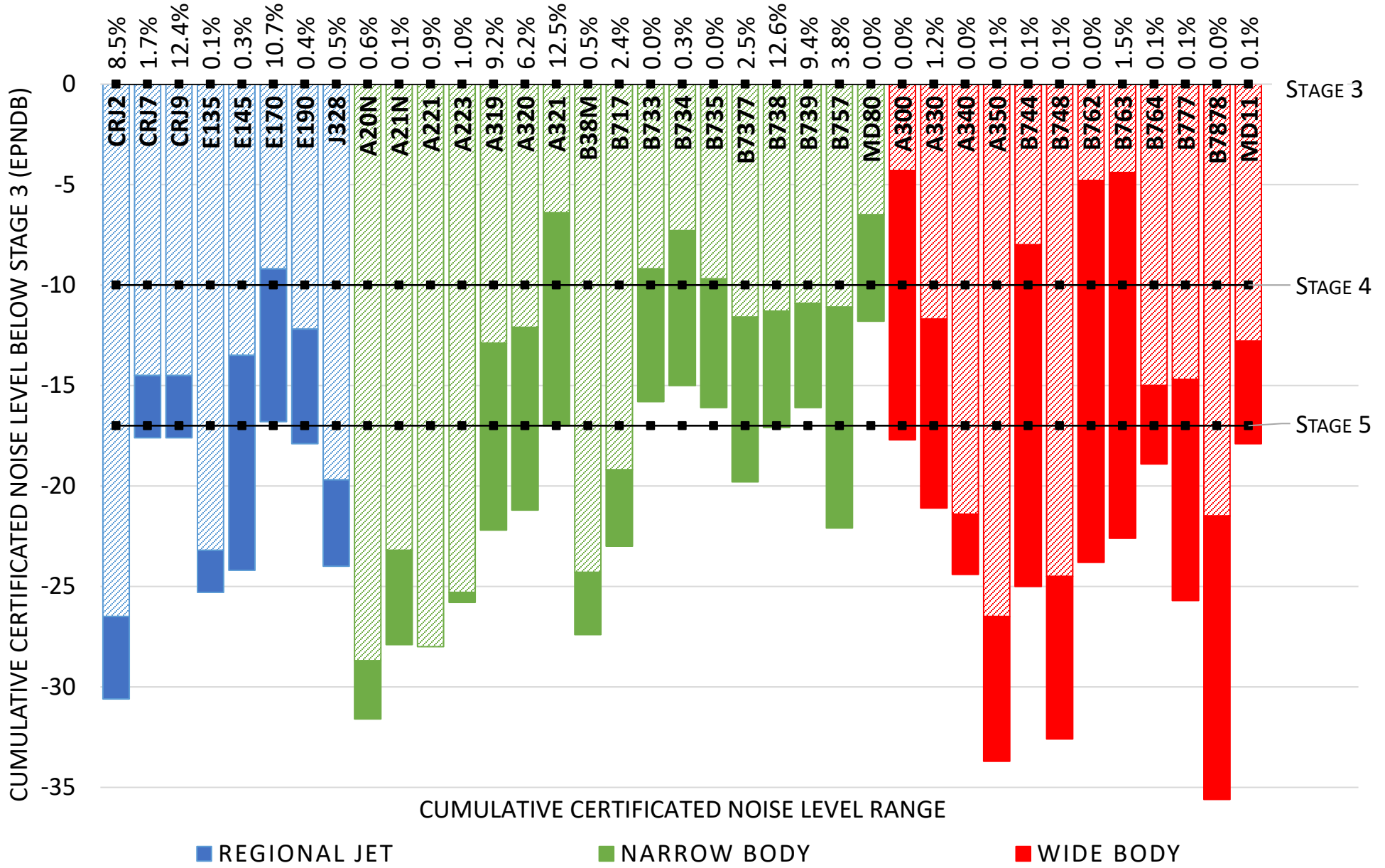
AVERAGE PASSENGERS PER FLIGHT



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
▲ 2019	93.3	99.1	105.1	100.7	103.3	108.6	108.3	106.7	102.4	102.8	99.6	103.7
◆ 2020	96.7	100.1	63.4	14.1	36.6	57.7	57.1	56.0	56.7	58.3	50.5	53.3
● 2021	56.5	63.8	78.2	78.0	92.3	96.7	105.8	100.5	93.4	99.2	100.1	98.9
■ 2022	89.6	99.4	112.5	109.0	112.6	116.3	114.9	112.7	111.9	114.4	113.1	

SOURCE: MSP MONTHLY OPERATIONS REPORTS

2022 MSP CARRIER JET USAGE WITH CUMULATIVE CERTIFICATED NOISE LEVELS

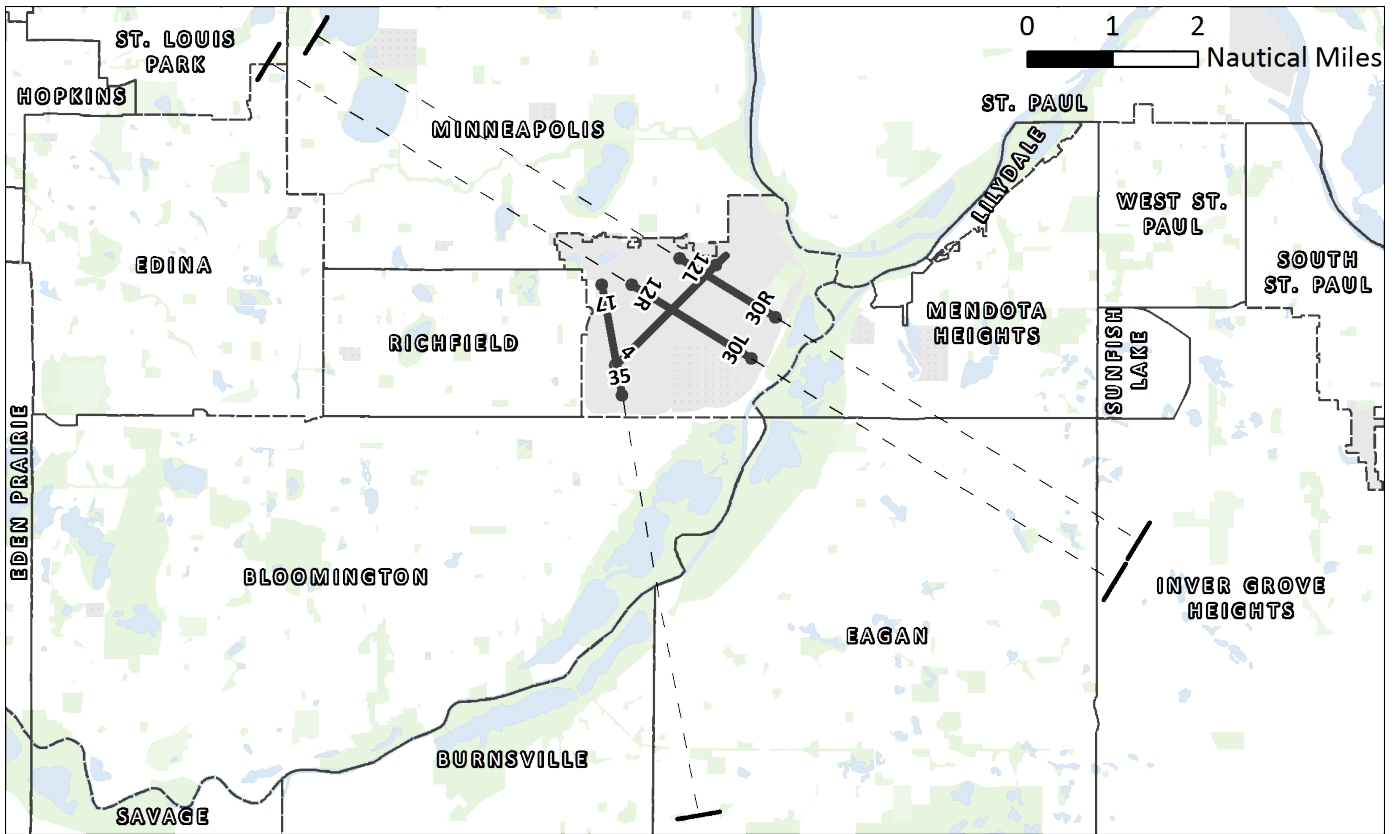
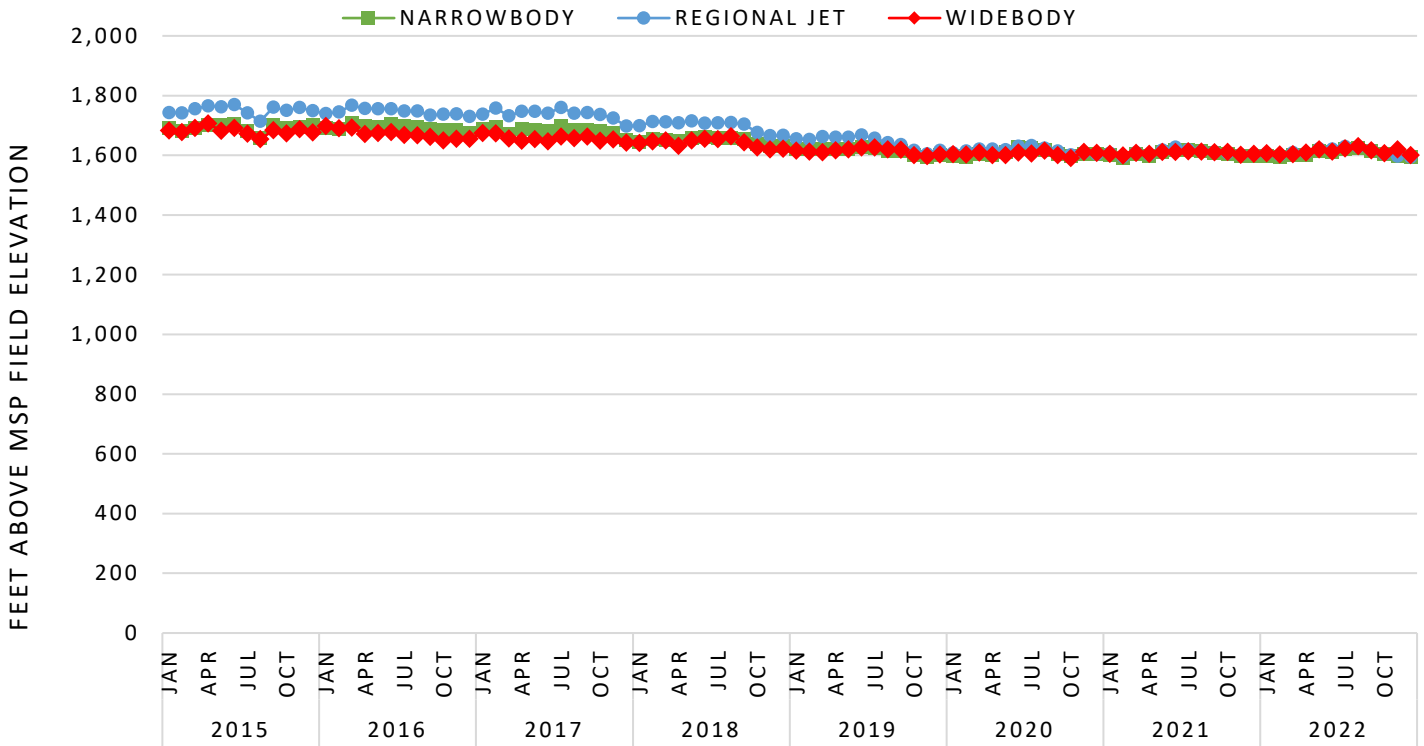


SOURCE: USAGE DATA: MACNOMS; NOISE CERTIFICATION DATA: EUROPEAN AVIATION SAFETY AGENCY

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

MSP FLEET MIX REPORT

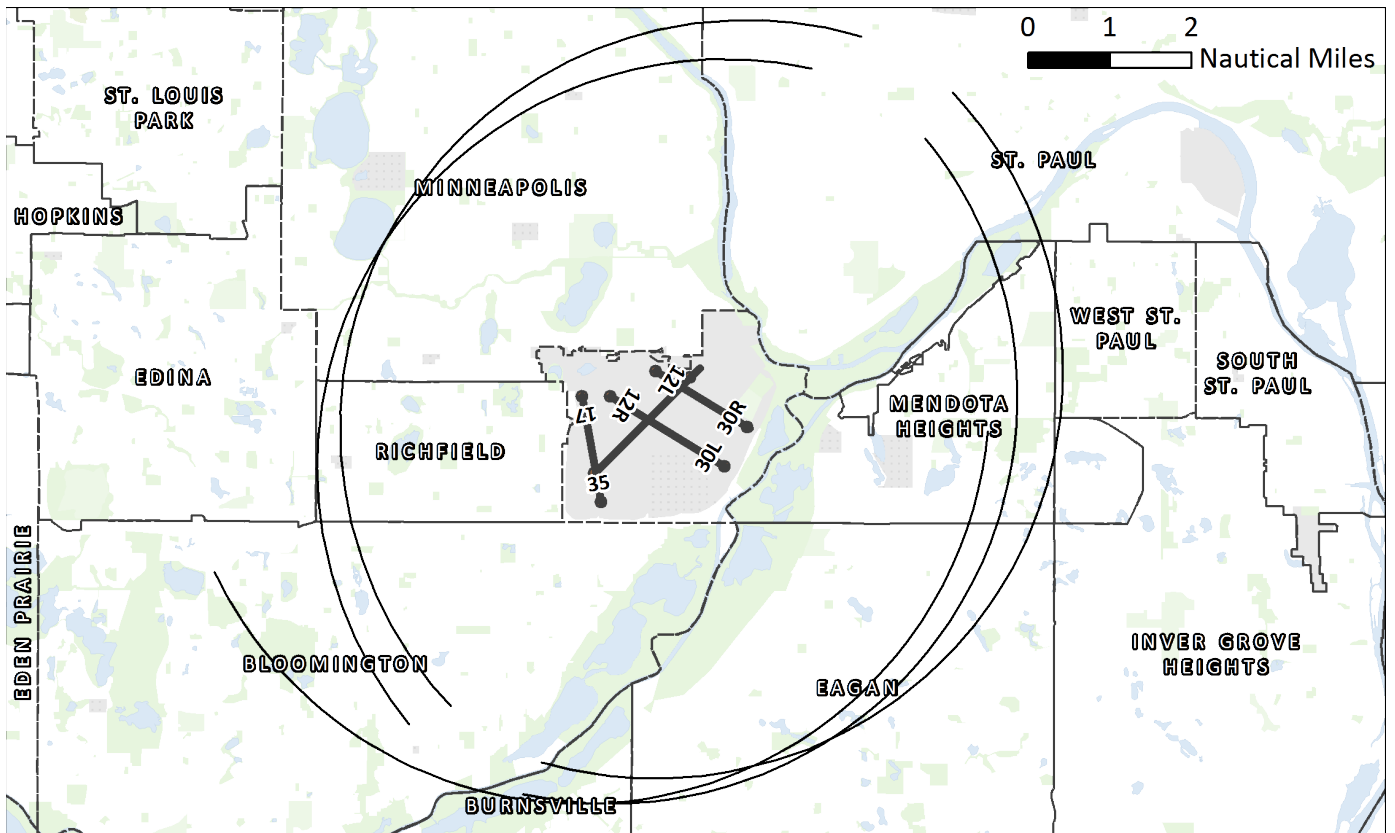
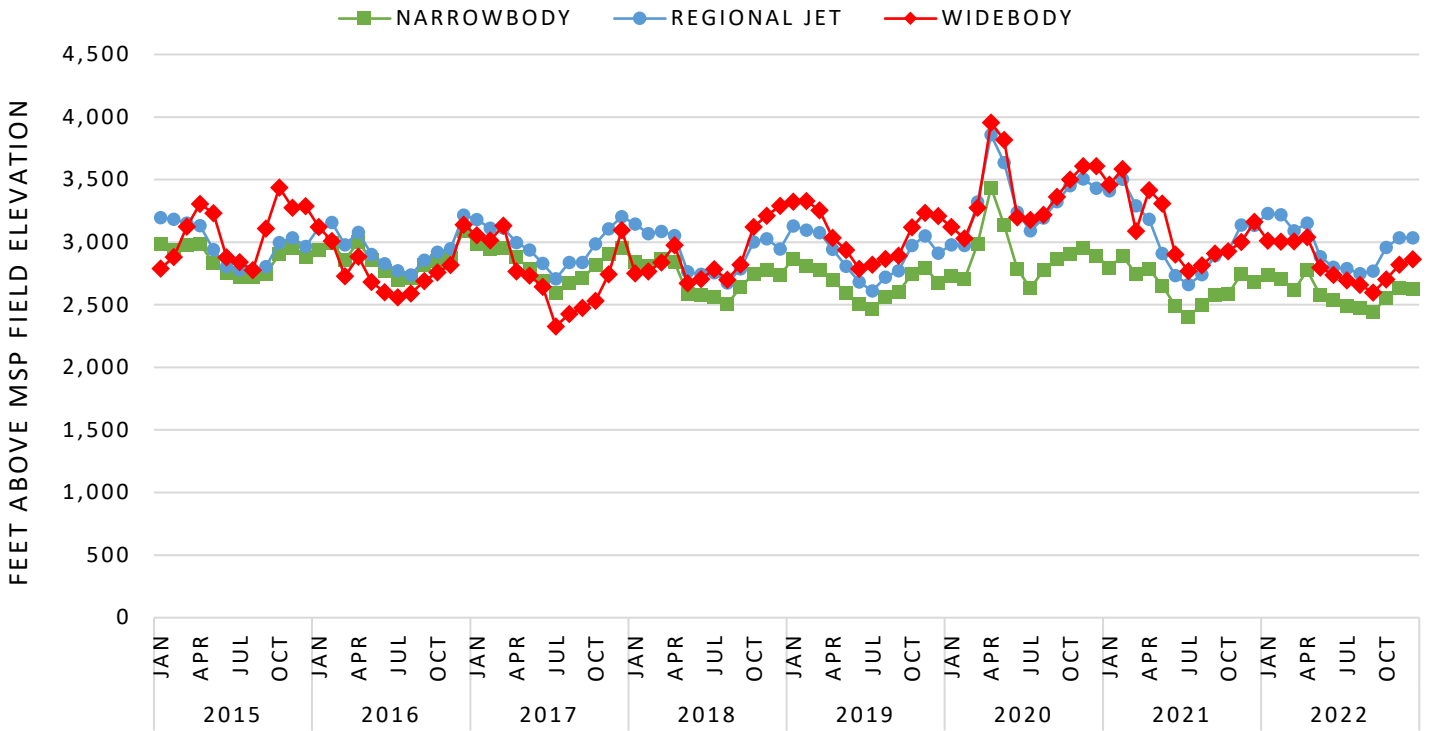
AVERAGE ALTITUDE FOR AIRCRAFT ARRIVING TO MSP



MEASUREMENT GATE IS FIVE NAUTICAL MILES FROM THE THRESHOLD OF THE ARRIVAL RUNWAY

MSP FLEET MIX REPORT

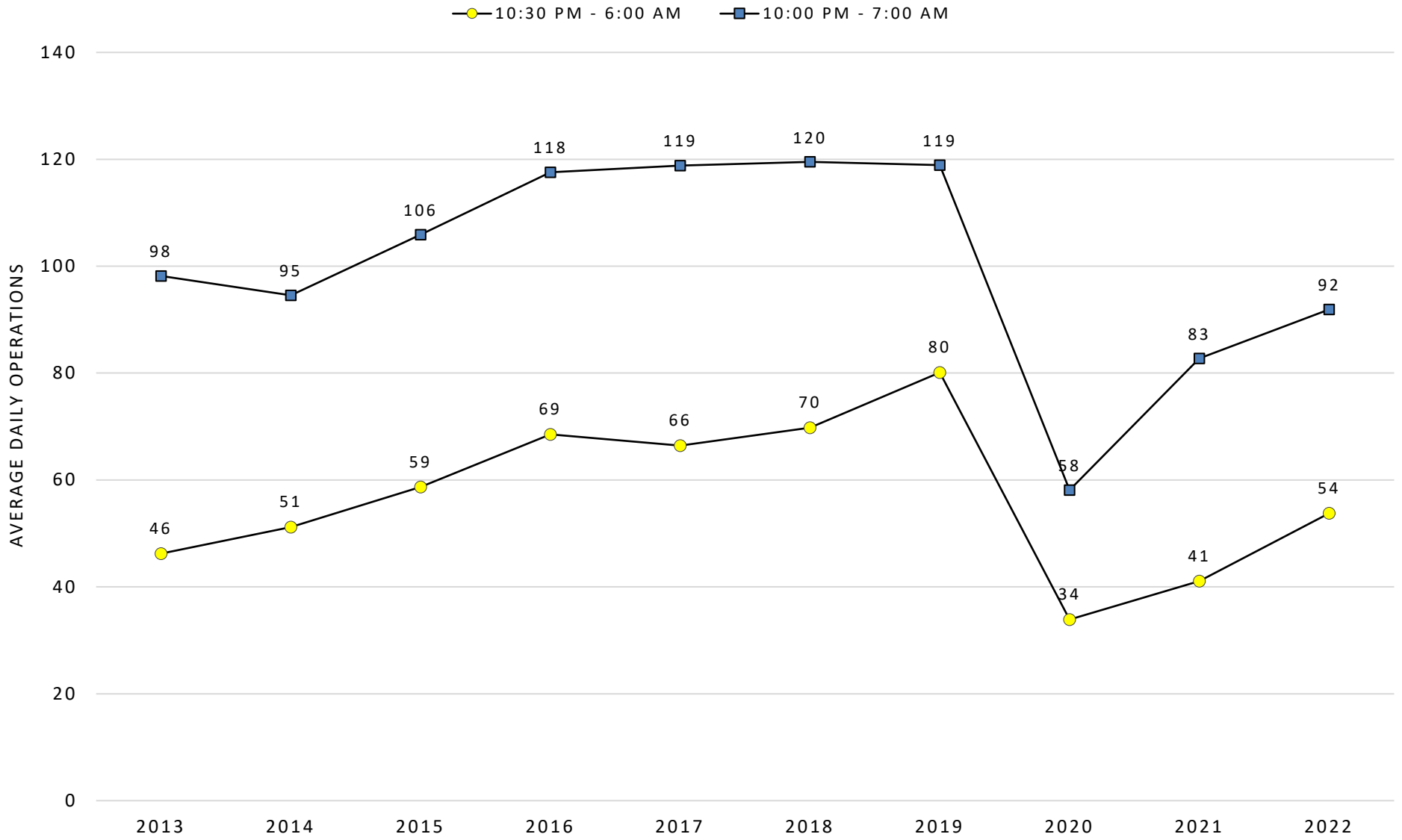
AVERAGE ALTITUDE FOR AIRCRAFT DEPARTING FROM MSP



MEASUREMENT GATE IS AN ARC FIVE NAUTICAL MILES FROM THE START OF TAKEOFF ROLL

MSP NIGHTTIME OPERATIONS REPORT

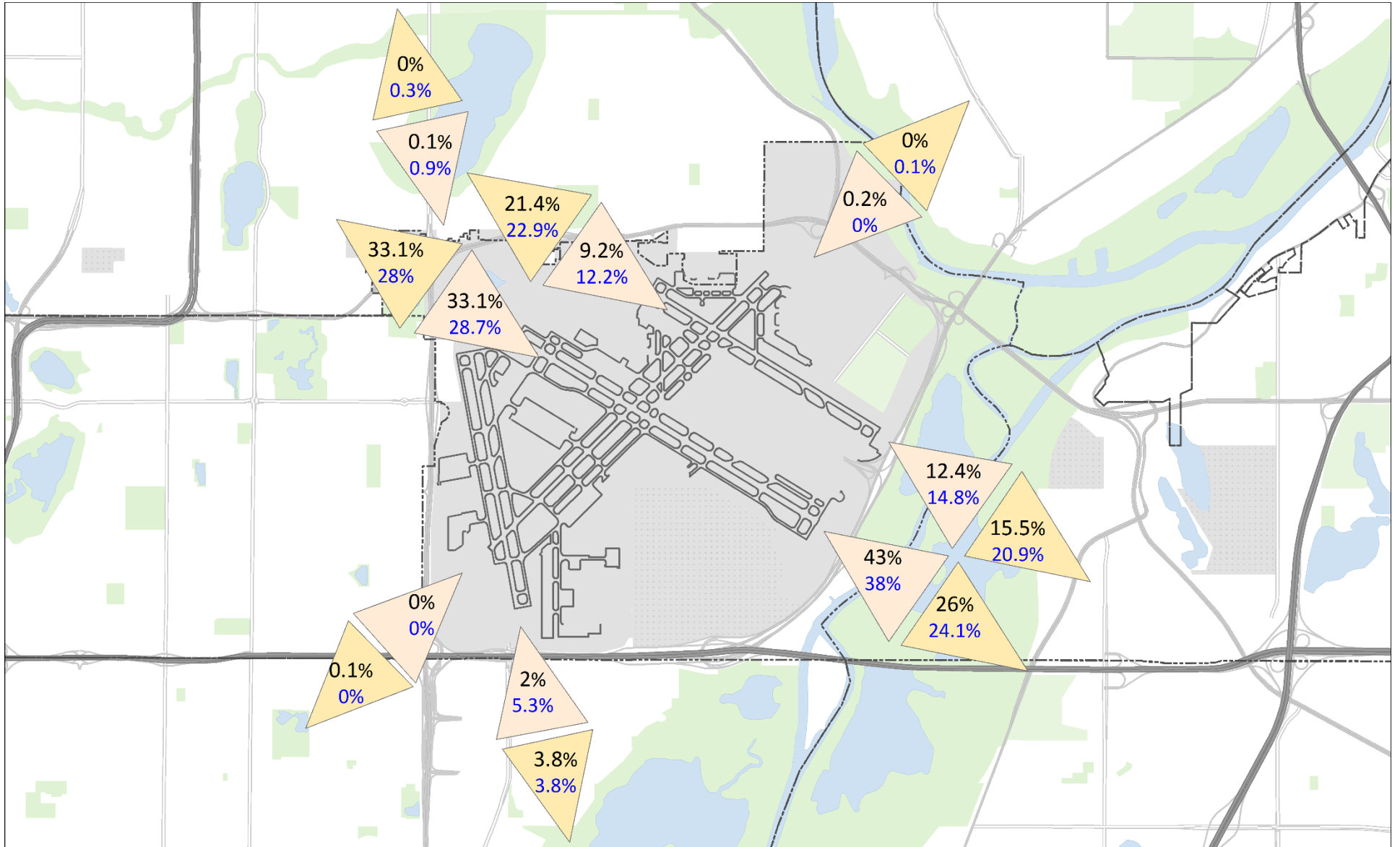
AVERAGE DAILY NIGHTTIME OPERATIONS



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

RWY	ARR / DEP	OVERFLIGHT AREA	2022			2019 - 2021 AVERAGE		
			TOTAL NIGHT OPS	AVERAGE DAILY NIGHT OPS	%	TOTAL NIGHT OPS	AVERAGE DAILY NIGHT OPS	%
04	ARR	SO. RICHFIELD/BLOOMINGTON	5	0.0	0.0%	1	0.0	0.0%
12L	ARR	SO. MINNEAPOLIS/NO. RICHFIELD	1,238	3.4	9.2%	1,577	4.3	12.2%
12R	ARR	SO. MINNEAPOLIS/NO. RICHFIELD	4,454	12.2	33.1%	3,703	10.1	28.7%
17	ARR	SO. MINNEAPOLIS	18	0.0	0.1%	120	0.3	0.9%
22	ARR	ST. PAUL/HIGHLAND PARK	24	0.1	0.2%	5	0.0	0.0%
30L	ARR	EAGAN/MENDOTA HEIGHTS	5,788	15.9	43.0%	4,906	13.4	38.0%
30R	ARR	EAGAN/MENDOTA HEIGHTS	1,663	4.6	12.4%	1,914	5.2	14.8%
35	ARR	BLOOMINGTON/EAGAN	268	0.7	2.0%	686	1.9	5.3%
TOTAL NIGHTTIME ARRIVALS			13,458	36.9		12,912	35.2	
04	DEP	ST. PAUL/HIGHLAND PARK	0	0.0	0.0%	4	0.0	0.1%
12L	DEP	EAGAN/MENDOTA HEIGHTS	959	2.6	15.5%	1,245	3.4	20.9%
12R	DEP	EAGAN/MENDOTA HEIGHTS	1,607	4.4	26.0%	1,437	3.9	24.1%
17	DEP	BLOOMINGTON/EAGAN	236	0.6	3.8%	224	0.6	3.8%
22	DEP	SO. RICHFIELD/BLOOMINGTON	5	0.0	0.1%	1	0.0	0.0%
30L	DEP	SO. MINNEAPOLIS/NO. RICHFIELD	2,043	5.6	33.1%	1,668	4.6	28.0%
30R	DEP	SO. MINNEAPOLIS/NO. RICHFIELD	1,320	3.6	21.4%	1,365	3.7	22.9%
35	DEP	SO. MINNEAPOLIS	3	0.0	0.0%	20	0.1	0.3%
TOTAL NIGHTTIME DEPARTURES			6,173	16.8		5,964	16.2	
TOTAL NIGHTTIME OPERATIONS			19,631	53.7		18,876	51.4	

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



MSP NIGHTTIME OPERATIONS REPORT
NIGHTTIME OPERATIONS BY AIRLINE
 (TOP 15 BY COUNT)

2022	AIRLINE	ID	COUNT	PERCENT OF AIRLINE OPERATIONS OCCURRING AT NIGHT	PERCENT OF CONTRIBUTION TO NIGHTTIME TOTAL
	DELTA	DAL	5,824	4.9%	31.0%
	SUN COUNTRY	SCX	3,591	15.3%	19.1%
	SKYWEST AIRLINES	SKW	2,149	3.1%	11.4%
	SOUTHWEST	SWA	1,679	15.9%	8.9%
	AMERICAN	AAL	1,239	17.6%	6.6%
	UPS	UPS	1,119	33.6%	6.0%
	UNITED	UAL	781	9.7%	4.2%
	FEDEX	FDX	693	22.6%	3.7%
	GULF & CARIBBEAN CARGO	TSU	356	96.0%	1.9%
	JETBLUE AIRWAYS	JBU	350	18.4%	1.9%
	ALASKA	ASA	284	18.0%	1.5%
	FRONTIER AIRLINES	FFT	232	19.2%	1.2%
	SPIRIT	NKS	230	7.9%	1.2%
	ENDEAVOR AIR	EDV	163	0.9%	0.9%
SWIFT AIR (USA)	SWQ	85	16.4%	0.5%	

2021	AIRLINE	ID	COUNT	PERCENT OF AIRLINE OPERATIONS OCCURRING AT NIGHT	PERCENT OF CONTRIBUTION TO NIGHTTIME TOTAL
	DELTA	DAL	3,597	3.6%	25.1%
	SUN COUNTRY	SCX	3,214	15.6%	22.4%
	SKYWEST AIRLINES	SKW	1,632	2.3%	11.4%
	UPS	UPS	1,271	33.2%	8.9%
	AMERICAN	AAL	1,219	15.9%	8.5%
	SOUTHWEST	SWA	957	10.3%	6.7%
	FEDEX	FDX	679	19.6%	4.7%
	GULF & CARIBBEAN CARGO	TSU	367	96.8%	2.6%
	ALASKA	ASA	283	21.8%	2.0%
	ENDEAVOR AIR	EDV	281	0.7%	2.0%
	ENVOY AIR	ENY	201	12.6%	1.4%
	UNITED	UAL	194	4.0%	1.4%
	SPIRIT	NKS	179	5.2%	1.2%
	FRONTIER AIRLINES	FFT	129	11.1%	0.9%
MESA AIRLINES	ASH	119	7.0%	0.8%	

*AIRLINE OPERATIONS OCCURRING AT NIGHT REPRESENTS THE PERCENTAGE OF RESPECTIVE AIRLINE SCHEDULE THAT OCCURS AT NIGHT

*CONTRIBUTION TO TOTAL IS RESPECTIVE AIRLINE CONTRIBUTIONS TO OVERALL MSP NIGHT OPERATIONS

MSP NIGHTTIME OPERATIONS REPORT

**2022 NIGHTTIME OPERATIONS BY AIRCRAFT
(TOP 15 BY COUNT)**

AIRCRAFT CODE	DESCRIPTION	COUNT	NOISE LEVEL CERTIFICATION (EPNdB BELOW STAGE 3)
B738	BOEING 737-800	5,532	11.3 - 17.1
A321	AIRBUS INDUSTRIES A321	2,487	6.4 - 17
B739	BOEING 737-900	1,773	10.9 - 16.1
B757	BOEING 757-200	1,482	11.1 - 22.1
CRJ9	CANADAIR REGIONAL JET CRJ-900	1,259	14.5 - 17.6
A320	AIRBUS INDUSTRIES A320	1,156	12.1 - 21.2
A319	AIRBUS INDUSTRIES A319	872	12.9 - 22.2
B7377	BOEING 737-700	851	11.6 - 19.8
B763	BOEING 767-300	807	4.4 - 22.6
CRJ2	CANADAIR REGIONAL JET CRJ-200	707	26.5 - 30.6
E170	EMBRAER 170	676	9.2 - 16.8
B38M	BOEING 737-8 MAX	259	24.3 - 27.4
E190	EMBRAER 190	233	12.2 - 17.9
CRJ7	CANADAIR REGIONAL JET CRJ-700	209	14.5 - 17.6
A330	AIRBUS INDUSTRIES A330	164	11.7 - 21.1

NOISE CERTIFICATION DATA SOURCE: EUROPEAN AVIATION SAFETY AGENCY

CUMULATIVE CERTIFICATED NOISE LEVELS REPRESENTED AS A RANGE BELOW STAGE 3 NOISE LEVELS TO ACCOUNT FOR MULTIPLE CERTIFICATION VARIABLES (WEIGHT, MODEL, ENGINE TYPE, AIRFRAME CONFIGURATION, ETC)

MSP NIGHTTIME OPERATIONS REPORT
2022 NIGHTTIME OPERATIONS BY ORIGIN AND DESTINATION
(TOP 15 BY COUNT)

AIRPORT CODE	DESTINATION AIRPORT	COUNT
ATL	ATLANTA	342
DEN	DENVER	334
FAR	FARGO	327
FSD	SIOUX FALLS	318
RST	ROCHESTER MN	301
GFK	GRAND FORKS	286
DLH	DULUTH	267
BIS	BISMARCK	260
MDW	CHICAGO MIDWAY	238
LAS	LAS VEGAS	230
RAP	RAPID CITY	220
PHX	PHOENIX	203
TVF	THEIF RIVER FALLS REGIONAL	169
IAH	HOUSTON	164
MKE	MILWAUKEE	163

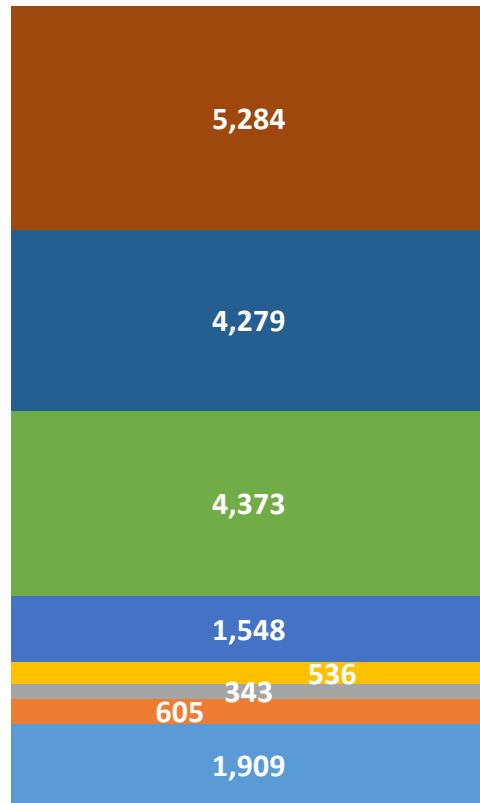
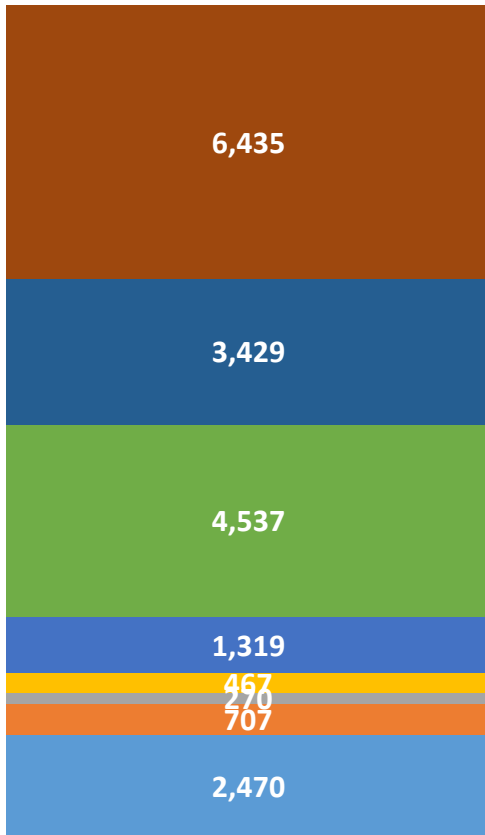
MSP NIGHTTIME OPERATIONS REPORT
NIGHTTIME OPERATIONS BY HOUR

2022

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

**3-YEAR HISTORICAL
 AVERAGE**

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

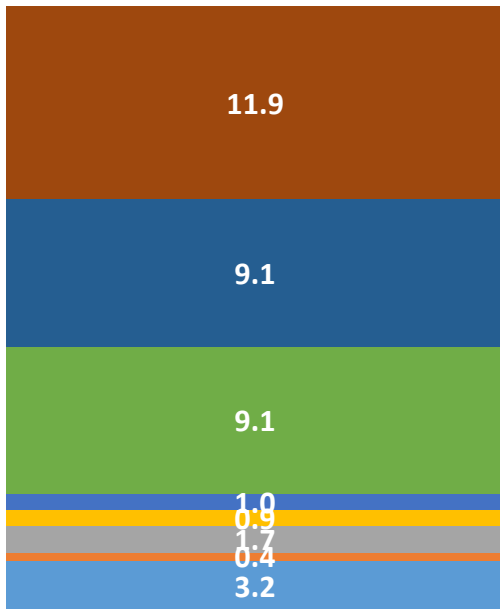


MSP NIGHTTIME OPERATIONS REPORT

SCHEDULED VERSUS ACTUAL OPERATIONS
(AVERAGE BY HOUR)

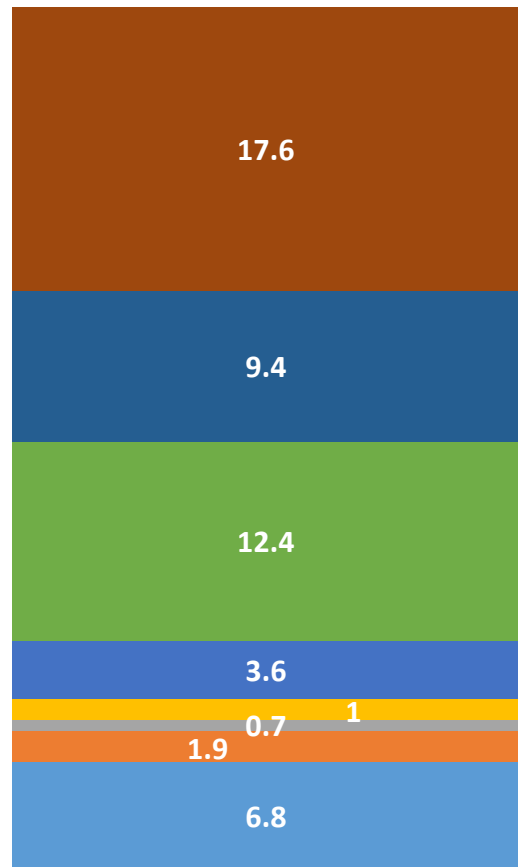
DAILY SCHEDULED NIGHT OPERATIONS

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



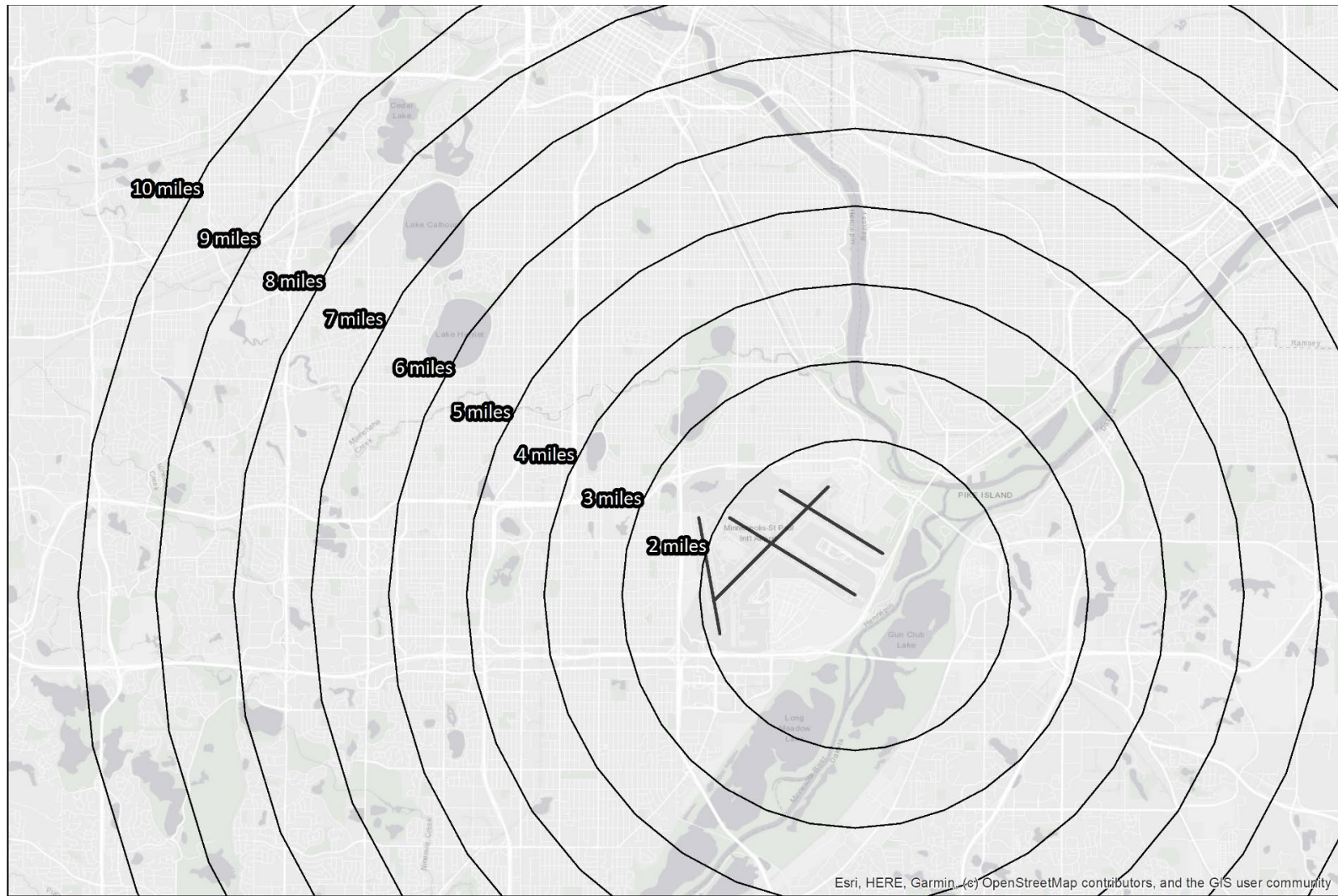
DAILY ACTUAL NIGHT OPERATIONS

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

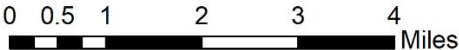


GENERAL AVIATION AND CHARTER AIRCRAFT OPERATORS DO NOT REPORT SCHEDULED OPERATIONS

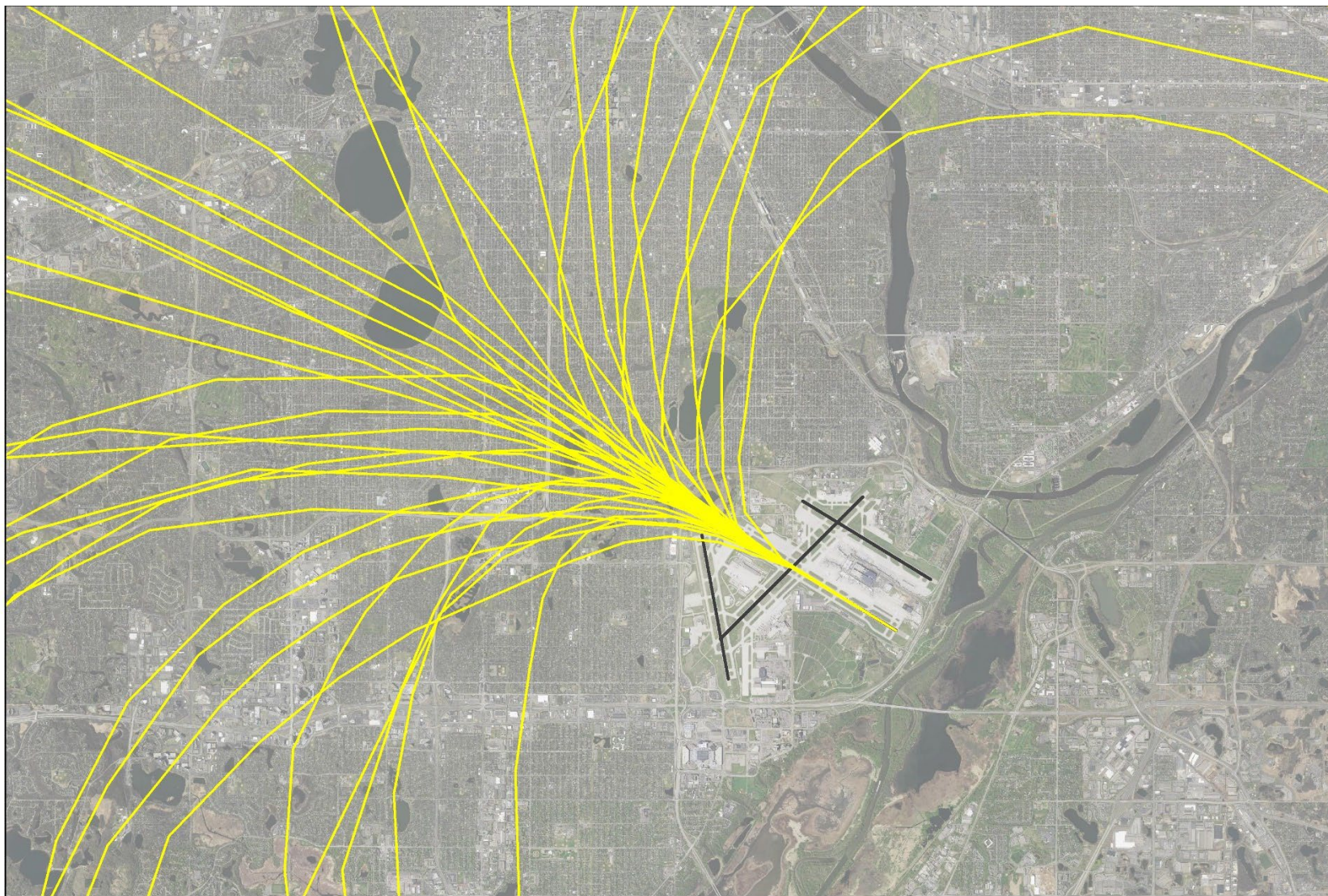
ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 30L DISTANCE MEASUREMENT RINGS



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

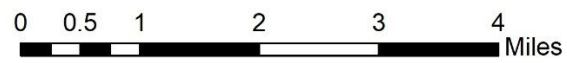


ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 30L AEDT MODEL DEPARTURE TRACKS

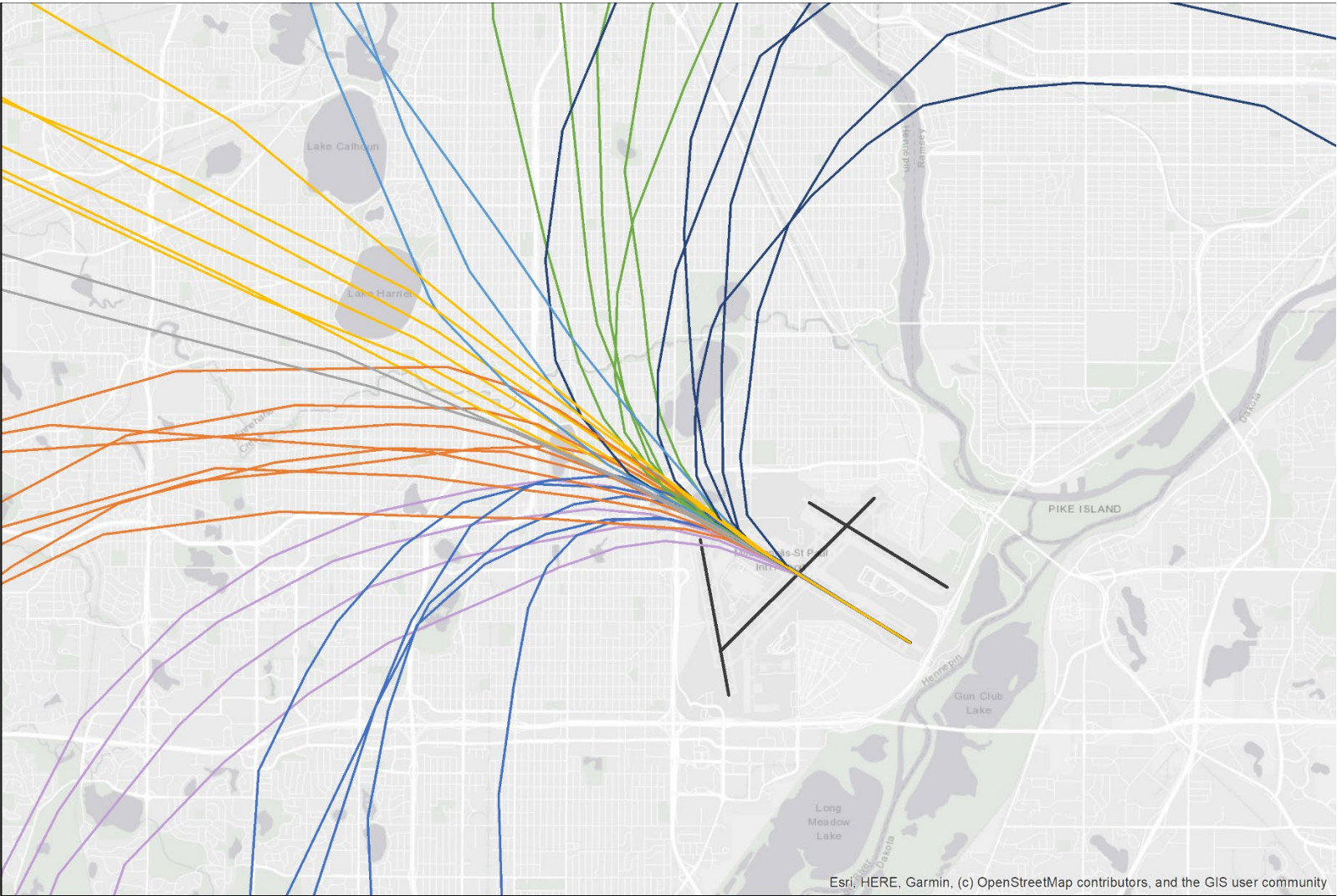


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— Runway 30L Departure Model Tracks



ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 30L AEDT MODEL TRACKS ASSIGNED HEADINGS

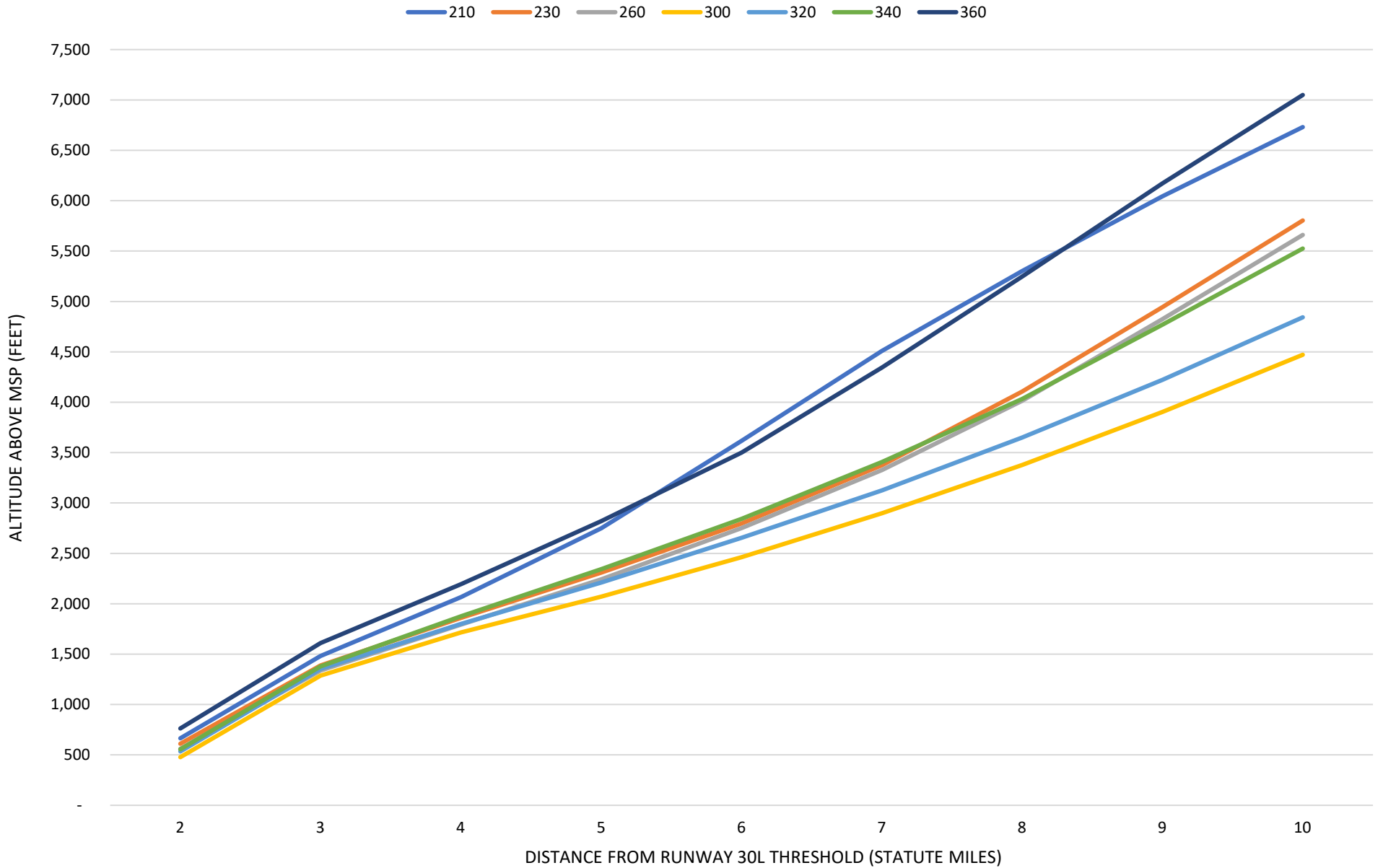


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— 210 — 230 — 260 — 280 — 300 — 320 — 340 — 360

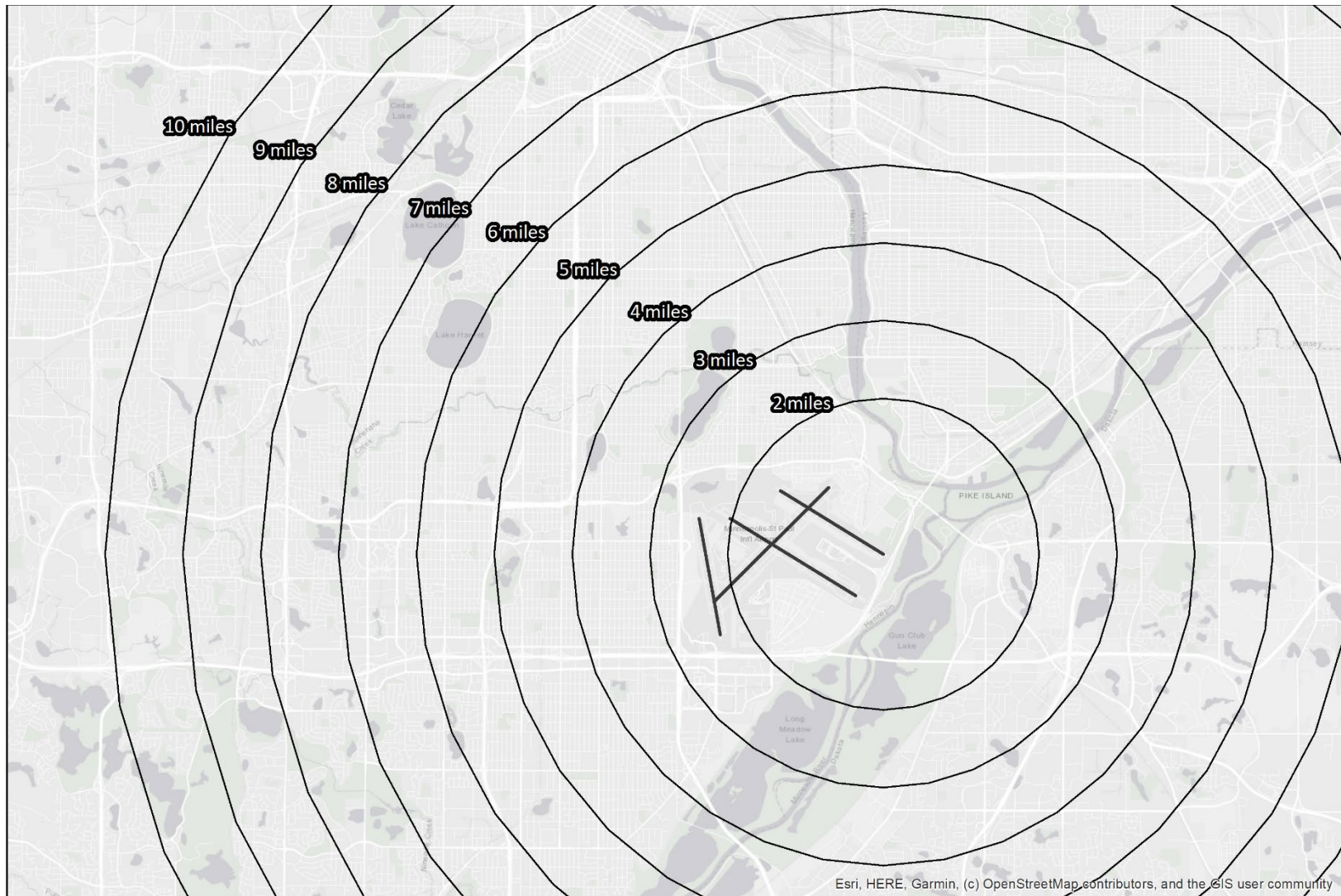
0 0.5 1 2 3 4 Miles

ADDENDUM: AVERAGE ALTITUDE BY HEADING
2022 AVERAGE MSP RUNWAY 30L DEPARTURE ALTITUDE BY HEADING



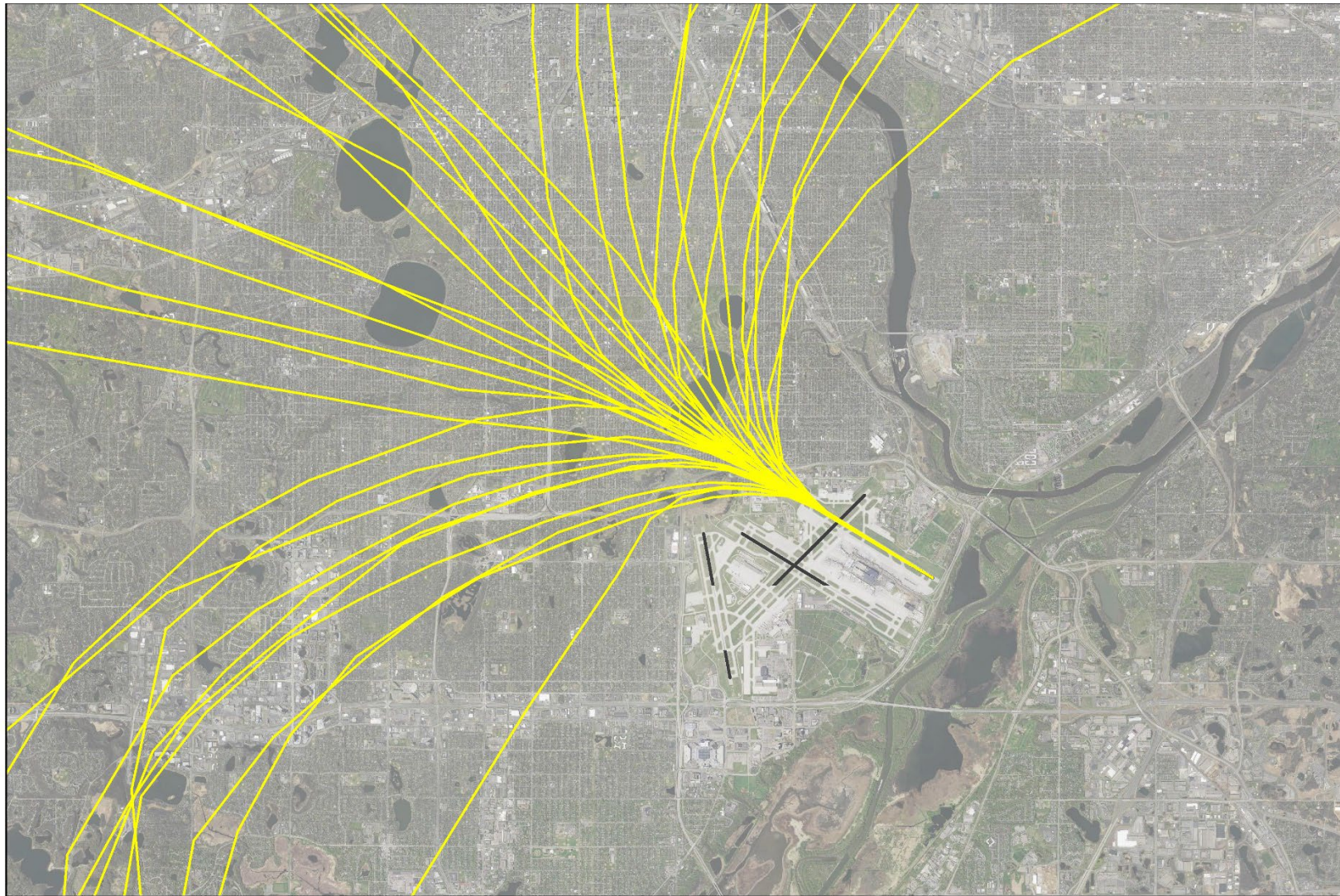
Note: AEDT modeled flight tracks used for analysis and heading assignment, not representative of ATC heading assignments. Headings with more than 300 assigned operations shown.

ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 30R DISTANCE MEASUREMENT RINGS



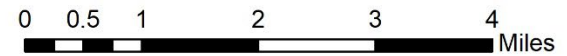
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ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 30R AEDT MODEL DEPARTURE TRACKS

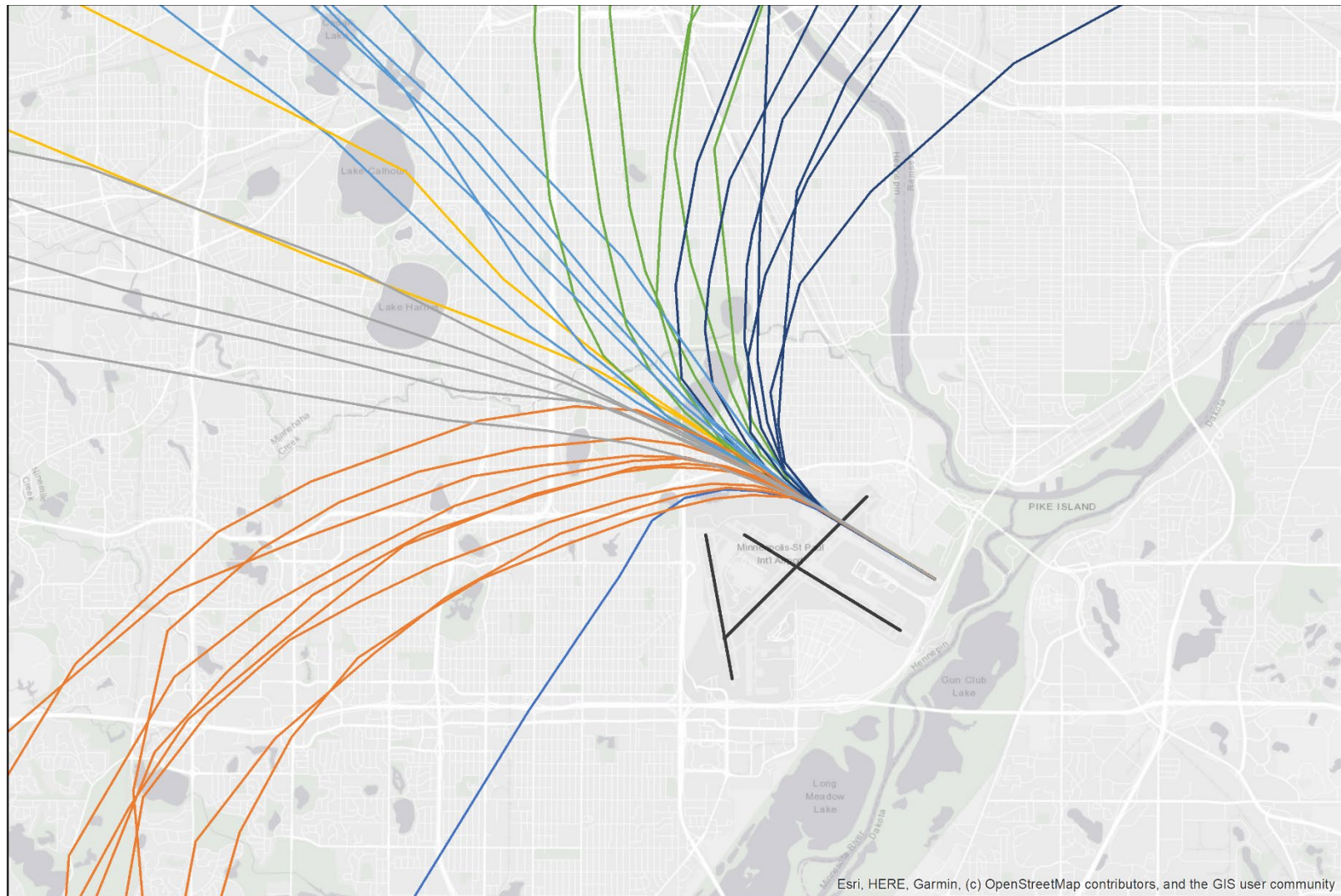


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— Runway 30R Departure Model Tracks



ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 30R AEDT MODEL TRACKS ASSIGNED HEADINGS

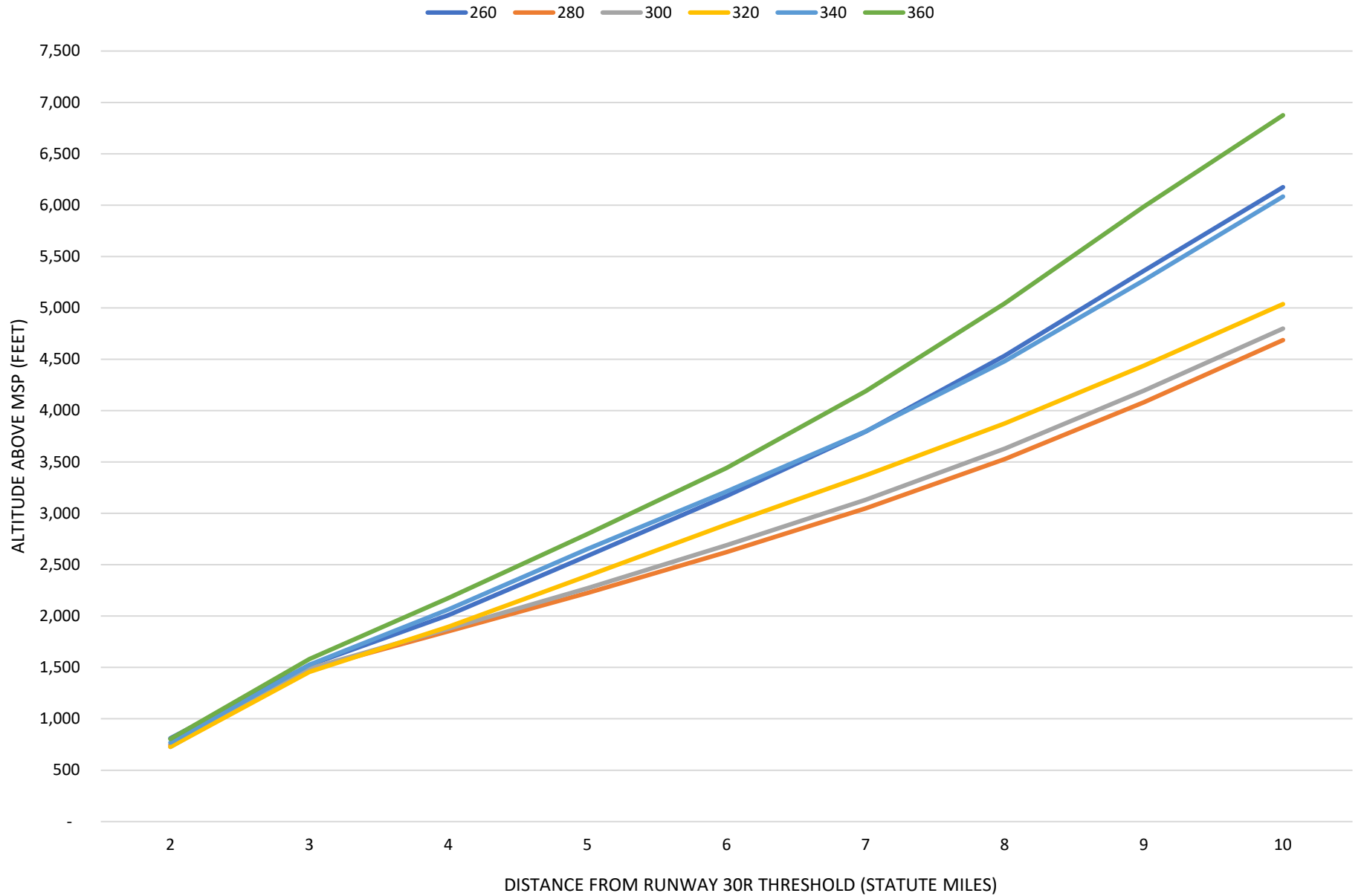


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— 210 — 260 — 280 — 300 — 320 — 340 — 360

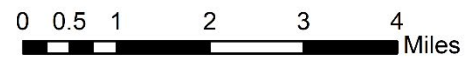
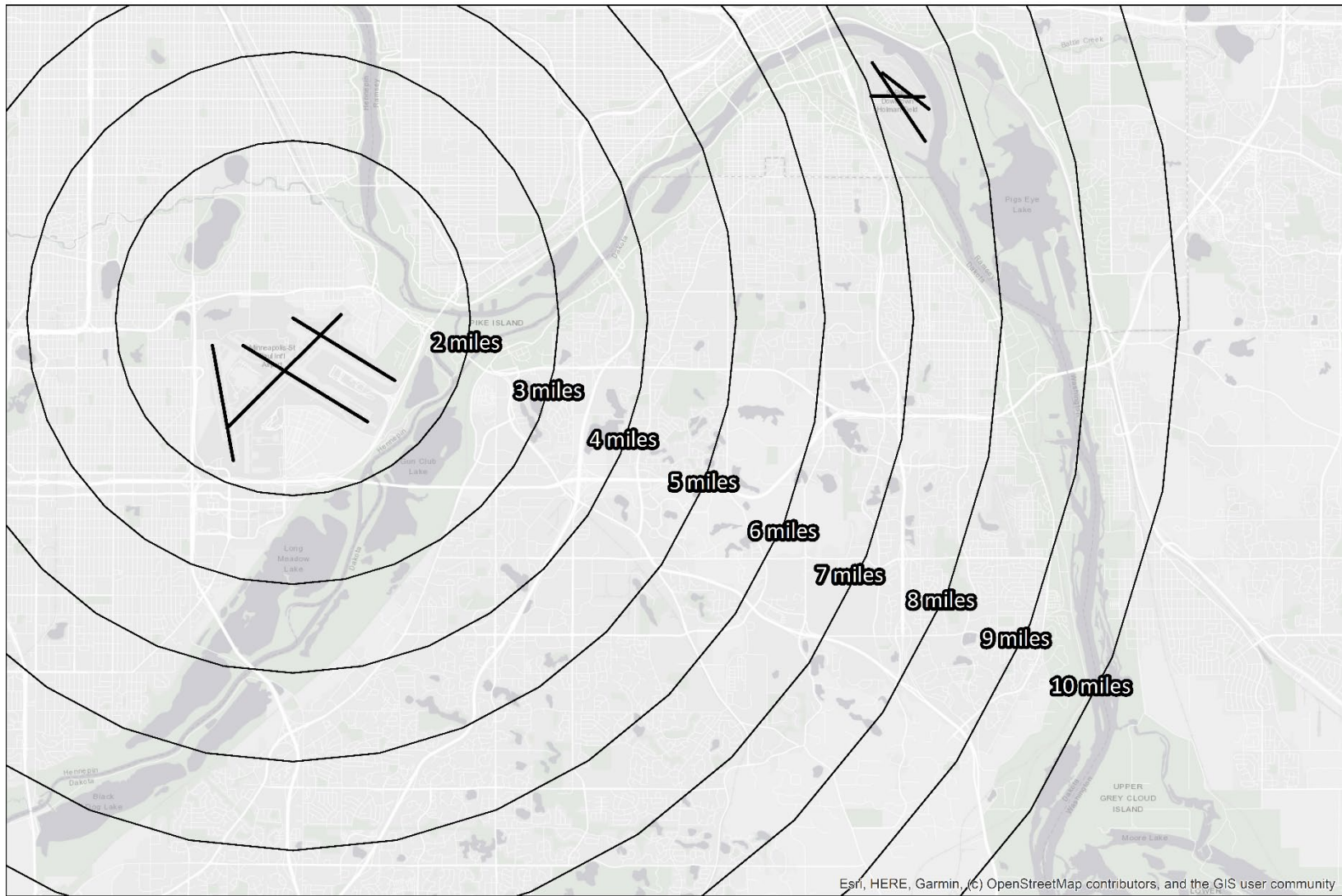
0 0.5 1 2 3 4 Miles

ADDENDUM: AVERAGE ALTITUDE BY HEADING
2022 AVERAGE MSP RUNWAY 30R DEPARTURE ALTITUDE BY HEADING

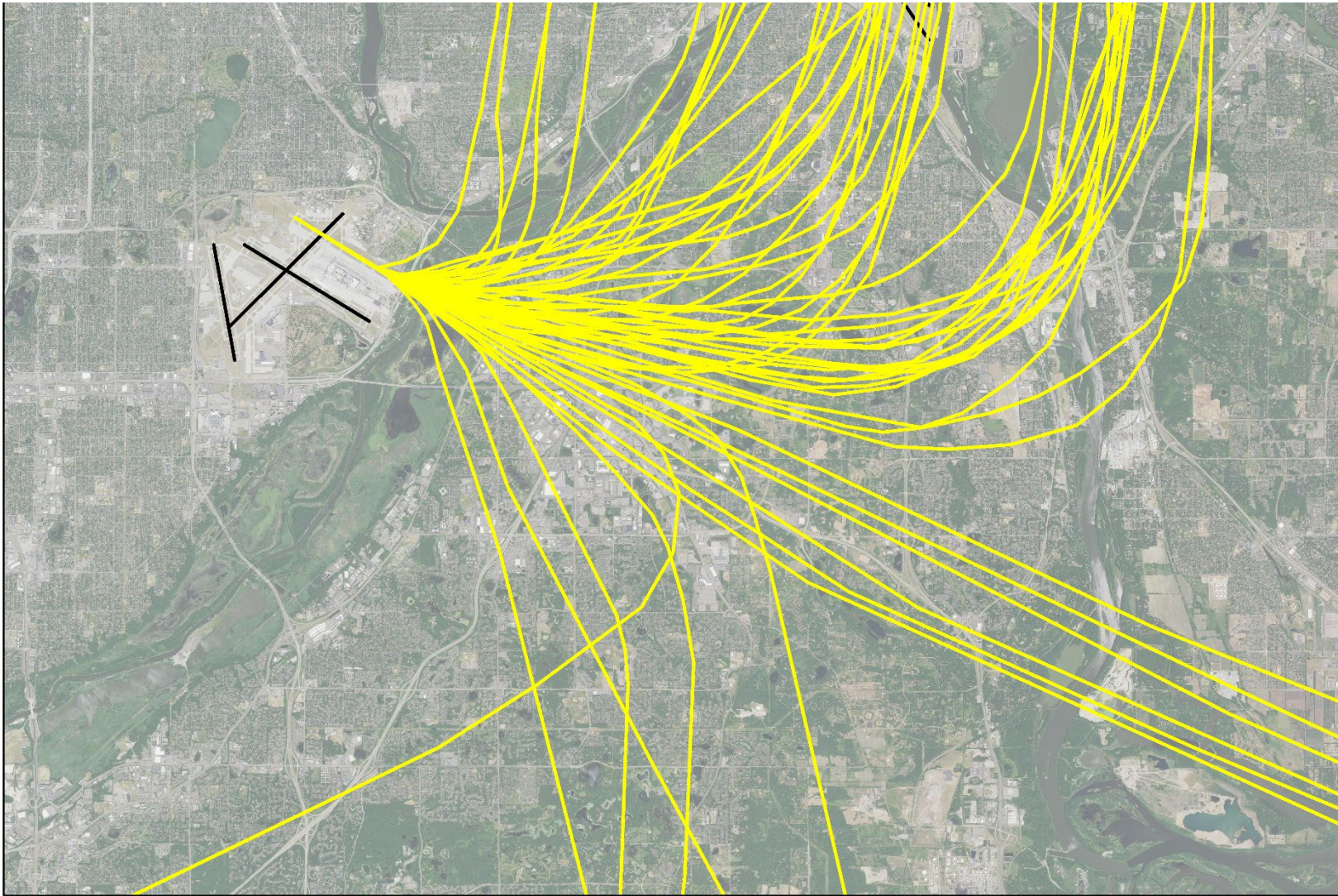


Note: AEDT modeled flight tracks used for analysis and heading assignment, not representative of ATC heading assignments. Headings with more than 300 assigned operations shown.

ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 12L DISTANCE MEASUREMENT RINGS

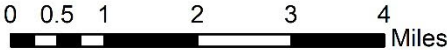


ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 12L AEDT MODEL DEPARTURE TRACKS

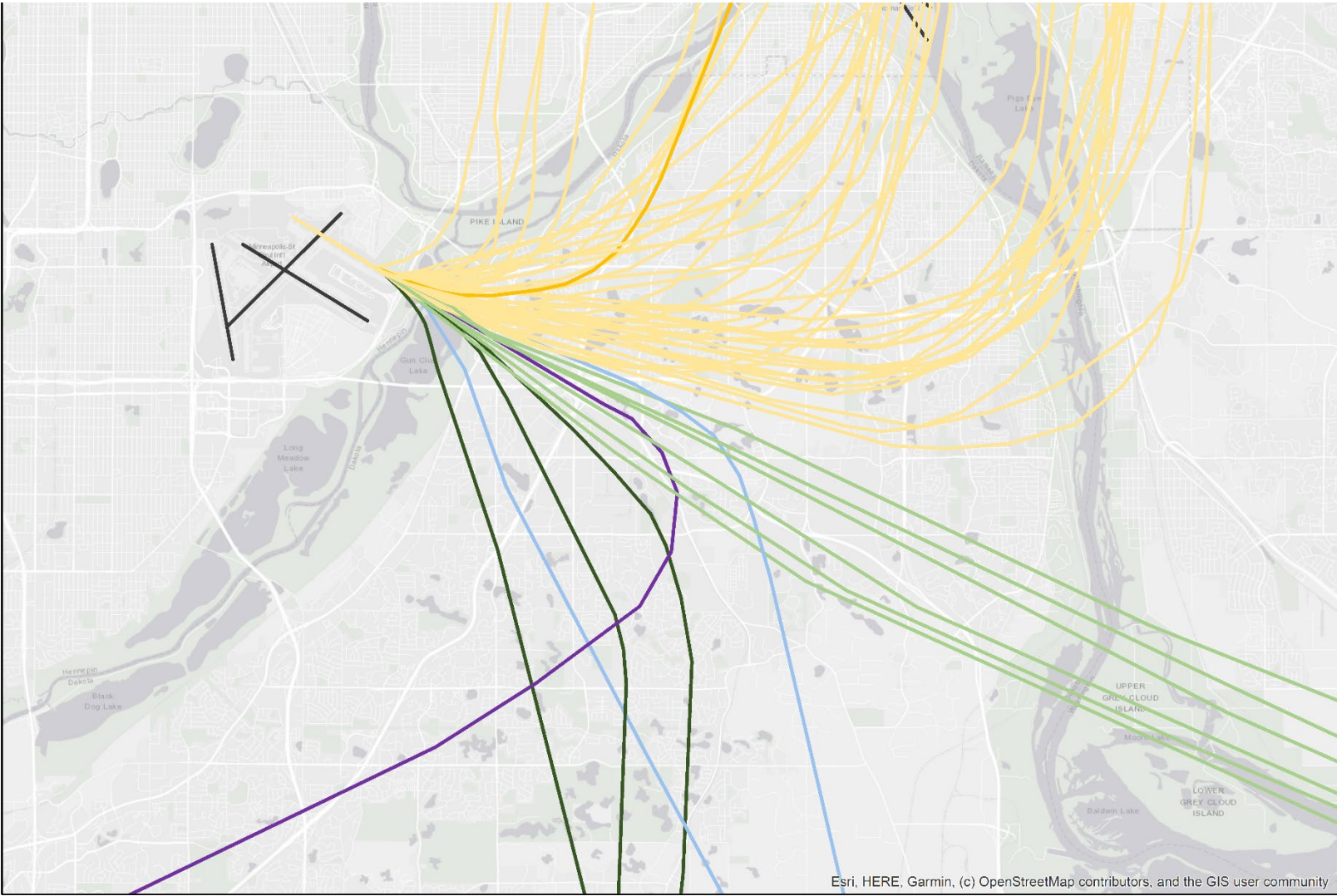


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— Runway 12L Depature Model Tracks



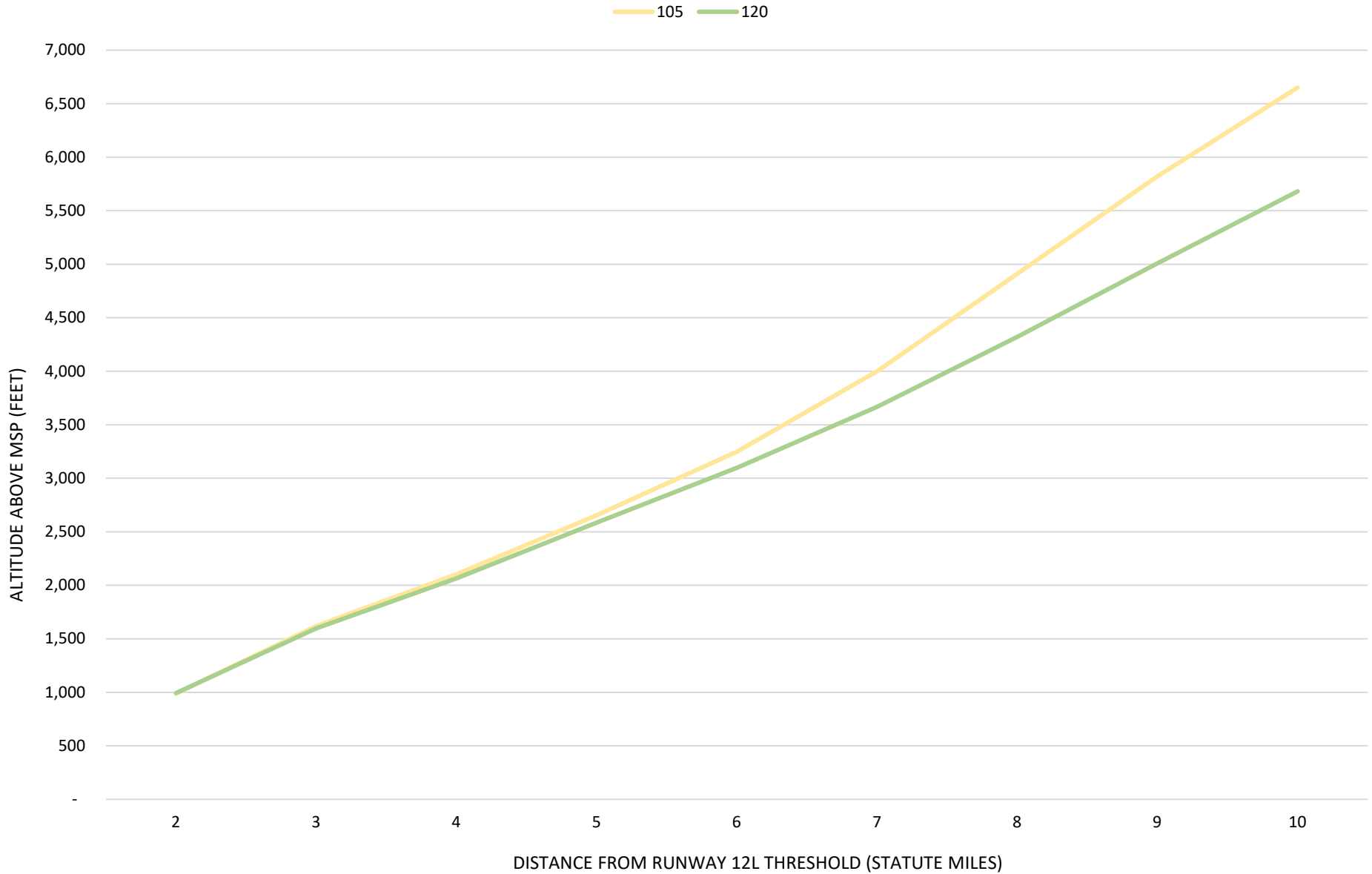
ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 12L AEDT MODEL TRACKS ASSIGNED HEADINGS



105 120 170 185 220 300

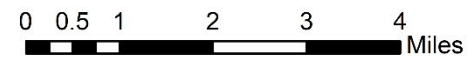
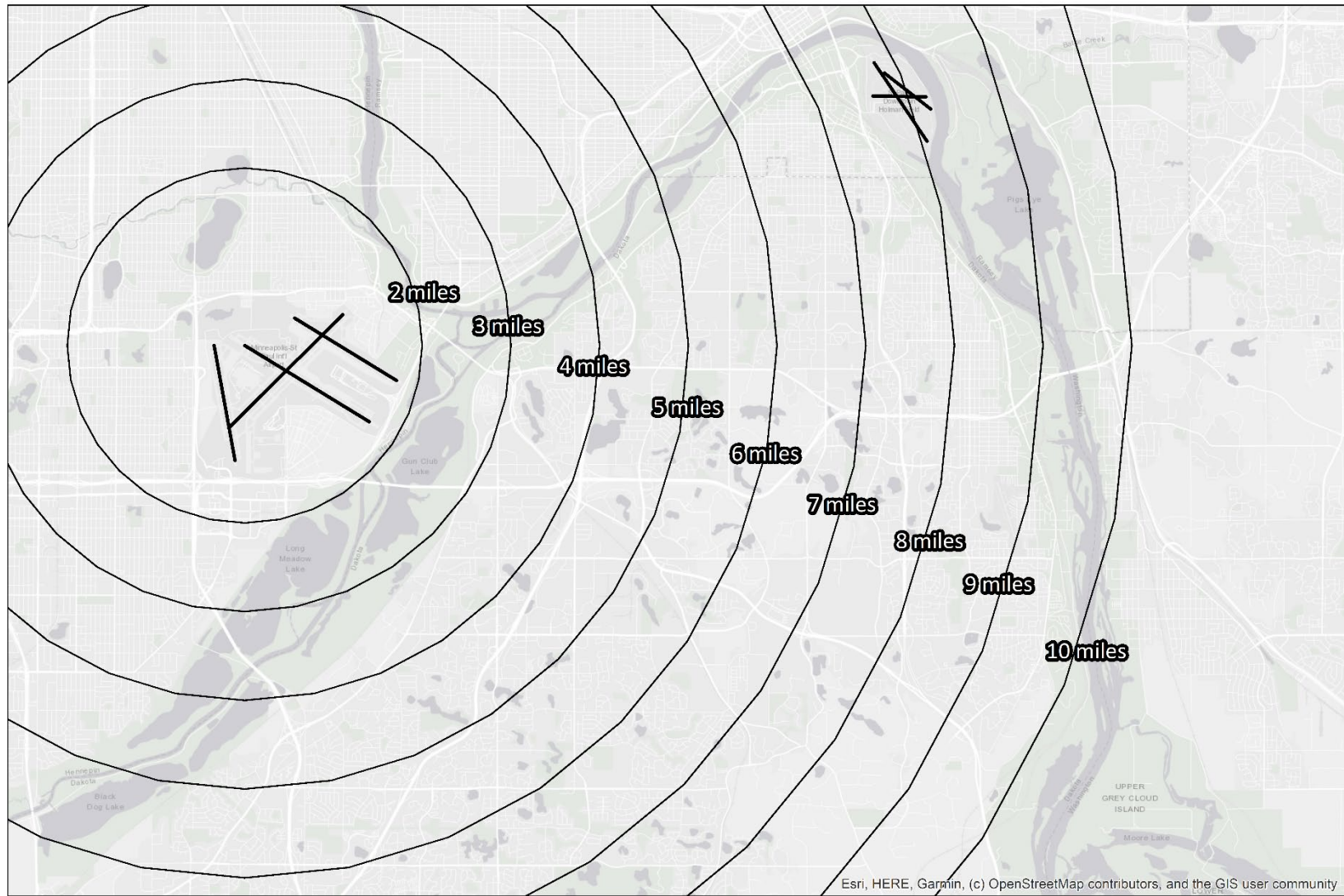
0 0.5 1 2 3 4 Miles

ADDENDUM: AVERAGE ALTITUDE BY HEADING
2022 AVERAGE MSP RUNWAY 12L DEPARTURE ALTITUDE BY HEADING

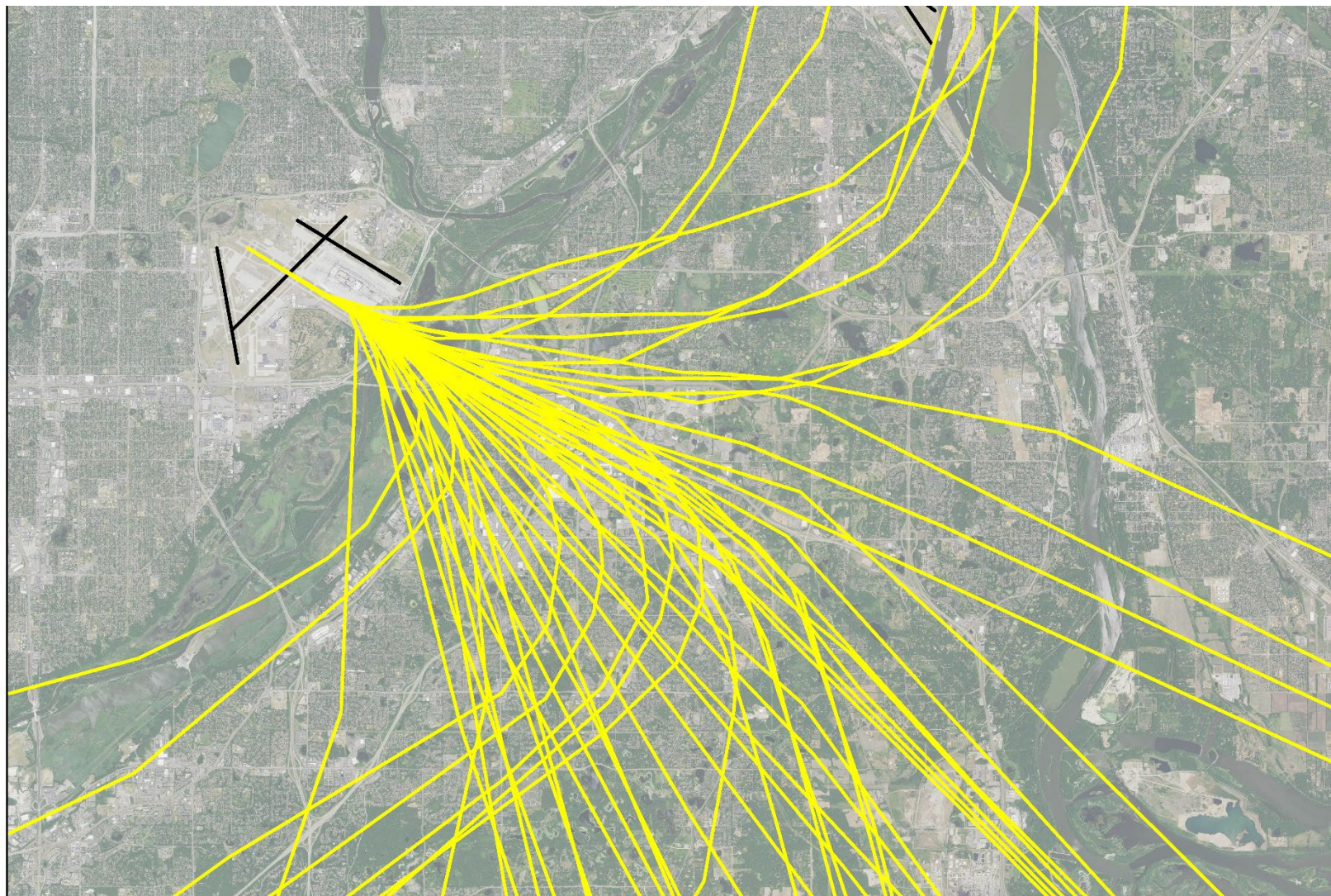


Note: AEDT modeled flight tracks used for analysis and heading assignment, not representative of ATC heading assignments. Headings with more than 300 assigned operations shown.

ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 12R DISTANCE MEASUREMENT RINGS

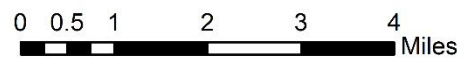


ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 12R AEDT MODEL DEPARTURE TRACKS

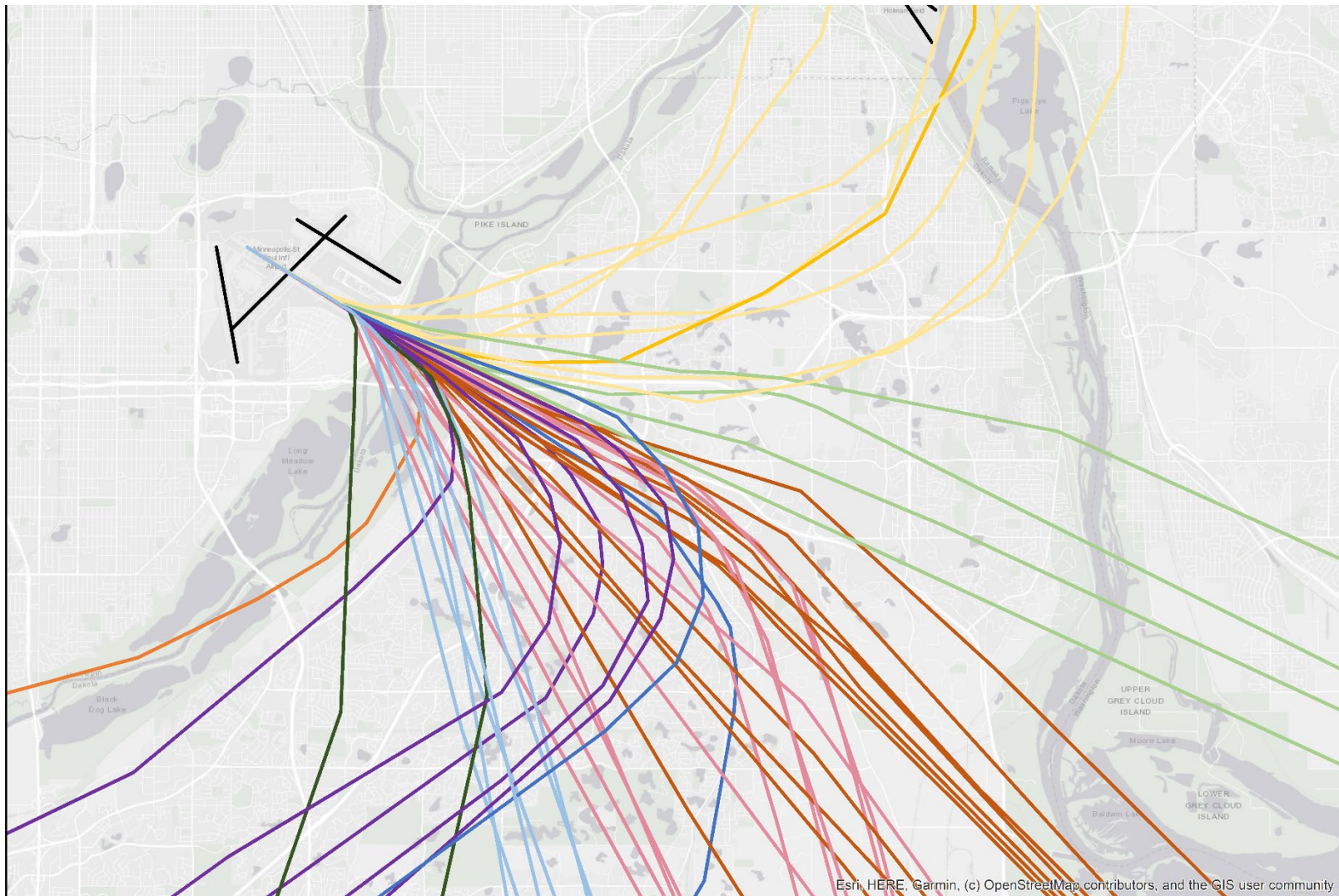


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— Runway 12R Depature Model Tracks



ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 12R AEDT MODEL TRACKS ASSIGNED HEADINGS

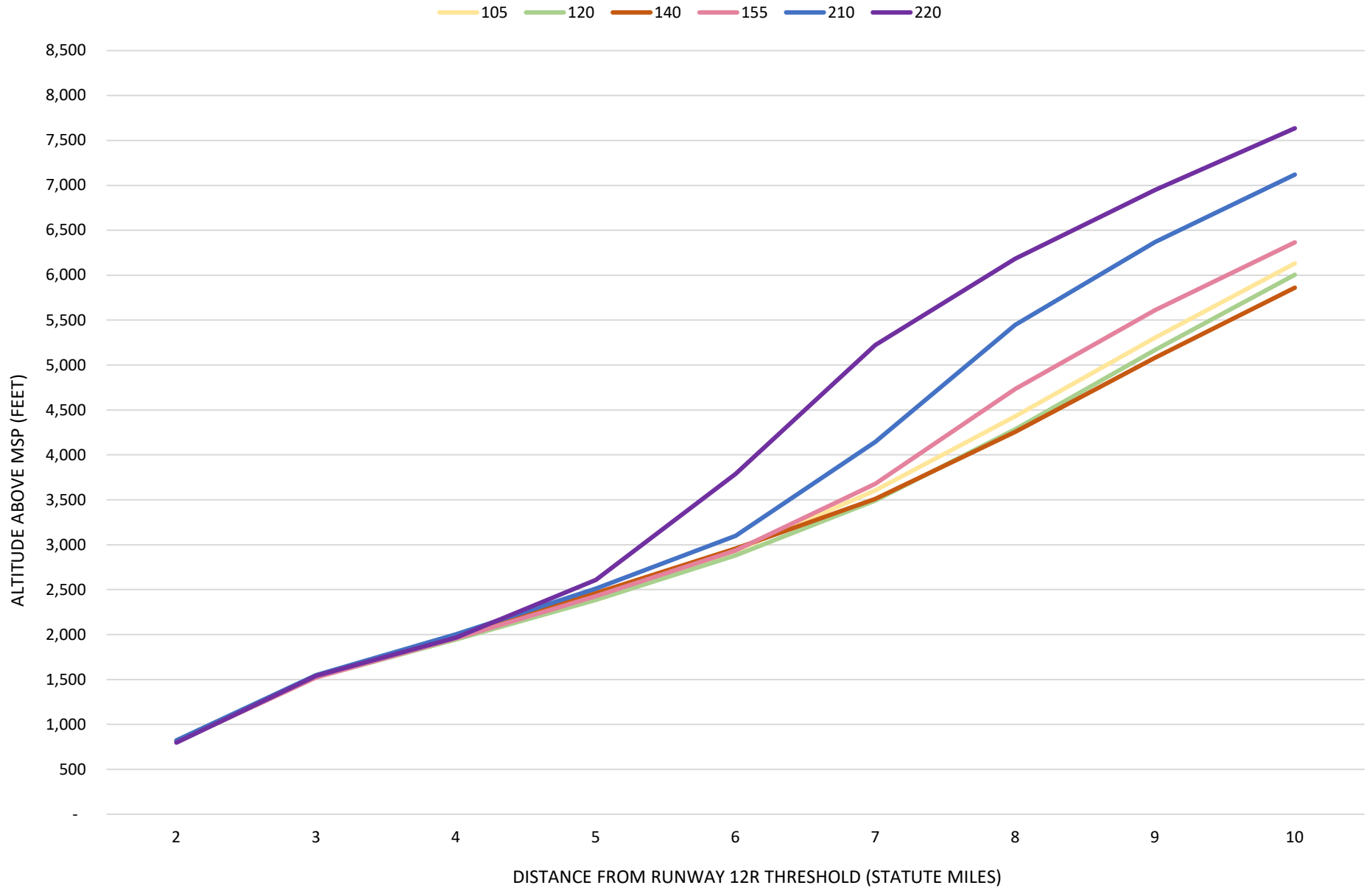


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

105 120 140 155 170 185 210 220 260 300

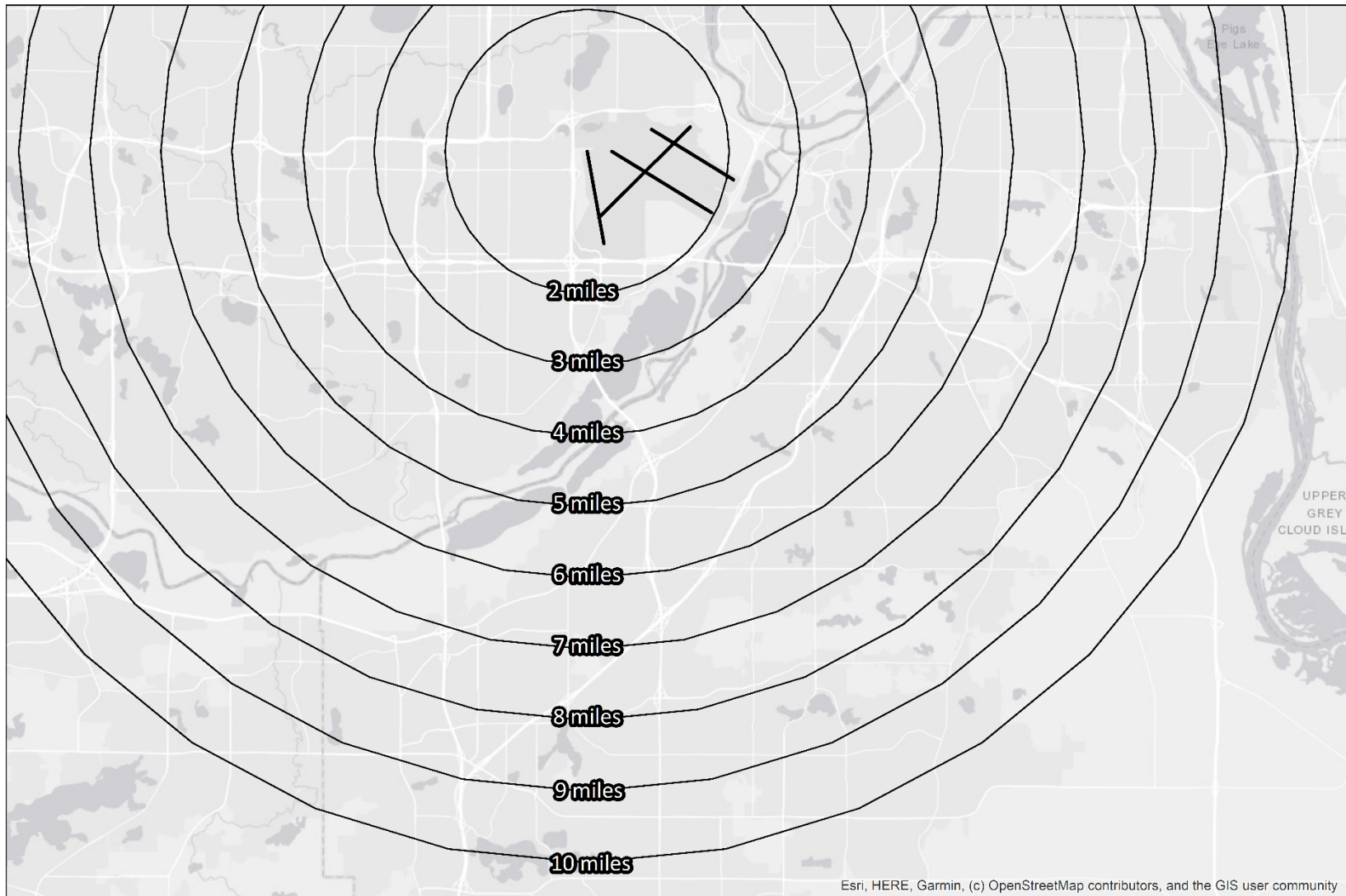
0 0.5 1 2 3 4 Miles

ADDENDUM: AVERAGE ALTITUDE BY HEADING
2022 AVERAGE MSP RUNWAY 12R DEPARTURE ALTITUDE BY HEADING



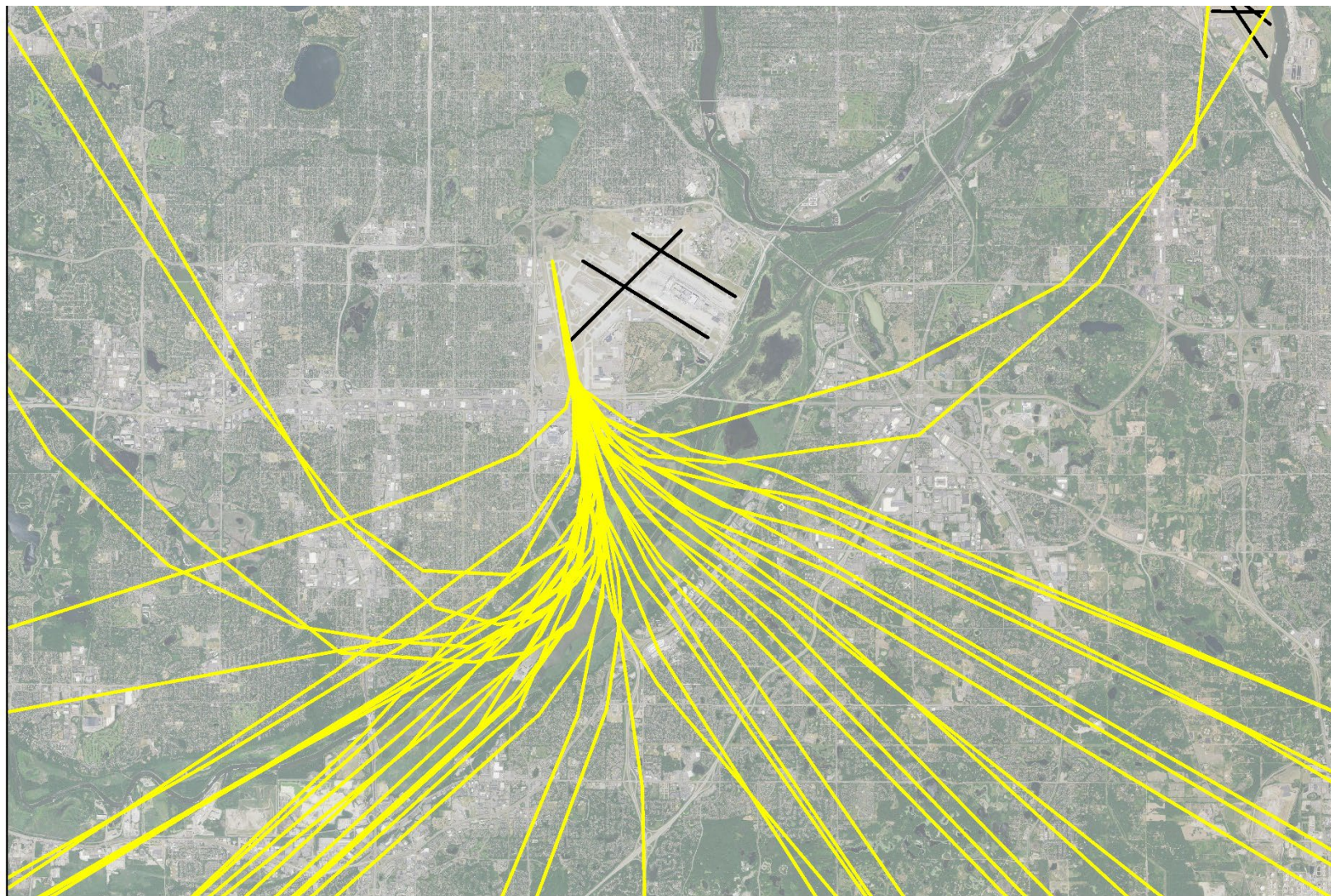
Note: AEDT modeled flight tracks used for analysis and heading assignment, not representative of ATC heading assignments. Headings with more than 300 assigned operations shown.

ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 17 DISTANCE MEASUREMENT RINGS



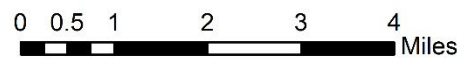
0 0.75 1.5 3 4.5 6 Miles

ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 17 AEDT MODEL DEPARTURE TRACKS

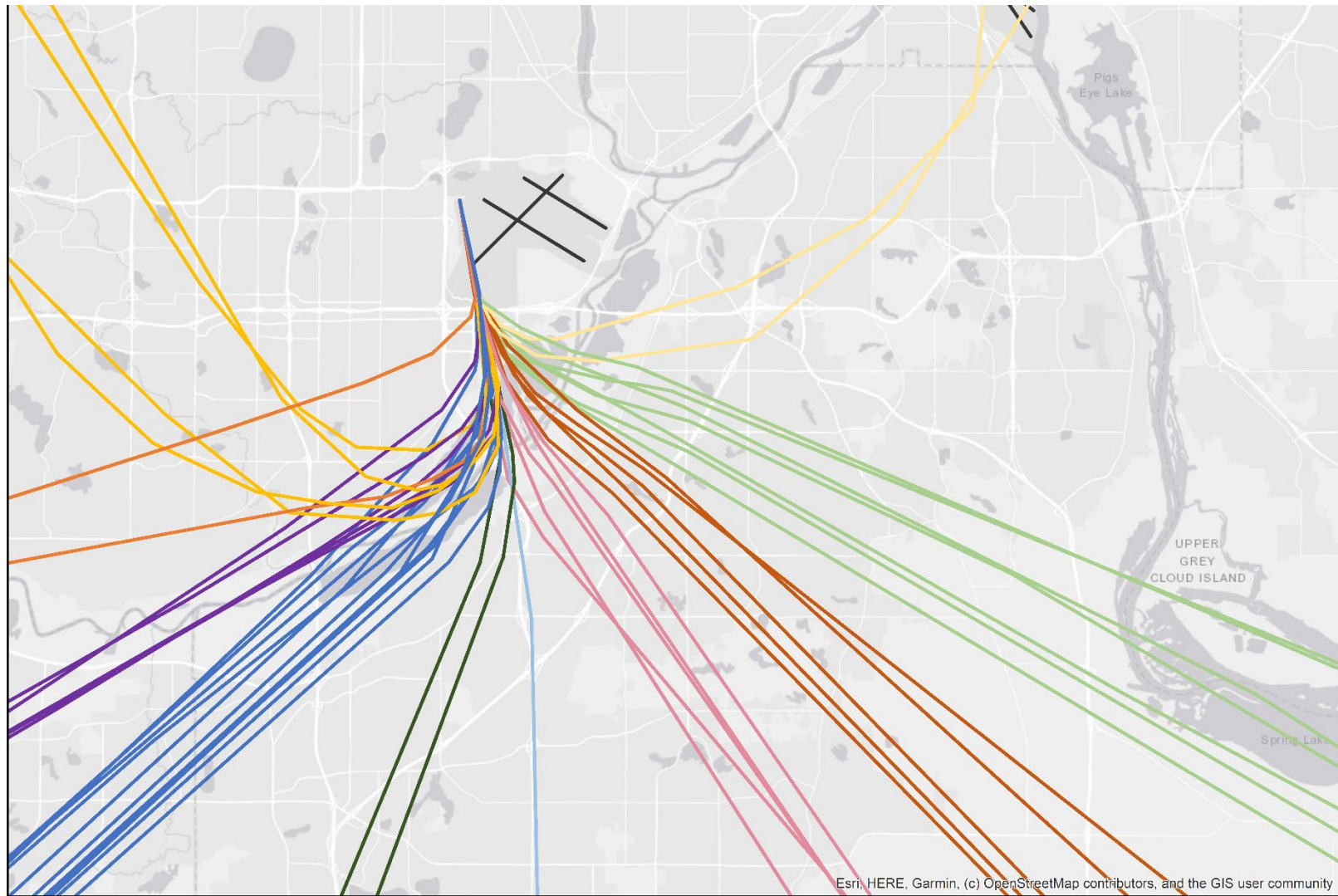


Note: AEDT modeled flight tracks shown, flight paths from actual operations have greater dispersion.

— Runway 17 Departure Model Tracks



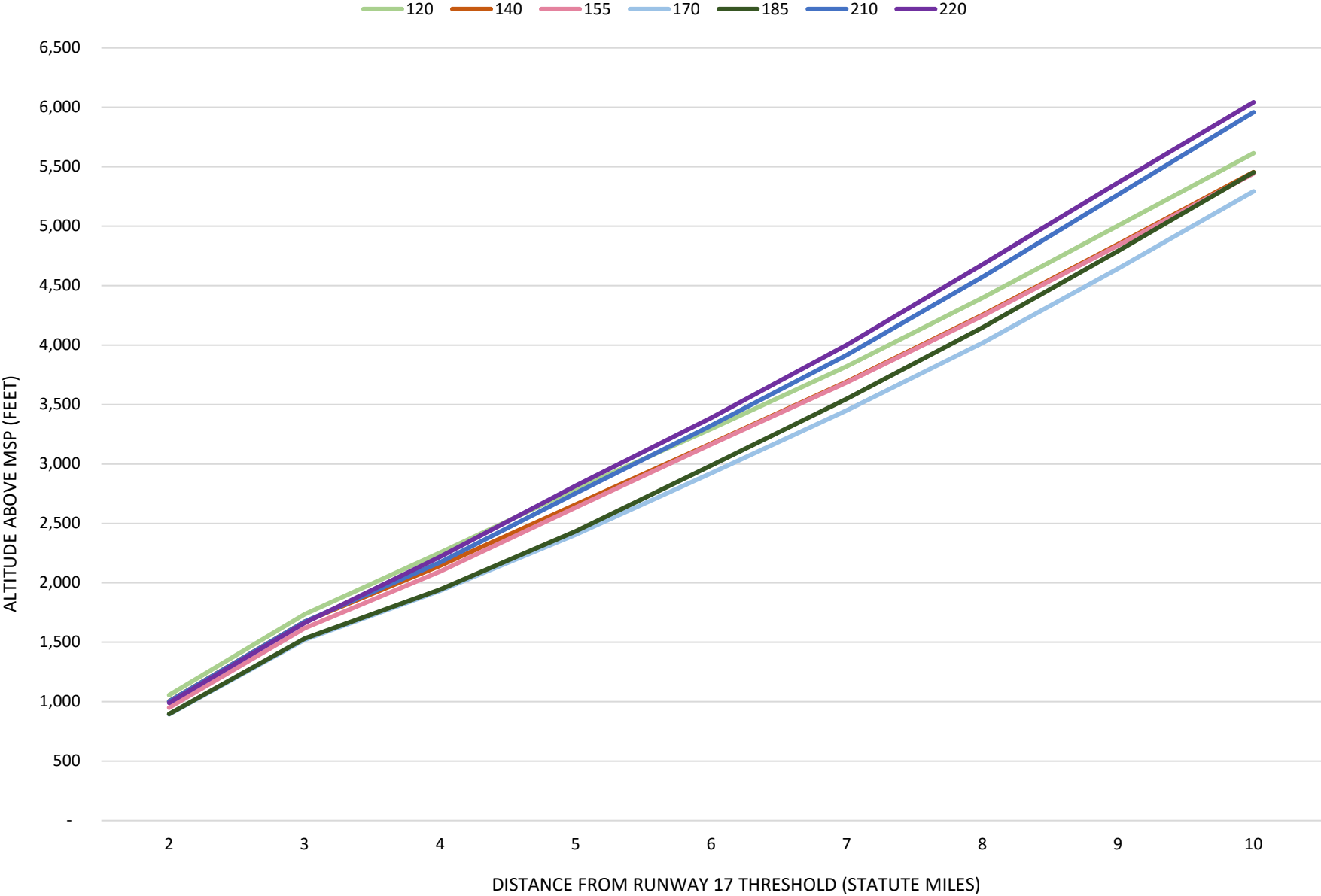
ADDENDUM: AVERAGE ALTITUDE BY HEADING
RUNWAY 17 AEDT MODEL TRACKS ASSIGNED HEADINGS



105 120 140 155 170 185 210 220 260 300

0 0.75 1.5 3 4.5 6 Miles

ADDENDUM: AVERAGE ALTITUDE BY HEADING
2022 AVERAGE MSP RUNWAY 17 DEPARTURE ALTITUDE BY HEADING



Note: AEDT modeled flight tracks used for analysis and heading assignment, not representative of ATC heading assignments. Headings with more than 300 assigned operations shown.



Metropolitan Airports Commission

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