

SAINT PAUL
DOWNTOWN AIRPORT



(DAAC)

DAAC Meeting

October 19, 2021

Agenda

1. Attendance
2. Approval of Meeting Minutes (4/20/2021)
3. Public Comment (up to 3 min. each speaker)
4. Airport Manager Update
5. Aircraft Operations and Noise Complaints Summary (Q3 2021)
6. STP Annual Sound Study
7. Member Comments
8. Set Next Meeting

Attendance-Roll Call

Airport User Representatives	Public Representatives	Government Representatives
Glenn Weibel -Chair	Gjerry Berquist	Noel Nix
Colleen Tahnk	Jacob Puffer	Andrew Wall
Tom Rehkamp	Stuart Knappmiller	David Napier
Nathan Garske	Gerald Mischke	
Larry Gregg	Jon Fure	
Corby Koehler		
Jon Dietman		
Lane Hinsperger		

Mike Wilson – Technical Advisor

Jennifer Lewis – Meeting Coordinator

Kalae Verdeja - Meeting Secretary

Approval of Meeting Minutes

April 20, 2021



Public Comment

Open to Members of the Public in Attendance

Please state your name and address for the record, and share your remarks within a timeframe of 3 minutes

STP Airport Update

Mike Wilson

Manager

St. Paul Downtown Airport (STP)
and Crystal Airport (MIC)



Airport Manager Update



RAAC Update – Sept 14

Winter Prep Update

Holman's Table Update

Airfield Painting Update

RSAT Update – Sept 15

Taxiway W change

SGS Traffic

FAASTeam Meeting – Oct. 9

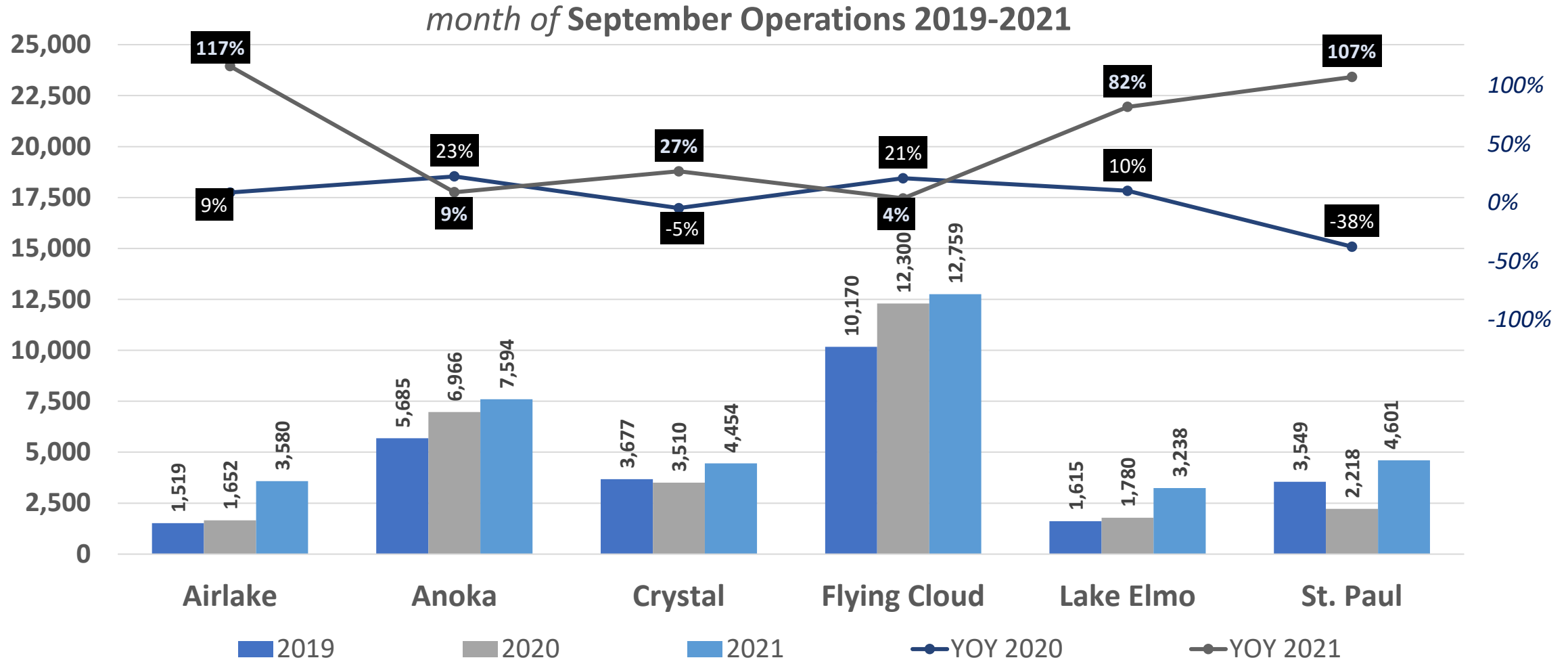
Upcoming Virtual Breakfast – Dec. 8

MAC Update

Snow Removal

Operations (next slide)

Reliever Airports Operations | SEPTEMBER 2021



Data Source: FAA Tower Counts ANE, FCM, MIC and STP

Data Source: MAC Noise Portal 21D and LVN

Note: STP and MIC ATCT hours were adjusted from 5/1/20 – 3/28/21

STP Development and Planning Efforts

Long Term
Comprehensive Plan –
2023

Airport Layout Plan –
2023



Questions?

Mike.Wilson@mspmack.org

612-224-5949

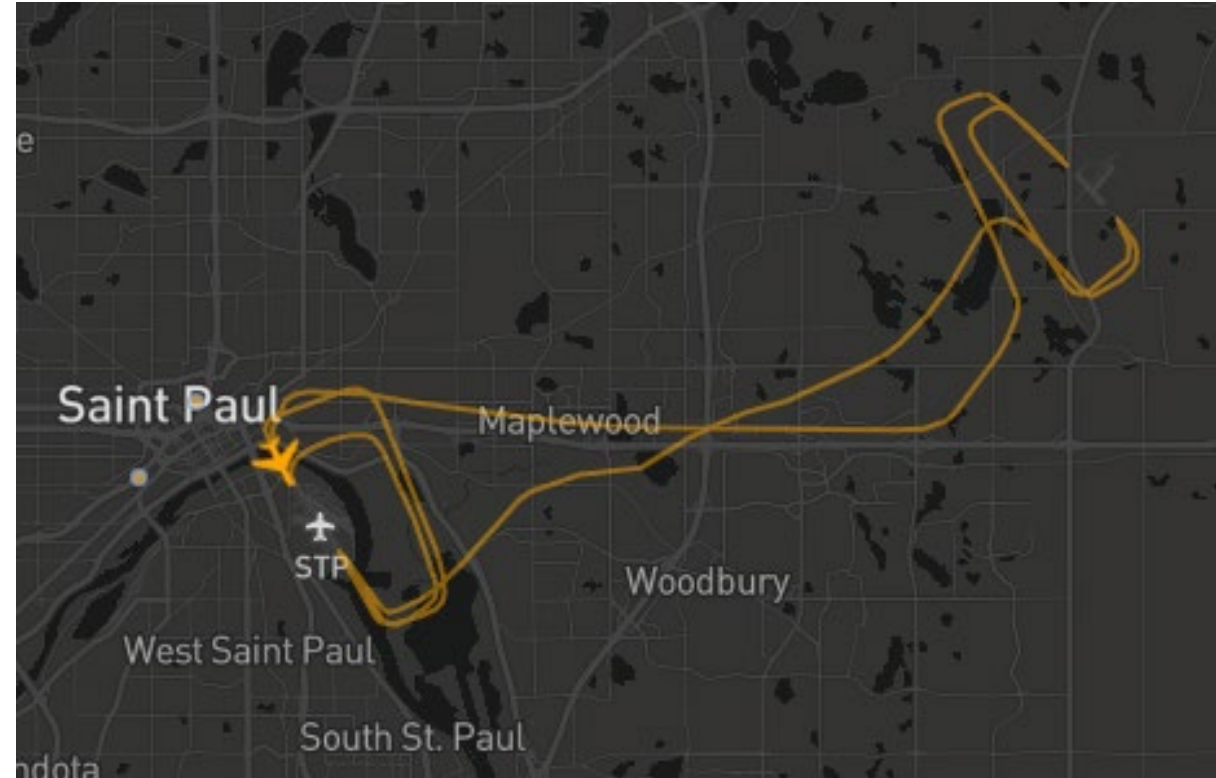
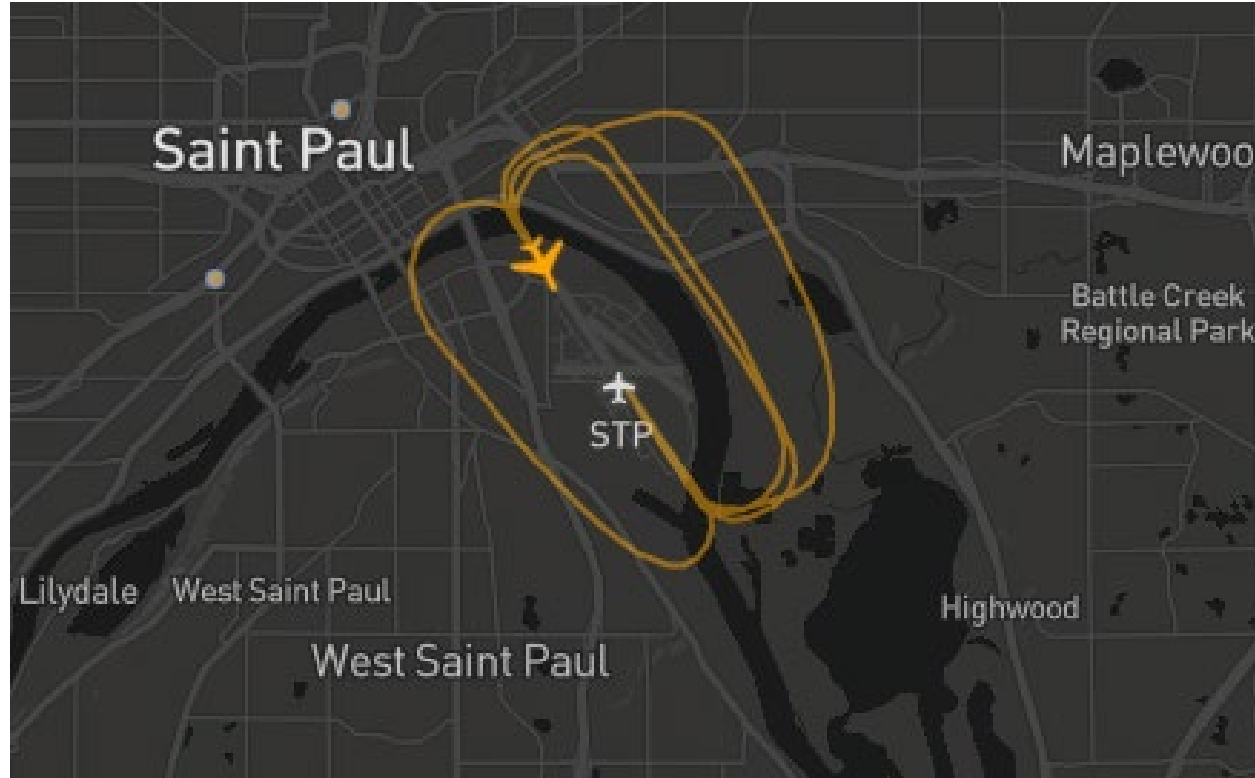


Aircraft Operations & Noise Complaints

Jennifer Lewis

MAC Community Relations Coordinator

MACNOMS Update (Effective July 1, 2021 each arrival and each departure is counted as an operation)



Before July 2021

- 2 STP operations
- 1 arrival, 1 departure

Starting July 2021

- 8 STP operations
- 4 arrivals, 4 departures

Before July 2021

- 0 STP operations
- 2 21D operations
- 1 arr, 1 dep

Starting July 2021

- 6 FCM operations
- 3 arr, 3 dep
- 4 21D operations
- 2 arr, 2 dep

Macnoise.com



Working together with Minnesota communities, aircraft operators and the FAA to reduce the impact of aircraft noise.

[Home](#) [About](#) [Contact Us](#) [FAQ](#) [News](#) [Calendar](#)

Ask us a question



Example: Why do the aircraft fly so low?

TOOLS & REPORTS

FOR OUR NEIGHBORS ▾

NOISE MITIGATION PROGRAM ▾

FOR PILOTS ▾

OTHER MAC AIRPORTS ▾

AIRCRAFT NOISE BASICS ▾



FlightTracker

Interactive Reports

MSP Runway Closures

Reports & Documents Library

MACNOMS

Welcome to the MAC Community Relations Office Website

This site was created to answer your questions and provide information that will help you better understand the complex issue of aircraft noise. It also provides a means for those affected by aircraft noise to research airport operations, express their concerns and engage with our office.

[LEARN MORE ABOUT US](#)



File a Noise Complaint



FlightTracker



Do I Qualify for Home Noise Mitigation?

Aircraft Operations & Noise Complaints

Home

STP

FCM

ANE

MIC

LVN

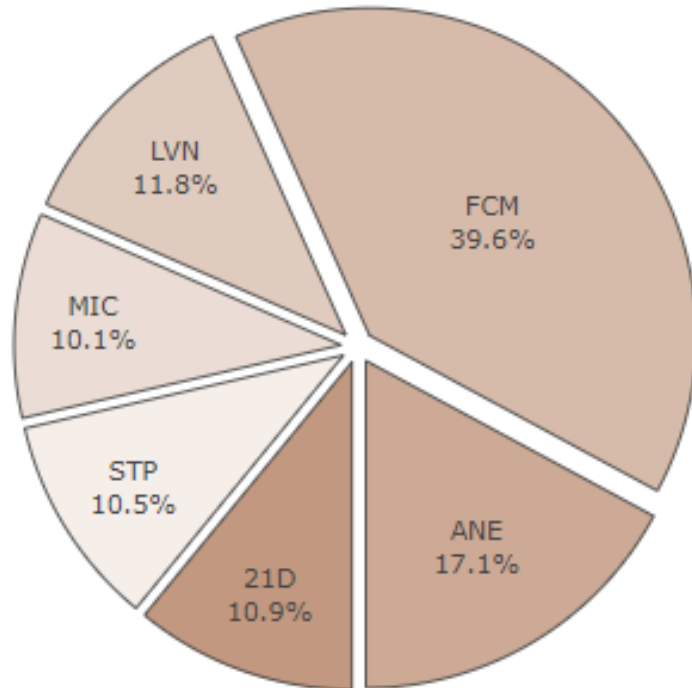
21D

MAC Reliever Interactive Reports

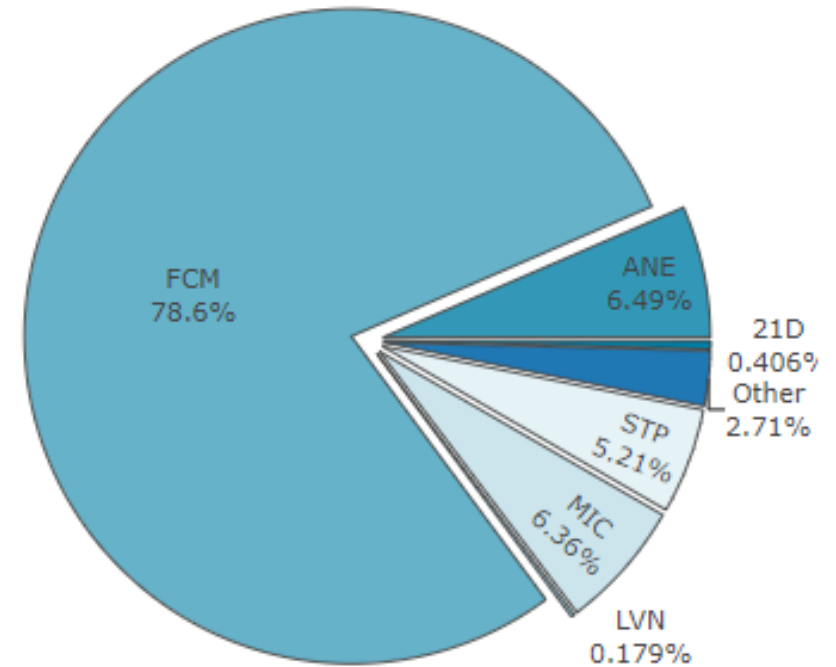


MAC Reliever Airport Comparison

AIRCRAFT OPERATIONS

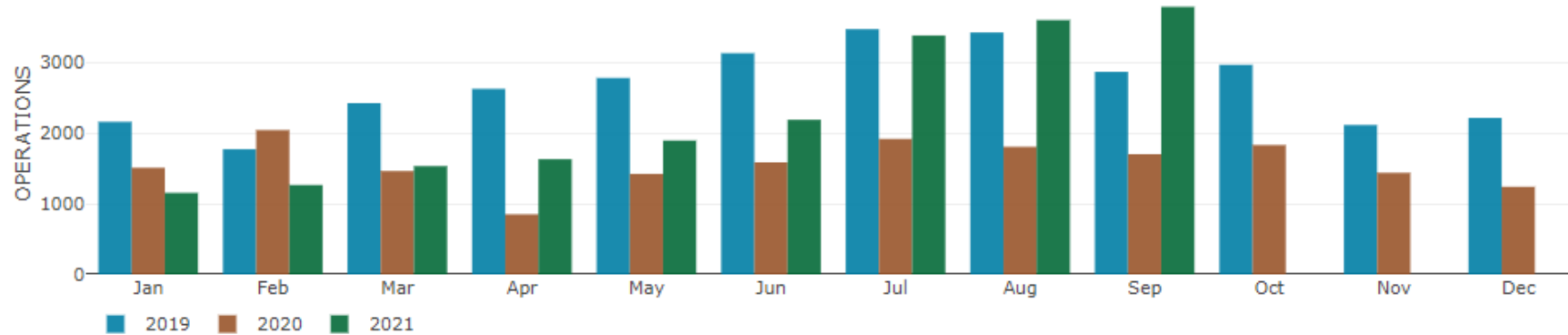


NOISE COMPLAINTS



Q3 2021 STP Aircraft Operations

2021		2020	
10761 OPERATIONS	770 NIGHTTIME OPERATIONS	5422 OPERATIONS	606 NIGHTTIME OPERATIONS



AIRCRAFT TYPE	OPERATIONS	%	COMPLAINTS	%
JET	3,271	30.4 %	137	42.7 %
HELICOPTER	623	5.8 %	66	20.6 %
PISTON	4,833	44.9 %	43	13.4 %
TURBO-PROP	1,487	13.8 %	67	20.9 %
UNKNOWN	547	5.1 %	8	2.5 %
RUN-UP	0	0.0 %	0	0.0 %

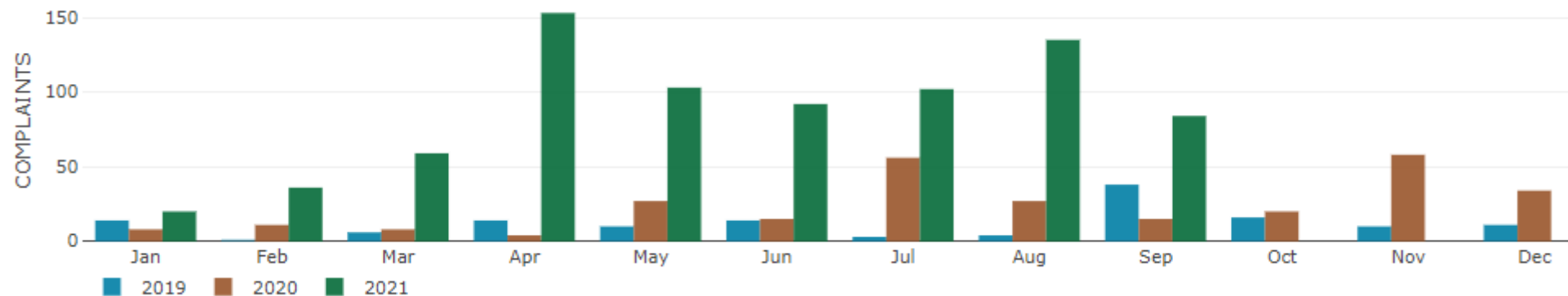
STP Q3 2021 Noise Complaints

St Paul Downtown Holman Field (STP)

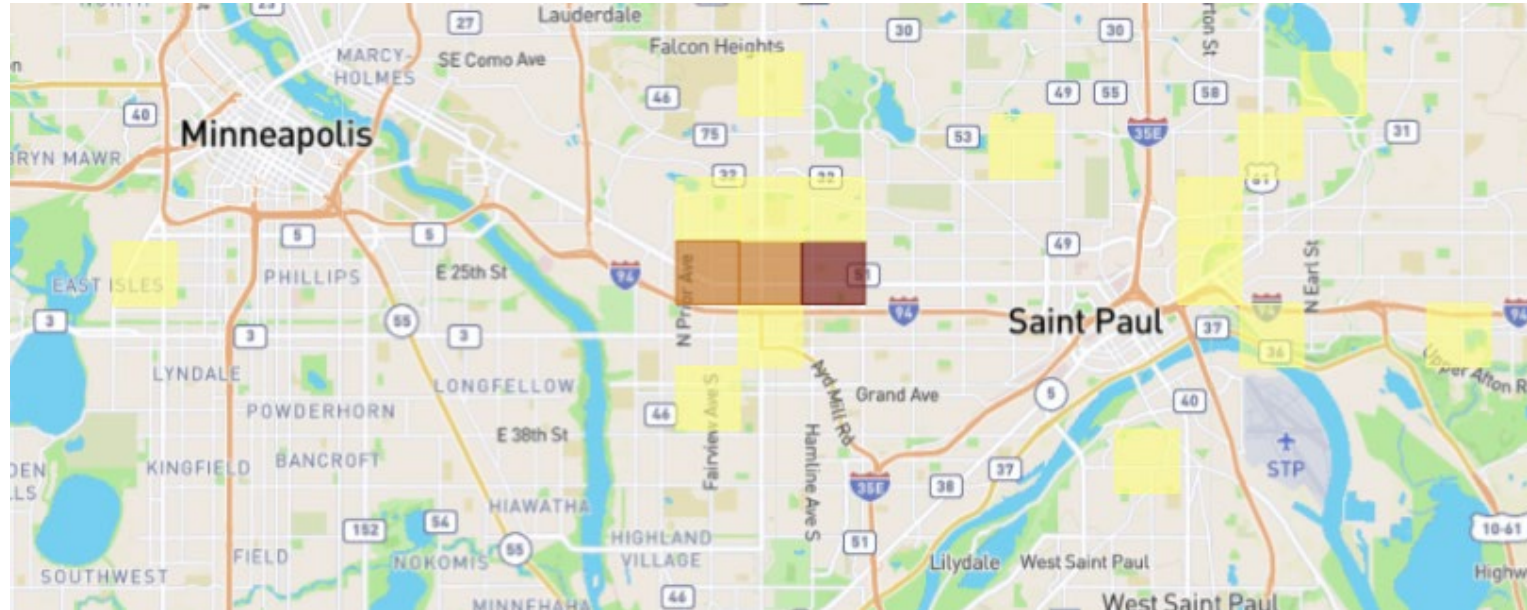
3RD QUARTER
2021

COMPLAINTS

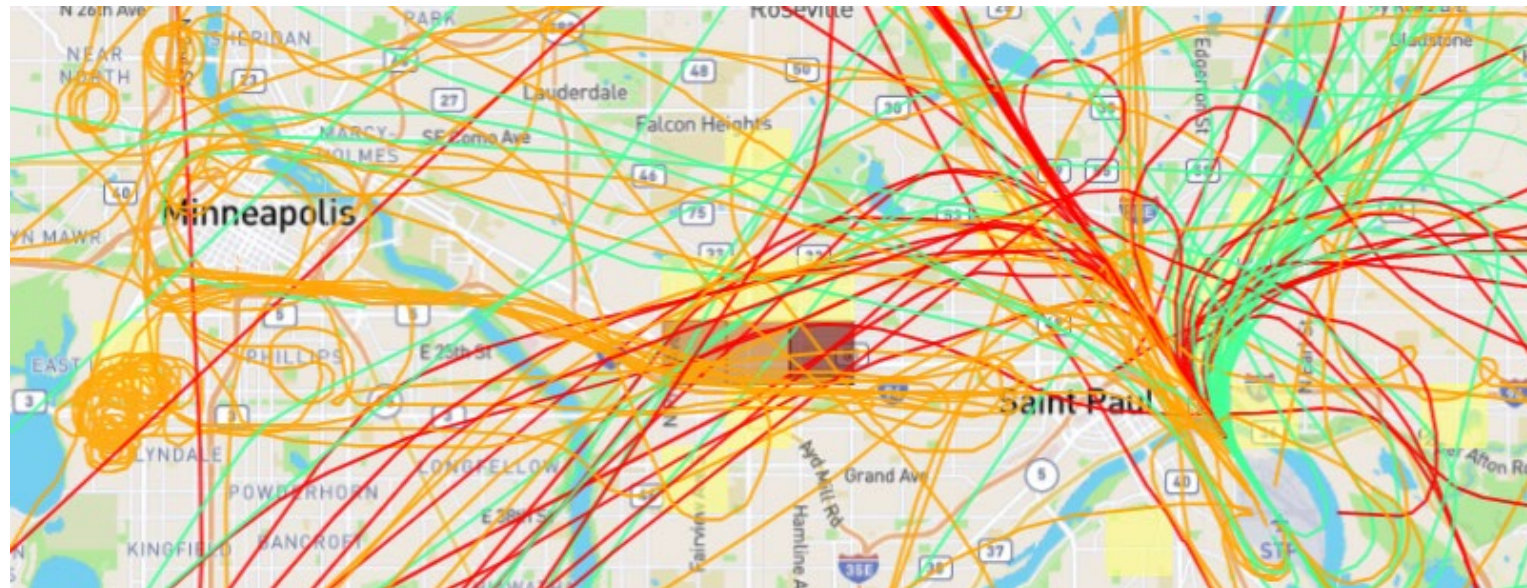
2021	321 COMPLAINTS	57 LOCATIONS	73 NIGHTTIME COMPLAINTS	11 NIGHTTIME HOUSEHOLDS
2020	98	12	13	3



Noise Complaint | Location Map



Locations



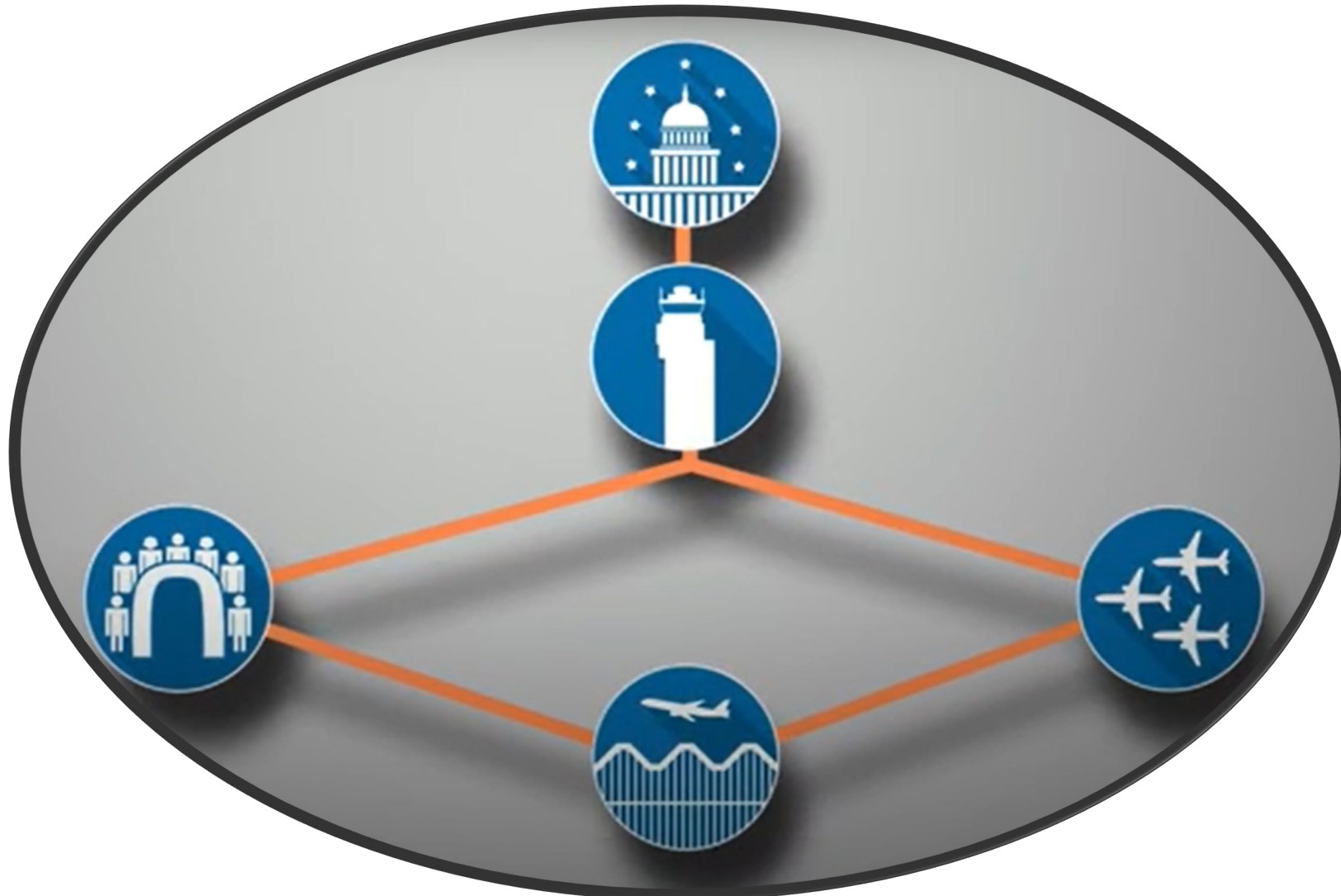
Sound 101

Michele Ross

MAC Assistant Manager

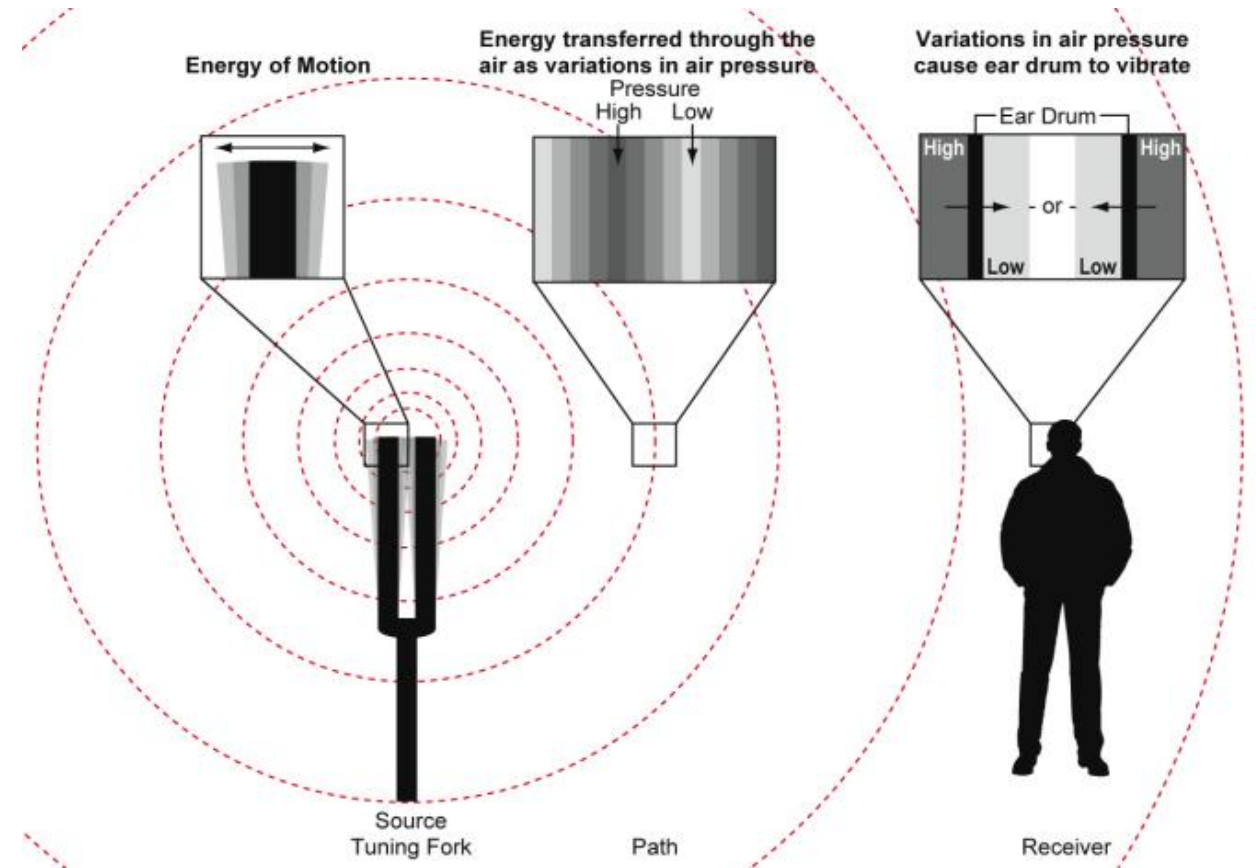
Community Relations

Aircraft Noise Basics at www.macnoise.com



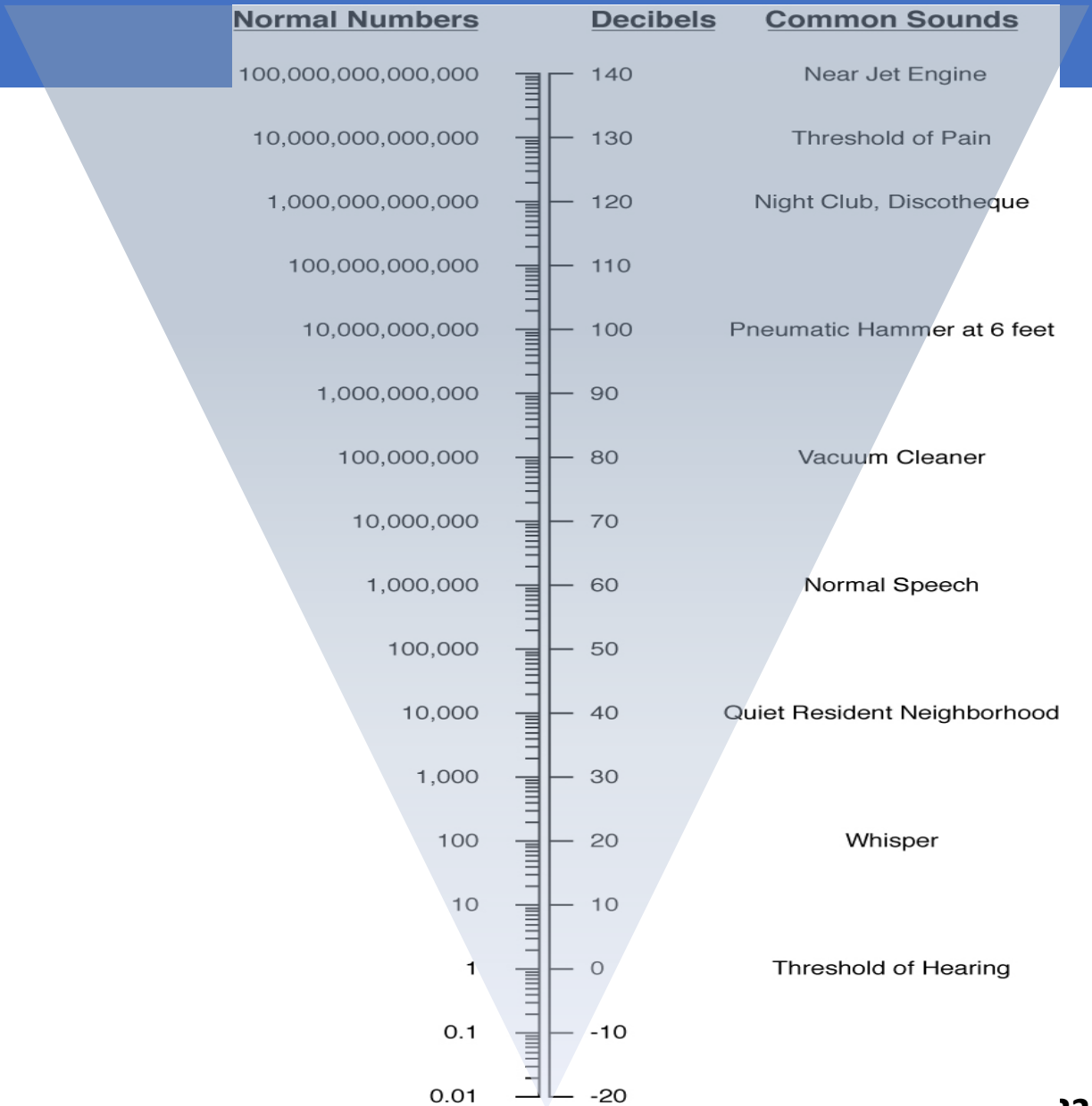
What is Sound?

- **Sound** is pressure variation our ears can detect
 - An objective quantity
- **Noise** is “unwanted” sound
 - A subjective quantity
- Relate sound and noise by considering effects
 - Annoyance/situation
 - Speech interference
 - Sleep disruption



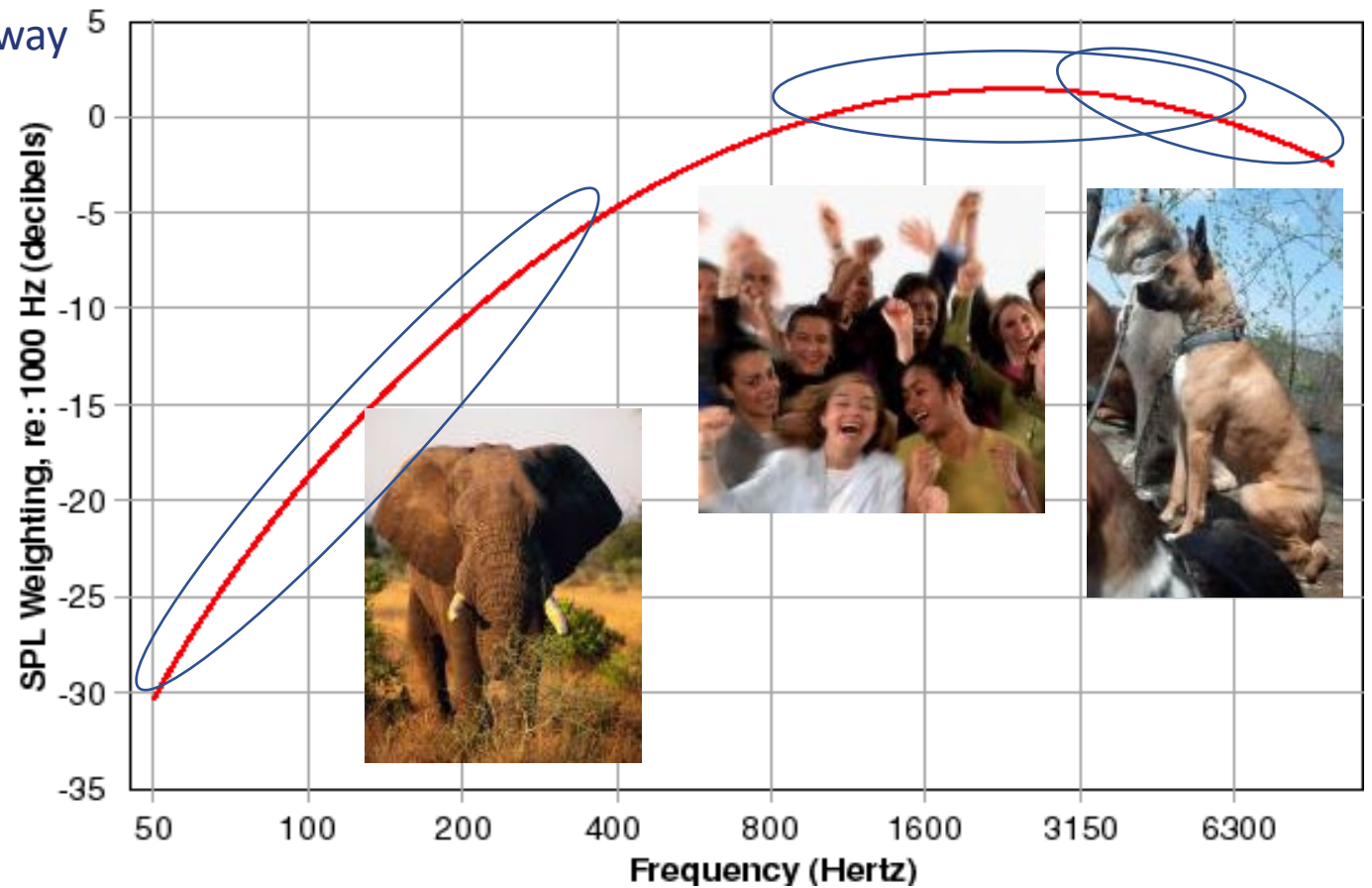
Decibels

- Logarithmic scale – decibels, or dB to express sound levels and noise levels
- Why?
 - Hear sound pressures over a HUGE range
 - Decibels compress this range to match the way we interpret sound pressure
 - 0 to 140 dB
 - 0.000000003 to 0.003 lbs. per sq. inch (psi)



A-weighted Sound Levels

- Our ear is not equally sensitive to all frequencies
- A-weighted decibels (dB) measure sound the way we “hear” it

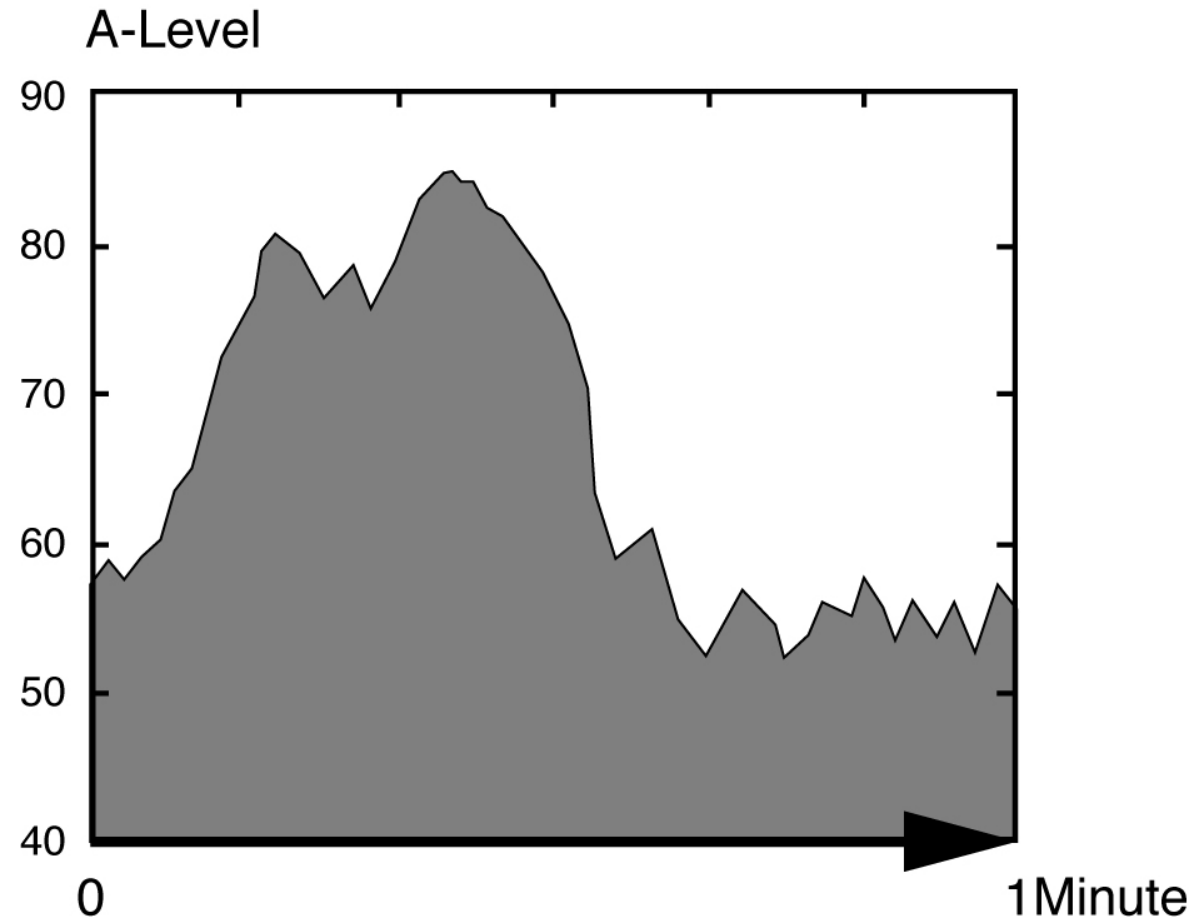


Common Aircraft Noise Metrics

-
- Maximum A-Weighted Sound Level, L_{max}
 - Sound Exposure Level, SEL
 - Equivalent Sound Level, L_{eq}
 - Day-Night Average Sound Level, DNL
 - Other Metrics :
 - Time Above a Threshold, TA
 - Number Above a Threshold, NA

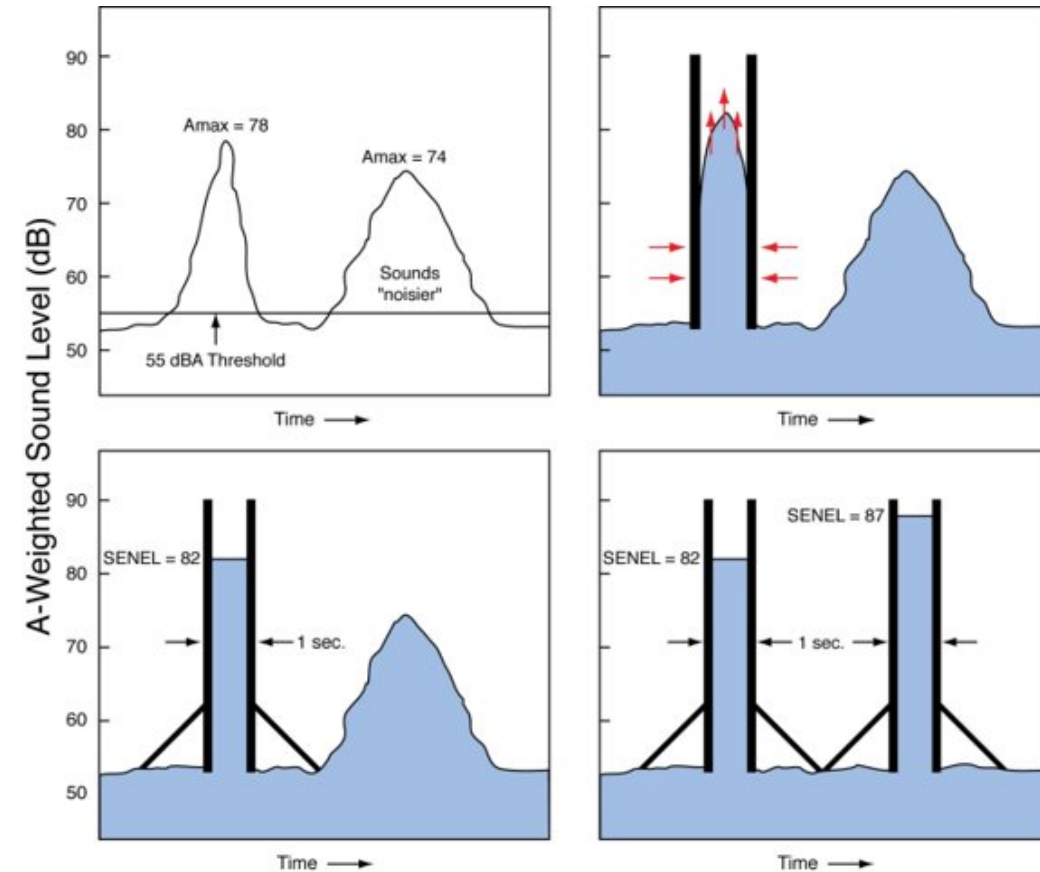
Maximum Sound Level (Lmax)

- Because of the variation in level of a sound event, it is often convenient to describe the event with its maximum sound level, abbreviated as Lmax
- Accounts only for sound amplitude (A-weighted sound level)
- Two events may have the same maximum level, but much different exposures



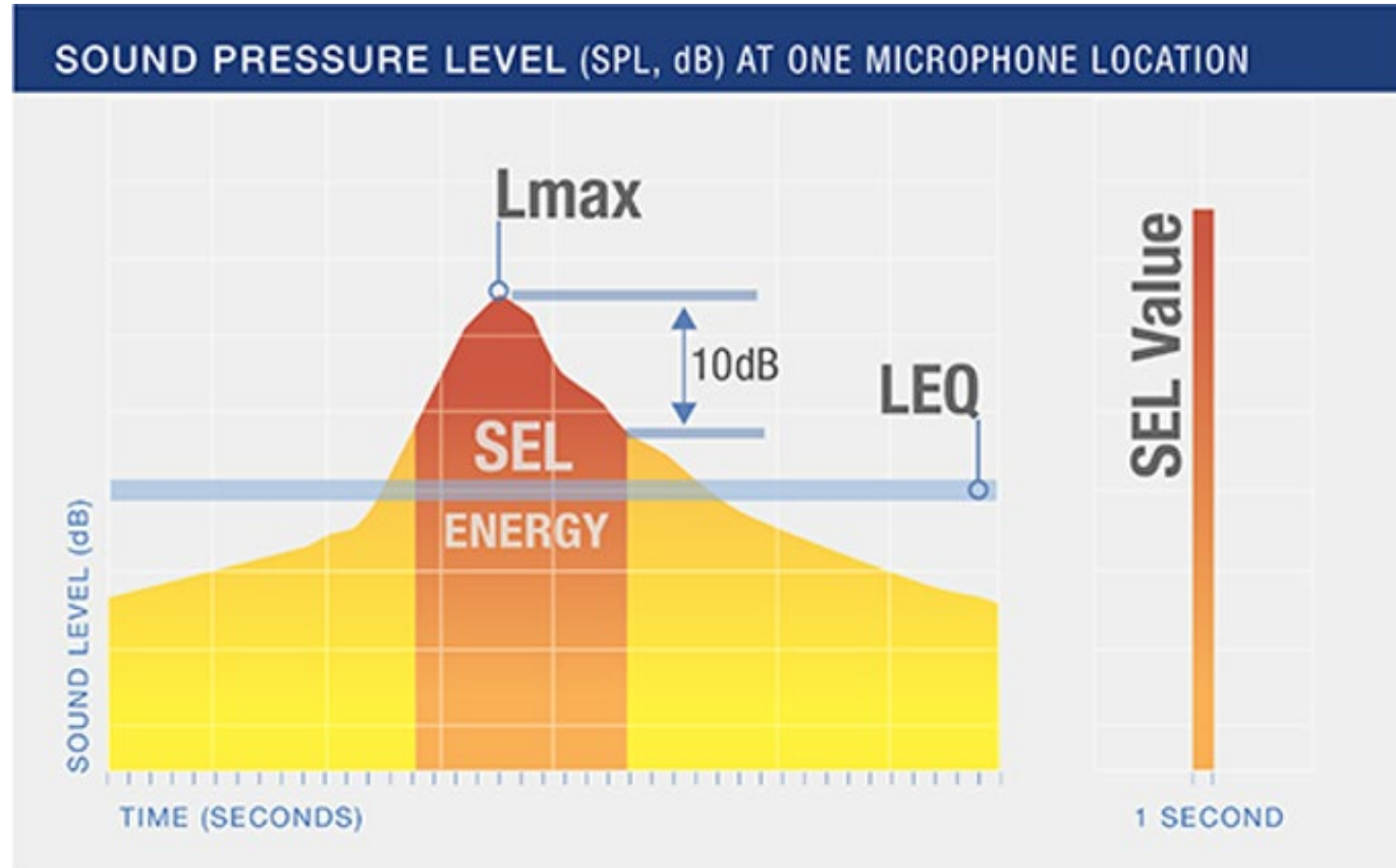
Sound Exposure Level (SEL)

- Duration matters: A longer event may seem “noisier,” even if it has a lower or equal maximum level
- SEL measures the total “noisiness” of an event by taking duration into account



Equivalent Sound Level (Leq)

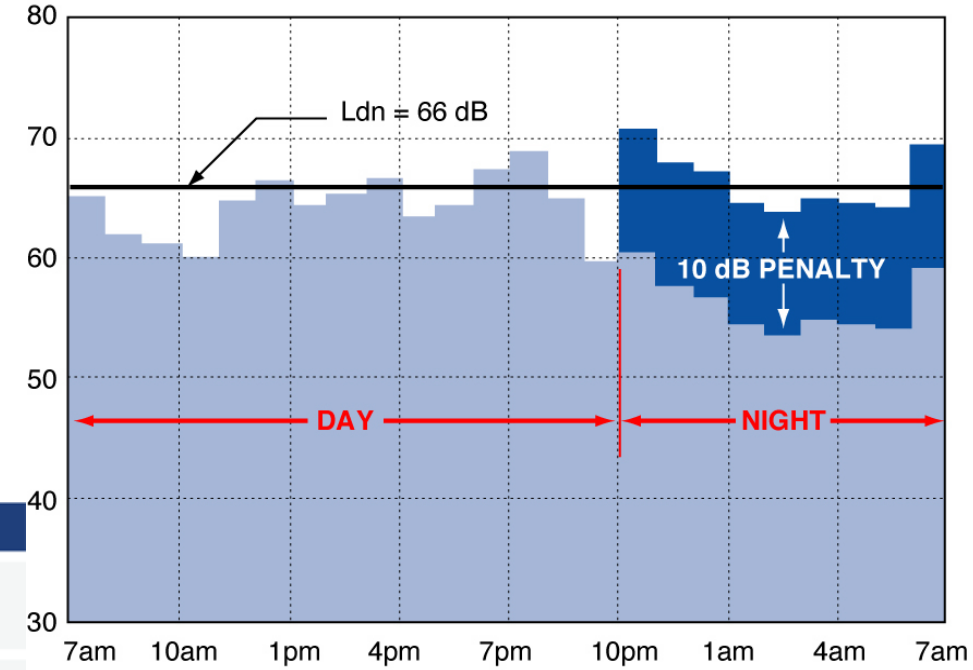
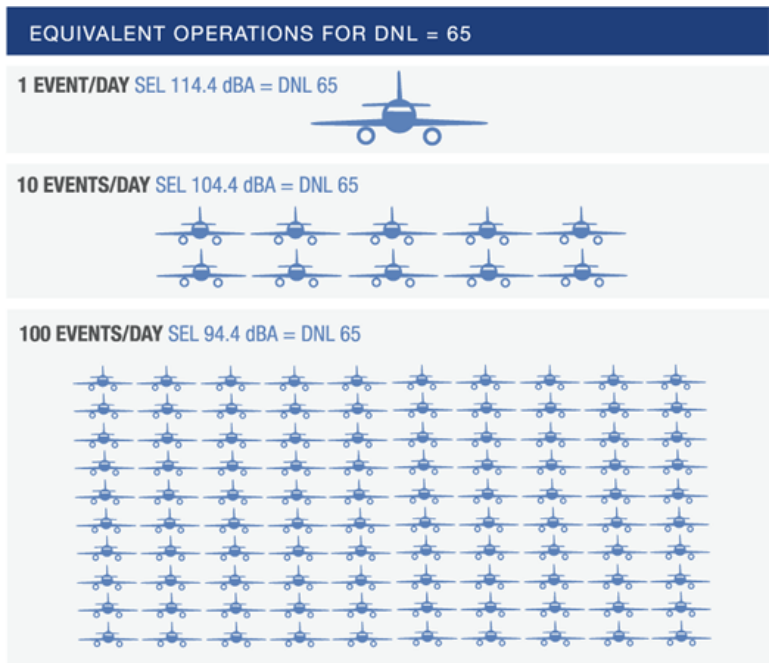
- Equivalent Sound Level (Leq)
 - The energy average noise level over a specified time period e.g., Leq(1hr) of 80 dB



Source: FAA

Day-Night Average Sound Level (DNL)

- A way to describe the noise dose for a 24-hour period
- Accounts for noise event “noisiness” (SEL)
- Accounts for number of noise events
- Provides an additional weighting factor for nighttime operations



Source: FAA

Other Metrics

-
- Time Above (TA)
 - The time above a specified noise level (or threshold) e.g., 30 minutes/day above 80 dB
 - Number Above (NA)
 - The number of events above a specified noise level (or threshold) e.g., 30 aircraft events/day above 80 dB Lmax or SEL

STP 2021 Annual Sound Study

STP Sound Study

August 17-23, 2021

- The purpose of the study is to measure sounds associated with aircraft activity at St. Paul Downtown Airport (STP)
- MAC conducts an annual study in accordance with the commitments of the Supplemental Conditions of Agreement for the airport floodwall
- Each study involves seven consecutive days of field measurements
- Studies have been conducted each year since 2007
- Other studies in August were conducted in 2017 & 2010 & 2020
- Modeling data were included in 2021 study



Daily STP Aircraft Activity per Runway

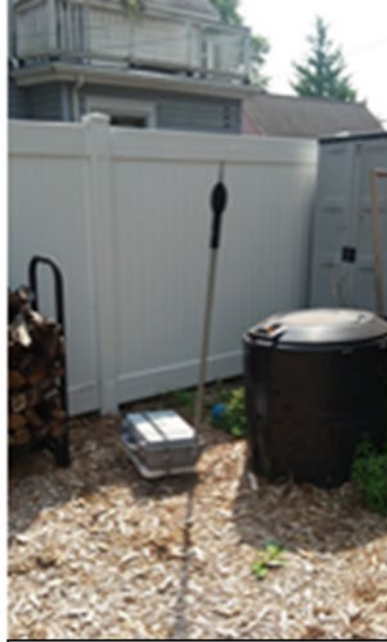
Runway	Tues. Aug 17	Wed. Aug 18	Thurs. Aug 19	Fri. Aug 20	Sat. Aug 21	Sun. Aug 22	Mon. Aug 23	Total
STP Arrivals (414)								
9	-	-	-	-	6	-	-	6
13	-	-	-	-	-	-	2	2
14	85	80	62	44	2	43	42	358
27	-	-	-	-	2	-	-	2
31	-	-	-	-	-	-	-	0
32	-	-	-	-	26	2	16	44
STP Departures (420)								
9	-	-	-	-	-	1	-	1
13	2	1	-	-	-	1	3	7
14	84	77	64	51	-	45	40	361
27	-	-	-	-	1	-	1	2
31	-	-	-	-	2	-	-	2
32	2	2	1	-	24	1	17	47
Daily Total	173	161	127	95	63	93	122	834



Site 1 – District 3 (Mt. Hope Drive)



Site 2 – District 17 (Allen Building)



Site 3 – District 5 (Jenks Ave)



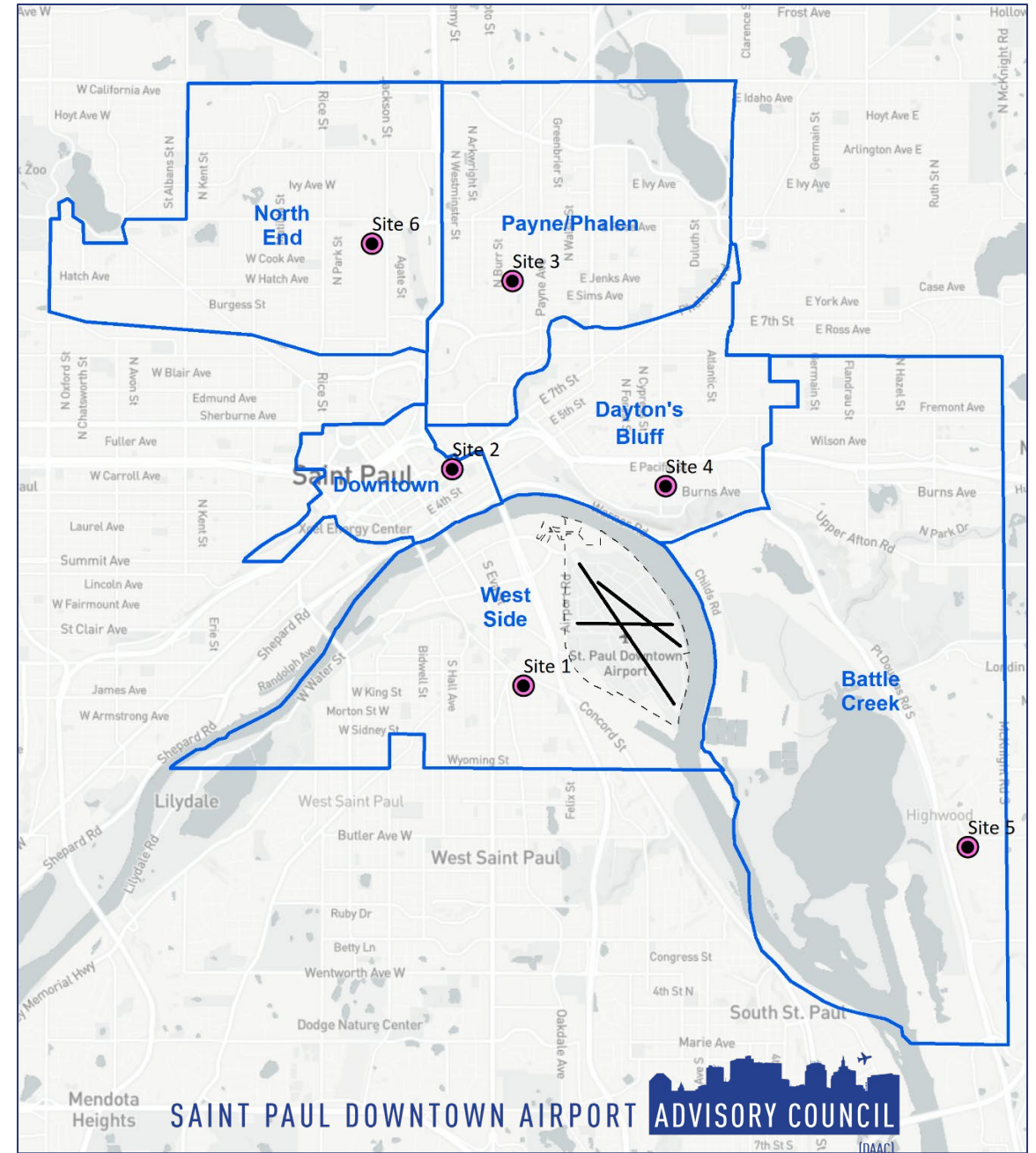
Site 4 – District 4 (Suburban Ave)



Site 6 – District 1 (Skyway Drive)

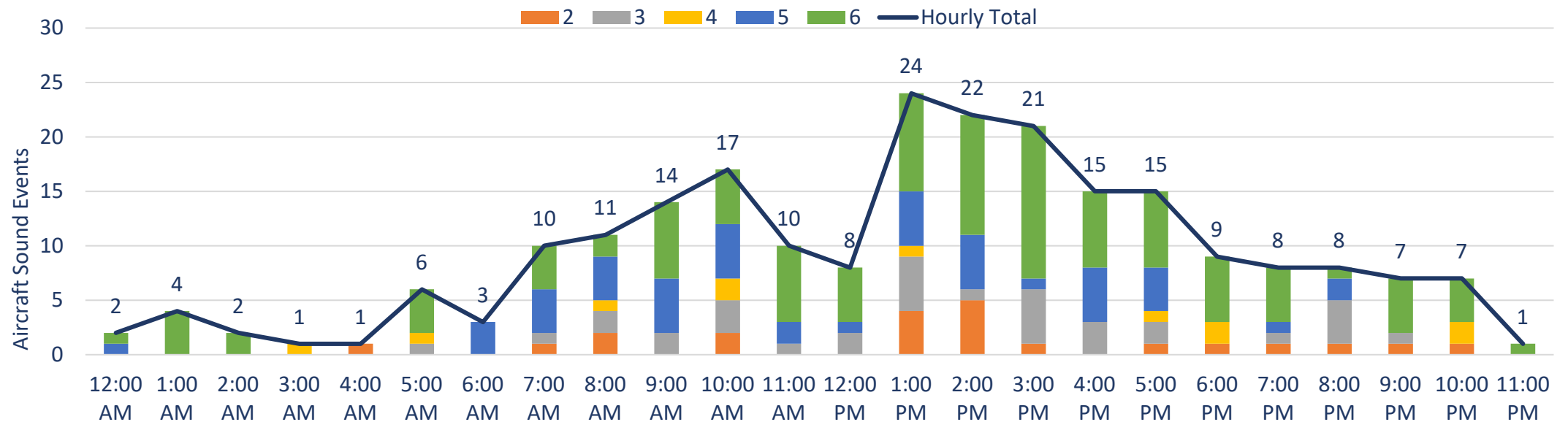


Site 6 – District 6 (Abell Drive)



STP Sound Study Field Measurement Results

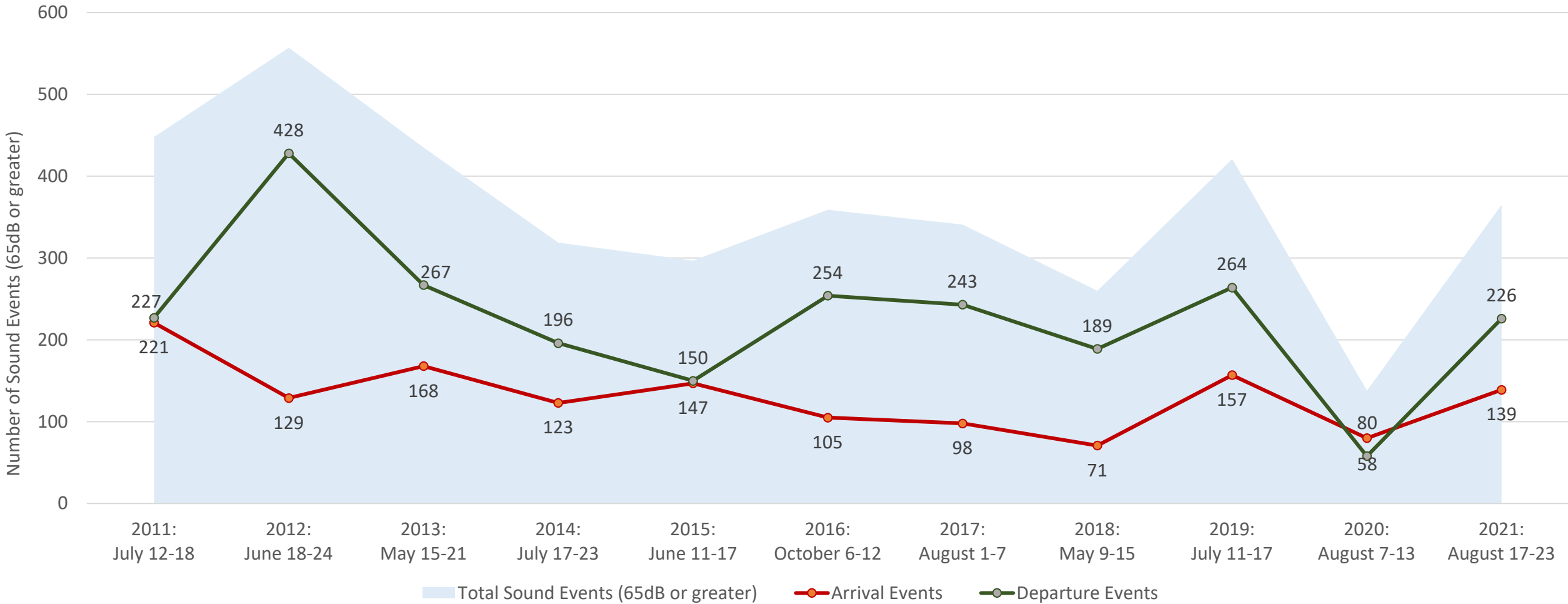
Number of Measured Single Event STP Aircraft Sounds								
	Tue. August 17	Wed. August 18	Thur. August 19	Fri. August 20	Sat. August 21	Sun. August 22	Mon. August 23	Site Total
Site 1	-	-	-	-	-	-	-	0
Site 2	5	1	4	4	6	1	1	22
Site 3	9	4	4	4	5	2	6	34
Site 4	3	1	1	1	2	2	1	11
Site 5	3	12	5	4	2	8	14	48
Site 6	26	28	17	10	2	13	15	111
Daily Total	46	46	31	23	17	26	37	226



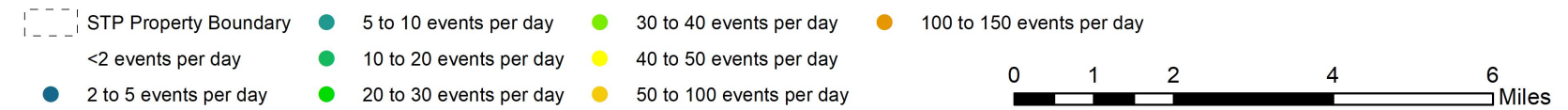
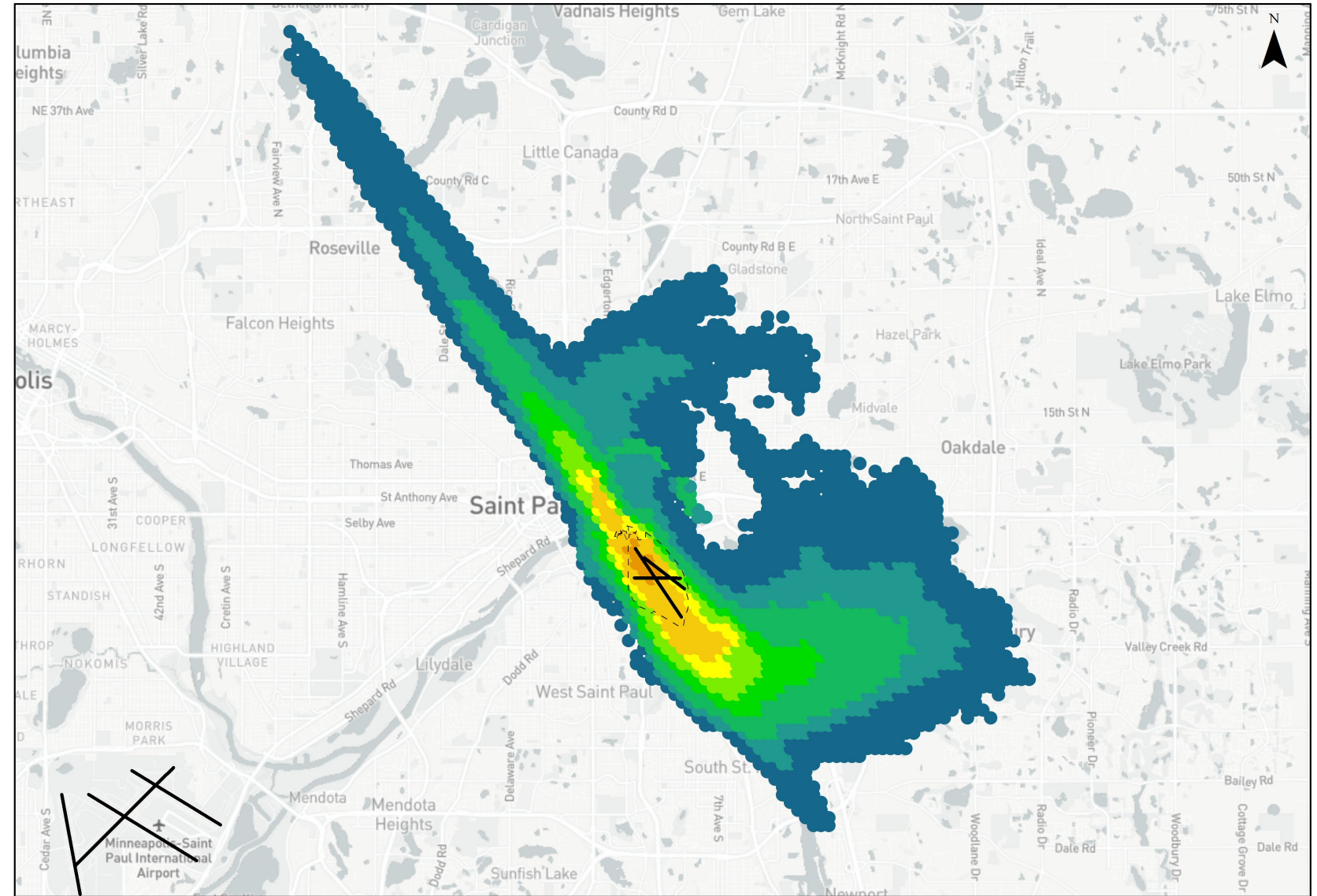
STP Sound Study Field Measurement Results

Number of Single Event Aircraft Sounds by Level				
Site	# of Events > 65dBA	# of Events > 80dBA	# of Events > 90dBA	# of Events > 100dBA
Aircraft Arrivals				
1	0	0	0	0
2	11	0	0	0
3	17	0	0	0
4	3	0	0	0
5	3	0	0	0
6	105	1	0	0
Arrival Total	139	1	0	0
Aircraft Departures				
1	0	0	0	0
2	11	0	0	0
3	17	0	0	0
4	8	0	0	0
5	45	0	0	0
6	6	0	0	0
Departure Total	87	0	0	0
Total Aircraft Events	226	0	0	0

STP Sound Study Field Measurement Results



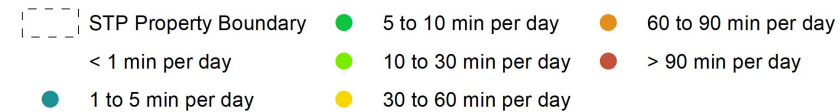
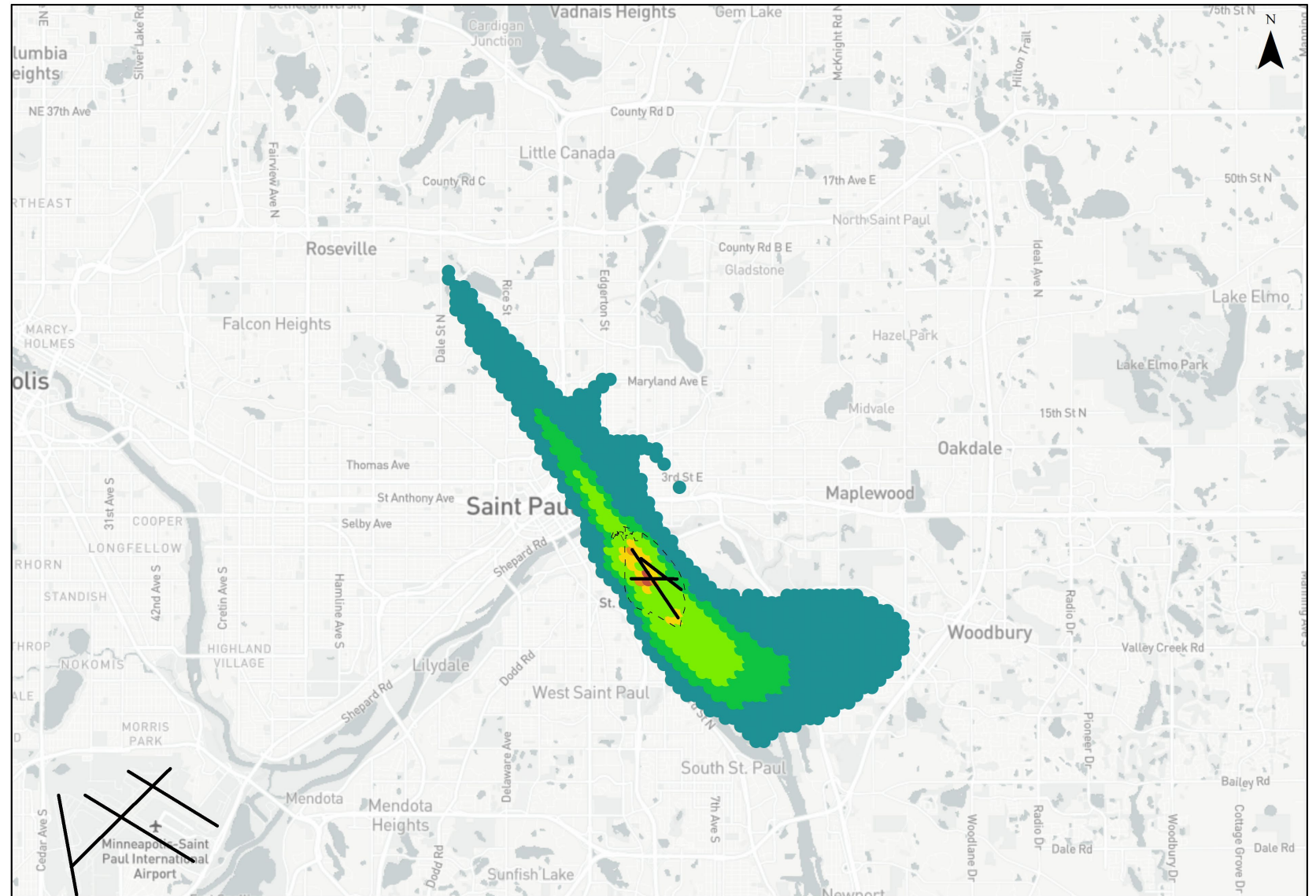
STP Sound Study Modeling Results -Number Above



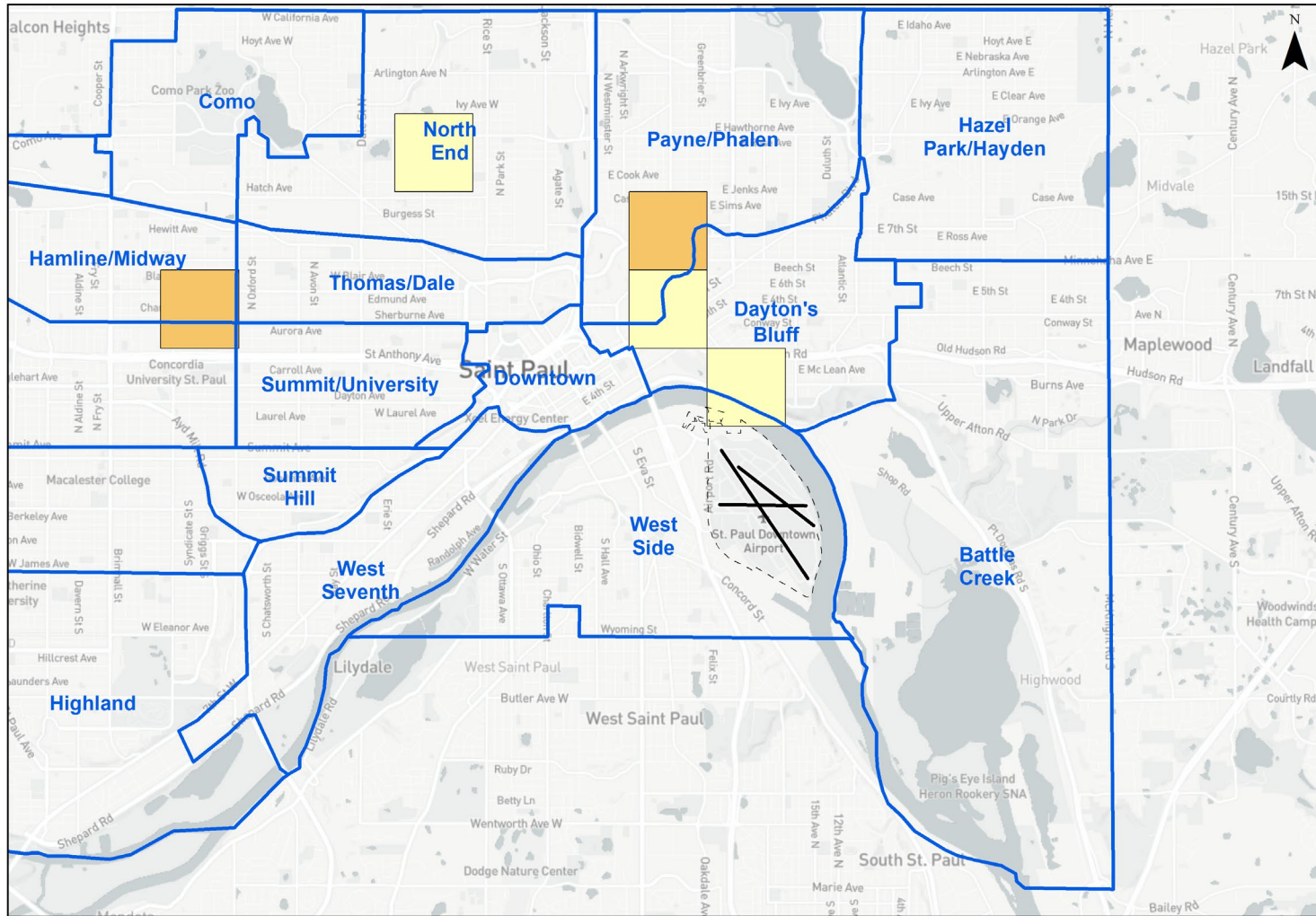
Measured Vs Modeled Number Above Sound Levels			
Site	N ⁶⁵ Measured	N ⁶⁵ Modeled	Difference
1	0	22	22
2	22	67	45
3	34	48	14
4	11	25	14
5	48	121	73
6	111	147	36

STP Sound Study Modeling Results -Time Above

Measured Vs Modeled Time Above Sound Level			
Site	TA ⁶⁵ Measured (min)	TA ⁶⁵ Modeled (min)	Difference (min)
1	0.0	2.3	2.3
2	6.5	8.8	2.4
3	4.7	9.8	5.1
4	1.9	4.8	2.9
5	6.7	24.7	18.1
6	20.7	34.3	13.6



STP Sound Study -Complaints



Complaints and Operations		
Aircraft Type	Operations	Complaints
Helicopter	18	1
Jet	269	7
Piston	380	3
Turbo-Prop	82	5
Unknown	85	-
Total	834	16

Questions?



Member Comments



2022 Meeting Schedule

Set Next Meeting Dates*

(Typically held on the third Tuesday in May and October)

- Possible Dates:
April 19 or May 17, 2022

- Possible Time:
3:30 p.m. or Other?

**Special meetings may be called as necessary*

January							February							March							April						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1			1	2	3	4	5			1	2	3	4	5						1	2
2	3	4	5	6	7	8	6	7	8	9	10	11	12	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	27	28	29	30	31	24	25	26	27	28	29	30	24	25	26	27	28	29	30
30	31																										

May							June							July							August						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2							
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
29	30	31	26	27	28	29	30	24	25	26	27	28	29	30	28	29	30	31									
													31														

Thank you!