



CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE

AGENDA **AUGUST 7, 2024**

6:30 p.m. – 8:30 p.m.

Centennial Airport, 7565 S. Peoria Street, Unit D9, Englewood, CO 80112

Chair: Chris Eubanks **Vice Chair:** Pam Thompson **Treasurer:** Andy Jones **Secretary:** Alison Biggs

Members' Representatives and Alternate Representatives are requested to attend all meetings in person.

Members of the public may attend meetings in person, or virtually.

CACNR Mission:

CACNR will bring together airport, community, FAA, and aviation industry representatives to collaboratively identify and discuss noise issues at Centennial Airport and recommend courses of action that could reduce noise over affected communities.

1. CALL TO ORDER AND DETERMINATION OF QUORUM:

<i>Arapahoe County:</i>	Leslie Summey/Sreenivasan Alakappan	<i>Greenwood Village:</i>	Donna Johnston/John Jackson
	Vacant/Vacant	<i>Highlands Ranch Metro Dist.</i>	Andy Jones/Renee Anderson
<i>Douglas County:</i>	Abe Laydon/Dan Avery	<i>Lone Tree:</i>	Mike Anderson/Chuck Darnell
	Alison Biggs/Mark Adams	<i>Parker:</i>	Ashley Chasez/Bryce Matthews
<i>Aurora:</i>	Brad Pierce/Mindy Parnes	<i>ACPAA:</i>	Michael Fronapfel/Vacant
<i>Castle Pines:</i>	Chris Eubanks/Ron Cole	<i>AOPA:</i>	John Hirshman/Brad Schuster
<i>Castle Rock:</i>	Laura Cavey/Sandy Vossler	<i>CABA:</i>	Don Kuskie/Mike Straka
<i>Cherry Hills Village</i>	Robert Eber/Randy Weil	<i>Wings Over the Rockies:</i>	Bill Wasmund/Vacant
<i>Foxfield:</i>	Pam Thompson/Frank Lawrence		

2. CONSENT AGENDA: (items here may be moved to Agenda Item #3, on the request of any CACNR Representative)

- A. DRAFT MINUTES, June 5, 2024 – Alison Biggs, Secretary
- B. TREASURER'S REPORT, May 2024 – Andy Jones, Treasurer, Zach Gabehart, ACPAA Staff
- C. NOISE REPORTS, May & June 2024- Zach Gabehart, ACPAA Staff

3. ITEMS REMOVED FROM CONSENT AGENDA:

4. CACNR STUDY GROUP COMMITTEE: Brad Pierce, Chris Eubanks, Mike Fronapfel

5. PART 150 STUDY UPDATE/PROGRESS: Mead and Hunt

- A. Centennial Airport Noise and Compatibility Study Update
- B. Aviation Noise 102 – Response to Roundtable Questions

6. EXECUTIVE COMMITTEE:

- A. ACPAA Meeting, June 13, 2024 – Pam Thompson
- B. Retreat Priorities

7. REPRESENTATIVES' COMMENTS:

- A. Provide Food for CACNR Meetings

8. OTHER REGULAR REPORTS:

- A. AIRPORT DIRECTOR – Mike Fronapfel
 - 1. Flight School Activity
 - 2. Part 150 Study Update
 - 3. Aviation Fuel – How Much Sold/What Kind
 - 4. Community Related Activity
 - 5. Other Airport Activity
 - 6. Legislative
 - 7. Status of Follow Up Items
- B. Chart Supplement Update – Zach Gabehart

9. **OLD BUSINESS:**
A. 2024-2025 CACNR Attendance Record
10. **NEW BUSINESS:**
A. Response Letter to FAA Administrator Stone – Chris Eubanks
11. **PUBLIC COMMENT:** (3 minutes per person time limit):
A. RECEIVED BY CACNR
B. MEETING ATTENDEES / VIRTUAL ATTENDEES
12. **NEXT MEETINGS:**
- | | | | |
|------------------------------|--------------------|-----------------------|---|
| A. CACNR – | September 4, 2024 | 6:30 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | October 2, 2024 | 6:30 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | November 6, 2024 | 6:30 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | December 4, 2024 | NO MEETING | |
| B. ACPAA – | August 8, 2024 | 3:00 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | September 12, 2024 | 3:00 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | October 10, 2024 | 3:00 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | November 14, 2024 | 3:00 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| | December 12, 2024 | 3:00 p.m. | 7565 South Peoria Street, Englewood, CO 80112 |
| C. PART 150 MEETING – | August 7, 2024 | 1:00 p.m. - 3:00 p.m. | Part 150 Advisory Committee 7565 South Peoria Street, Englewood, CO 80112 |
13. **ADJOURN:**



**CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE
MINUTES
June 5, 2024
DRAFT**

VISION – QUIETER SKIES FOR OUR COMMUNITIES

MISSION – CACNR WILL BRING TOGETHER AIRPORT, COMMUNITY, FAA, AND AVIATION INDUSTRY REPRESENTATIVES TO COLLABORATIVELY IDENTIFY AND DISCUSS NOISE ISSUES AT CENTENNIAL AIRPORT AND RECOMMEND COURSES OF ACTION THAT COULD REDUCE NOISE OVER AFFECTED COMMUNITIES.

Chair: Chris Eubanks **Vice Chair:** Pam Thompson **Treasurer:** Andy Jones **Secretary:** Alison Biggs

1. CALL TO ORDER, ROLL CALL, and QUORUM: The meeting was called to order at 6:32 p.m. by Chair Chris Eubanks.

The following were in attendance, and a quorum was present:

Arapahoe County:	Leslie Summey	Foxfield:	Pam Thompson
Douglas County:	Dan Avery	Greenwood Village:	Donna Johnston
Douglas County:	Alison Biggs	Highlands Ranch:	Andy Jones
Aurora:	Brad Pierce	Lone Tree:	Mike Anderson
Castle Pines:	Chris Eubanks	AOPA:	John Hirshman
Cherry Hills Village:	Robert Eber	Wings Over the Rockies:	Bill Wasmund

Others in attendance were Ron Cole, Alternate Representative from Castle Pines; and ACPAA staff Lauren Wiarda. There were 9 members of the public in attendance and three on line. **Lauren – did I miss anyone from staff or on-line??**

Those absent were: Arapahoe County: Vacant/Vacant

Castle Rock:	Laura Cavey/Sandy Vossler	ACPAA:	Mike Fronapfel/Vacant
Parker:	Ashley Chasez/Bryce Matthews	CDOT Aeronautics Div	Todd Green/Vacant

2. CONSENT AGENDA: The Consent Agenda included the Draft CACNR Minutes from May 1, 2024; a Treasurer's Report from May 31, 2024 showing a balance of \$24,782.88; and the Noise Report from April 2024. On the motion of Andy Jones, duly seconded, the Consent Agenda was approved.

The April 2024 Noise Report included the following information:

April Local Operations:	15,531	April Total Operations:	27,900
Year to Date Local Operations:	59,902	Year to Date Total Operations	111,353

27,900 Total Operations in April resulted in 1,031 complaints from 78 households.

<u>April Total:</u>		<u>April 60 – 69 db:</u>		<u>April Noise Events:</u>		<u>April 80 – 89 db:</u>	
				<u>April 70 – 79 db:</u>			
Golf Course	11,895	Golf Course	6,988	Golf Course	4,595	Airport East	400
Meridian	7,153	Meridian	5,719	Meridian	1,393	Golf Course	306
Portable Station	2,659	Portable Station	2,191	Airport East	739	Meridian	38
Airport East	2,559	Parker	1,761	State Park	640	State Park	14
State Park	2,339	State Park	1,683	Portable Station	455	Portable Station	12
Parker	1,982	Airport East	1,377	Parker	213	Castle Rock	09
Grandview Estates	1,495	Grandview Estates	1,347	Grandview Estates	144	Parker	08
Greenwood Village	1,274	Greenwood Village	1,162	Greenwood Village	108	Grandview Estates	04
Castle Rock	1,071	Castle Rock	955	Castle Rock	74	Greenwood Village	04
LoneTree	766	Lone Tree	734	Hunters Hill	47	Hunters Hill	02
Hunters Hill	584	Hunters Hill	535	Lone Tree	31	Castle Pines	01
Castle Pines	199	Castle Pines	184	Castle Pines	14	Lone Tree	01
Sagebrush Park	146	Sagebrush Park	137	Sagebrush Park	9	Sagebrush Park	00

April Noise events in the 90+ decibel range: Airport East 43 Castle Rock – 33 Golf Course – 06 Meridian – 03 State Park – 02
Portable Station 01

<u>April Noise Complaints</u>		<u>and</u>		<u>Numbers of Households:</u>		<u>YTD Complaints</u>		<u>and</u>		<u>Number of Households:</u>	
(1,031)				(78)		(3,798)				(143)	
Unincorporated Arapahoe County	518 (50%)	UAC	31 (55%)	UAC	1,784	UAC	44				
Greenwood Village	297 (29%)	GV	25 (29%)	GV	1,307	GV	43				
Centennial	120 (12%)	Other	05 (06%)	Centennial	300	Other	17				
UDC	32 (03%)	UDC	04 (05%)	UDC	133	UDC	08				
Denver	30 (03%)	Castle Rock	03 (05%)	Denver	112	Centennial	06				
Other	16	Centennial	03	Other	77	Lone Tree	06				

DRAFT

Castle Rock	12	Lone Tree	03	Castle Rock	38	Aurora	04
Lone Tree	03	Denver	02	Parker	20	Castle Rock	04
Highlands Ranch	02	Aurora	01	Aurora	11	Parker	04
Aurora	01	Highlands R	01	Lone Tree	08	Highlands R	03
Castle Pines	00	Castle Pines	00	Highlands R	05	Castle Pines	02
Cherry Hills Vill age	00	CHV	00	Castle Pines	03	Denver	02
Parker	00	Parker	00	CHV	00	CHV	00

Year to Date, the top five households complaining were:

Household #1 631	Unincorporated Arapahoe County	Household #4 289	Centennial
Household #2 475	Greenwood Village	Household #5	Unincorporated Arapahoe County
Household #3 294	Greenwood Village		

In April, 59 responses were requested from 1,031 noise complaints, with 46 of those requests made by email (78%), and made by telephone (22%).

In April, 986 complaints were made about **daytime flights** (7:00 a.m. – 9:59 p.m.) – 96%.

45 complaints were made about **nighttime flights** (10:00 p.m. – 6:59 a.m.) – 4%.

In April, props accounted for **91% of the complaints by aircraft type**; **jets** accounted for **9% of the complaints**, and **helicopters** caused **0%**.

In April, training was responsible for 60% of the complaints, **departures** were responsible for 26% of the complaints, and **arrivals** were responsible for 14% of the complaints.

The April Complaint Map and an April Radar Track Density Map were provided.

3. ITEMS REMOVED FROM CONSENT AGENDA: None

4. CACNR ORIENTATION:

1. N.O.I.S.E. Overview and Federal Update – Postponed due to internet problems with Emily Tranter. Reschedule possibly in August.

The next in-person presentation from Mead and Hunt was also scheduled for August, related to progress on the Part 150 Study, so there would need to be coordination for that month.

5. **CACNR STUDY GROUP COMMITTEE:** The Committee provided its Quarter 1 2024 Update Report, dated June 5, 2024. Updates from the last report were indicated in blue type. There were some comparisons between the first quarter of 2023 and the same time period for 2024. ACPAA staff is following up with pilots who have been noticed flying in the study area when there was room in the pattern. Most have been receptive, and staff will continue being proactive in this area.

Throughout the report, there were notations that all current and future air traffic controllers have or will receive(d) briefing/training regarding the various adopted mitigations. Noise sensitive areas have been added to the radar display in the tower. Considerable work was being done to provide noise abatement information on the Chart Supplement, for use by flights from all over the US. It was agreed that Bill Wasmund should work with this effort, on behalf of CACNR, and CACNR would like to be kept up to date about its progress and distribution.

A continuing education meeting had been held on May 23, 2024 to increase pilot awareness of voluntary fly quiet procedures and the preferred pattern area. Attendance had been good; the next meeting will be scheduled for August 2024. ACPAA staff have been proactively looking at nighttime outliers and contacting them to remind them about the noise abatement guidelines, which unfortunately are only voluntary. Question was asked if there were numbers of outliers related to each flight school and what the reaction had been from schools which had been contacted, but that information was not available.

The Study Area Data Analysis portion of the report showed that the trend may be for a decrease in the percentage of touch and goes, but with an increase in overall flights, that percentage does not necessarily present an accurate picture of what the study area is dealing with.

Members of the public were still being encouraged to send in comments, and it was requested that the report be made more noticeably separate on line, and there be a useful way to submit comments related to it.

For the next report, the plan was to include bar charts with more data analysis, and additional numbers comparisons as well as percentages. Question was asked where the increase in capacity was coming from. Staff indicated that would be researched. The research should also include if transient or airport based or from where. Whether the increase in capacity was related to an increase in touch and goes or other factors might also be researched.

6. PART 150 STUDY UPDATE/PROGRESS: Update would be provided at the August meeting.

7. EXECUTIVE COMMTEE:

- A. ATTENDANCE AT ACPAA MEETINGS – Pam Thompson agreed to represent CACNR at all future ACPAA meetings.
- B. RETREAT PRIORITIES – Nothing new.

8. **REPRESENTATIVES' COMMENTS:**

A. **GENERAL DISCUSSION** – Request was made for comparison Radar Track Density Maps from 2022 and 2023 to be provided for the next meeting.

A question was asked if the portable noise monitor in Greenwood Village could be made permanent. There was curiosity as to how the location of the current monitors had been determined, and if anyone 'manages' them. Audience member Bette Todd, a past CACNR Representative, had been very involved when the sites were selected and provided some history about that process.

It was noted that the Part 150 study should determine if the current noise monitors provide the most useful data given the increases in population throughout the area and the operations at the airport; they have not been moved from their original placement. Additional monitors might also be considered.

It was noted that Elbert County may still be interested in becoming a member of CACNR. It has been informed of the process.

9. **OTHER REGULAR REPORTS:**

A. **DIRECTOR'S REPORT** – None

10. **OLD BUSINESS:** None

11. **NEW BUSINESS:** None

12. **PUBLIC COMMENT:**

A. **RECEIVED BY CACNR** – Communication had been received from an individual who was concerned that multiple complaints submitted on-line had not been counted as such, but only as one complaint. It had been clarified that in order to submit multiple complaints at a time, the Noise Hotline – 303-790-4709 – should be used instead of the on-line mechanism.

B. **ATTENDEES/VIRTUAL/TELEPHONE** – The procedure for signing up to speak during this portion of the agenda was read. Orchard Gate and Louviers were represented at this meeting. Orchard Gate representatives noted the situation seemed worse and the flight schools were not really helping. Someone needs to put their foot down with the flight schools, as they seem to go wherever they wish. If some don't have to "fly in the box," then no one must have to fly in the box; if some flights can move, then all flights can move away from those living under the boxes.

The issue of leaded fuel was again brought up, with major concerns for students in schools under flights using such fuel. It was stated that CACNR could do better in addressing this problem. There was some appreciation that night flights were being monitored, but frustration that the problems are addressed only by voluntary guidelines. It was stated that good relations don't get us anywhere – what is needed are strategies with teeth to require implementation. There was some concern that the April heat map did not look quite right with what was benign experienced over Louviers. There was discussion of the altitude limit over various areas, when planes are coming into the airport to land, etc. It was noted there needed to be constant education for pilots because of the 'churn' within that group.

13. **NEXT MEETINGS:**

A. CACNR –	July 2024	NO MEETING
	August 7, 2024	6:30 p.m. 7565 South Peoria Street, Englewood, CO 80112
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C. **PART 150 MEETING DATES** When and What Meetings, When Available from APA Staff

14. **ADJOURNMENT:** The meeting was adjourned at 8:10 p.m.

Alison Biggs, Secretary

CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE		2024 BUDGET - Approved November 1, 2023; Updated as of 08/02/2024			
		BUDGET	ACTUAL		
INCOME:			as of 08/02/24	NOTES	
CARRY OVER FROM PRIOR YEAR		\$ 20,000.00	\$20,317.55	Carry over from 2023	
ACPAA		\$ 10,000.00	\$10,000.00		
CACNR REGULAR MEMBERS		\$ -		Members not invoiced for 2024 due to amount of carry over available	
TOTAL INCOME:		\$ 30,000.00	\$30,317.55		
EXPENDITURES:					
WORK PROGRAM:					
COMMUNITY OUTREACH		\$ 2,000		Website Updating and Maintenance	
		\$ 5,000		Media Outreach Project	
FLY QUIET		\$ 1,000		Placeholder for Projects tbd	
NOISE MONITOR		\$ 1,000		Exploration of desired data and software for 2024	
EXECUTIVE/WORK PLAN		\$ 500		Orientation Manual, Annual Report	
EDUCATION					
2 Reps to UC Davis Symposium		\$ 4,000	\$4,534.67	Symposium to be at UC Davis; estimate based on prior symposiums	
2 Reps to 2 N.O.I.S.E. Conferences		\$ 4,000		based on prior years on-site conferences	
CONSULTATION/ TASK SUPPORT		\$ 4,000		Projects with Jason Schwartz	
MEMBERSHIP DUES		\$ 1,000	\$1,000.00	N.O.I.S.E.	
ADMINISTRATIVE		\$ 1,000		Part time secretarial assistance	
		\$ -		Legal	
RESERVE		\$ 2,500.00		for presently unidentified and unanticipated expenses and/or	
				work CACNR activities consistent with the approved Work Plan.	
TOTAL EXPENDITURES:		\$ 26,000.00			
CARRY OVER TO 2025		\$ 4,000.00	\$24,782.88	Actual to be determined at the end of 2024	
** Usually includes registration, travel, ground transportation, lodging, meals.					
FRAME OF REFERENCE: The MOU Funding Structure adopted 12/13/2018 called for an initial two-year funding mechanism. "Thereafter, CACNR will provide ACPAA and each Regular Member with a report on the previous year's expenditures, and an annual invoice accompanied by a proposed budget indicating how the requested funds would be utilized, so that funds could be appropriated for the coming year."					



Centennial Airport Monthly Noise Report



May 2024

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1 Definitions

A-weighted Sound Level – A measure of sound level with weighted frequency characteristics that correspond to human subjective response to noise.

Arrival – The act of an aircraft approaching and landing at an airport.

Ambient Noise Level – The level of noise that is all-encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the noise monitor.

Community Noise Event Level (CNEL) – The average sound level over a 24-hour period, with a penalty of 10dB for nighttime hours between 10:00 PM and 7:00 AM.

Day Night Average Sound Level (DNL) – A measure of the average noise level over a 24-hour day. It is the 24-hour, logarithmic (or energy) average, A-weighted sound pressure level with a 10-decibel penalty applied to the nighttime event levels that occur between 10:00 PM and 7:00 AM.

Decibel (dB) – A logarithmic quantity reflecting the ratio of the sound pressure of the source to a reference pressure. This results in a sound pressure level of about 0 dB for the quietest sounds that we can detect and sound pressure levels of about 120 dB for the loudest sounds that can be heard without pain.

Departure – The act of an aircraft taking flight and leaving the airport.

Energy-Averaged Sound Pressure Level (Leq) – The value or level of a steady, non-fluctuating sound that represents the same sound energy as the actual time-varying sound evaluated over the same time period.

Flight Track – The path along the ground followed by an aircraft in flight.

Instrument Flight Rules (IFR) Rules and regulations established by the FAA to govern flight under conditions in which flight by outside visual reference is not safe. IFR flight depends upon flying by reference to instruments, and navigation is accomplished by reference to electronic signals. It is also a term used by pilots and controllers to indicate the type of flight plan an aircraft is flying, such as an IFR or VFR flight plan.

Local Operations – Operations in the local traffic pattern or within sight of the airport; flight in local practice areas within a 20 mile radius; execute simulated instrument approaches or low airport passes.

Maximum Noise Level (L_{max}) – The peak noise level for a single noise event.

Noise Exposure – The cumulative sound energy affecting a person over a specified period of time.

Overflight – Aircraft flight originating and terminating outside the area that transits the airspace without landing.

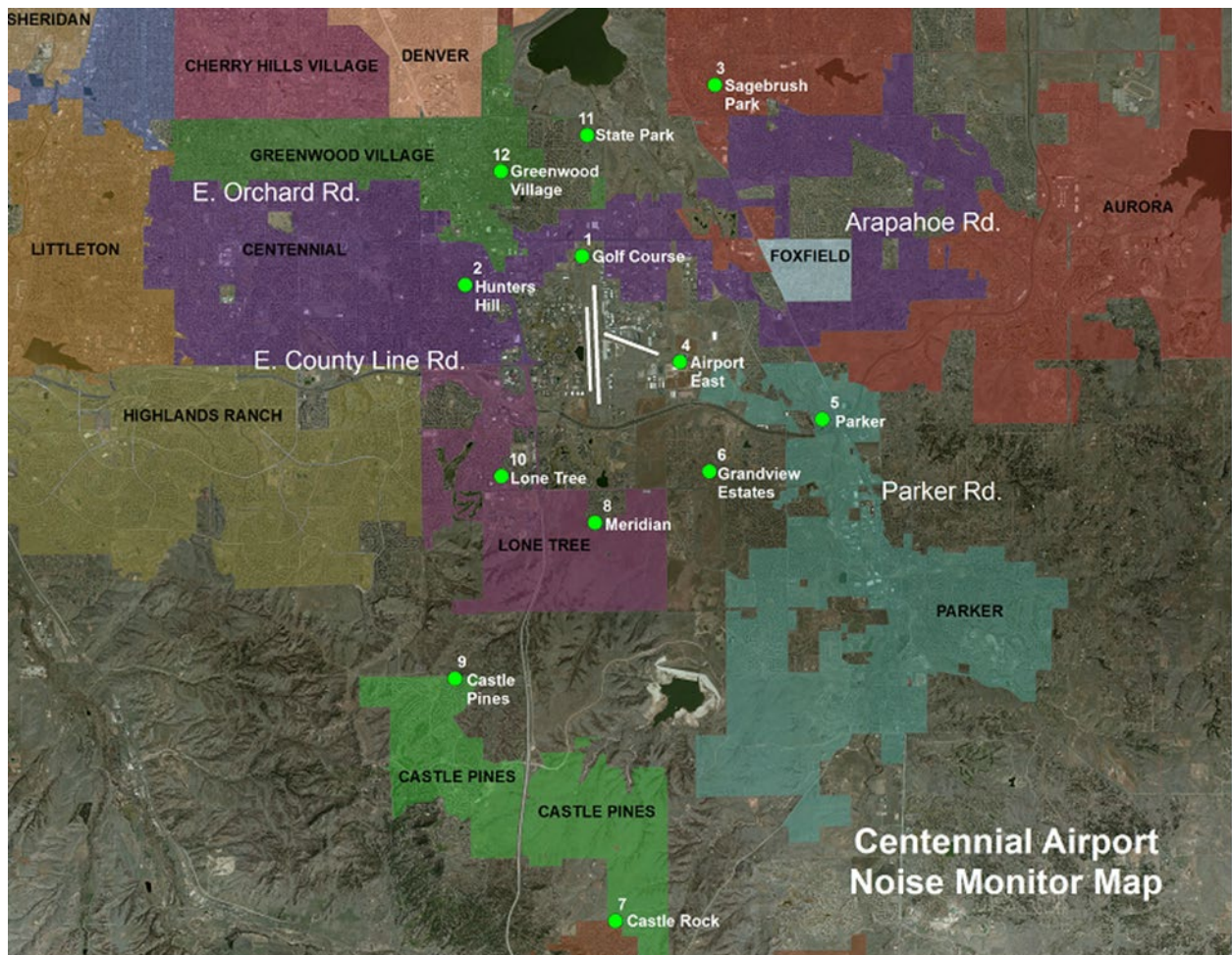
Visual Flight Rules (VFR) – A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. A flight plan is not required when the pilot is operating under Visual Flight Rules.

Sound Exposure Level (SEL) – The total energy in the A-weighted sound level measured during a transient noise event. SEL accounts for both the duration and the loudness of a noise event.

Overview

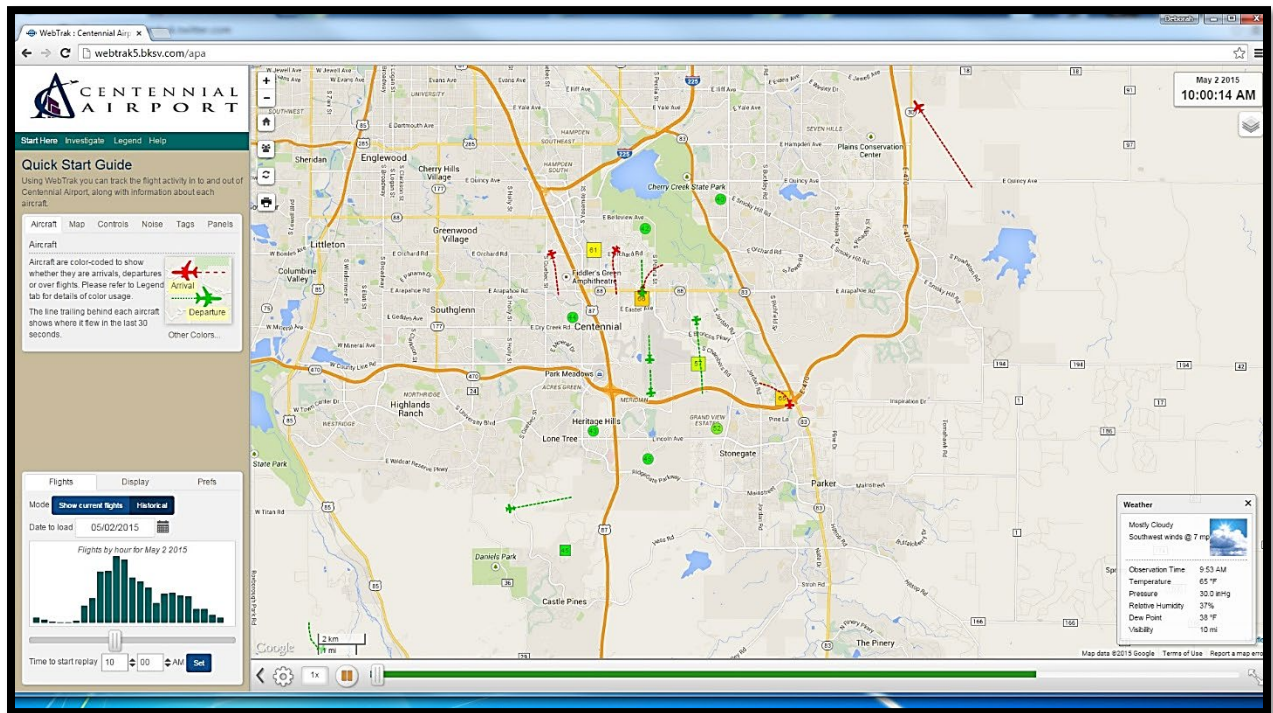
3 ABOUT APA'S NOISE MONITORING PROGRAM

Centennial Airport's (KAPA) Noise and Operations Monitoring System (ANOMS) is a new state of the art system that enables the Arapahoe County Public Airport Authority to monitor and better understand aircraft noise in the vicinity of Centennial Airport. This system is comprised of 12 fixed noise monitoring terminals in the community, as well as 2 portable monitors that are available for short term monitoring anywhere in the community.



4 ABOUT WEBTRAK™

As part of an ongoing program, Centennial Airport now offers an online tracking system for the movement of flights and air traffic patterns within the Denver Metro area. **WebTrak** Flight Tracking and Noise Information System allows concerned individuals to research data about flights to and from Centennial Airport, Denver International Airport, Rocky Mountain Metropolitan Airport, Front Range Airport and Buckley Air Force Base, as well as any transitional air traffic through the region.



How to participate

The general public may use **WebTrak** to investigate a noise or flight that occurred near their location. The system also simplifies the process of filing a noise complaint, offering an easy, online option for residents to register concerns regarding noise levels at the following web addresses:

APA WebTrak:

https://webtrak.emsbk.com/apa?fbclid=IwAR1xnXwQ2sVwisSZ_szUAIHFtyYBNI_ZTACOI1PF7ZSH8PPbBxORnnaidUUE

Centennial Airport Website: <http://www.centennialairport.com>

In addition, noise complaints can also be submitted on our noise hotline:

APA Noise Hotline:

303-790-4709

5 OPERATIONS STATISTICS

	IFR ITINERANT				VFR ITINERANT				LOCAL		
	AIR TAXI	G.A.	MILITARY	TOTAL ITINERANT	AIR TAXI	G.A.	MILITARY	TOTAL	G.A.	MILITARY	TOTAL LOCAL
January	2,483	2,640	172	5,295	1,607	5,408	132	7,147	13,881	2	13,883
February	2,374	2,702	161	5,237	1,709	5,384	83	7,176	13,797	2	13,799
March	2,527	2,771	133	5,431	1,947	6,487	89	8,523	16,676	13	16,689
April	2,247	2,606	140	4,993	1,592	5,580	105	7,277	15,502	29	15,531
May	2,659	2,833	164	5,656	1,933	6,068	112	8,113	15,677	24	15,701
June				0				0			0
July				0				0			0
August				0				0			0
September				0				0			0
October				0				0			0
November				0				0			0
December				0				0			0
Y-T-D Totals	12,290	13,552	770	26,612	8,788	28,927	521	38,236	75,533	70	75,603

	IFR OVERFLIGHTS				VFR OVERFLIGHTS					TOTAL OPERATIONS
	AIR TAXI	G.A.	MILITARY	TOTAL INTINERANT	AIR TAXI	G.A.	MILITARY	TOTAL		
January	3	4	4	11	35	61	12	108	January	26,444
February	4	8	1	13	21	36	5	62	February	26,287
March	0	10	1	11	31	31	6	68	March	30,722
April	3	5	3	11	39	47	4	90	April	27,902
May	8	7	0	15	16	60	6	82	May	29,567
June				0				0	June	
July				0				0	July	
August				0				0	August	
September				0				0	September	
October				0				0	October	
November				0				0	November	
December				0				0	December	
Y-T-D Totals	18	34	9	61	142	235	33	410	Y-T-D Totals	140,922

Definitions

Air Taxi – A company that operates aircraft that carry cargo or mail, or passengers on an on demand or charter basis.

General Aviation (G.A.) – All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire.

Local – Operations are performed by aircraft which operate in the local traffic pattern or within sight of the airport; flight in local practice areas located within a 20-mile radius of the airport; execute simulated instrument approaches or low passes at the airport.

IFR Itinerant – Operations other than local operations conducted under Instrument Flight Rules.

VFR Itinerant – Operations other than local operations conducted under Visual Flight Rules.

Overflight – Operation performed by aircraft that transit the area and did not originate or did not terminate within the airspace.

6 NOISE MONITOR REPORTS

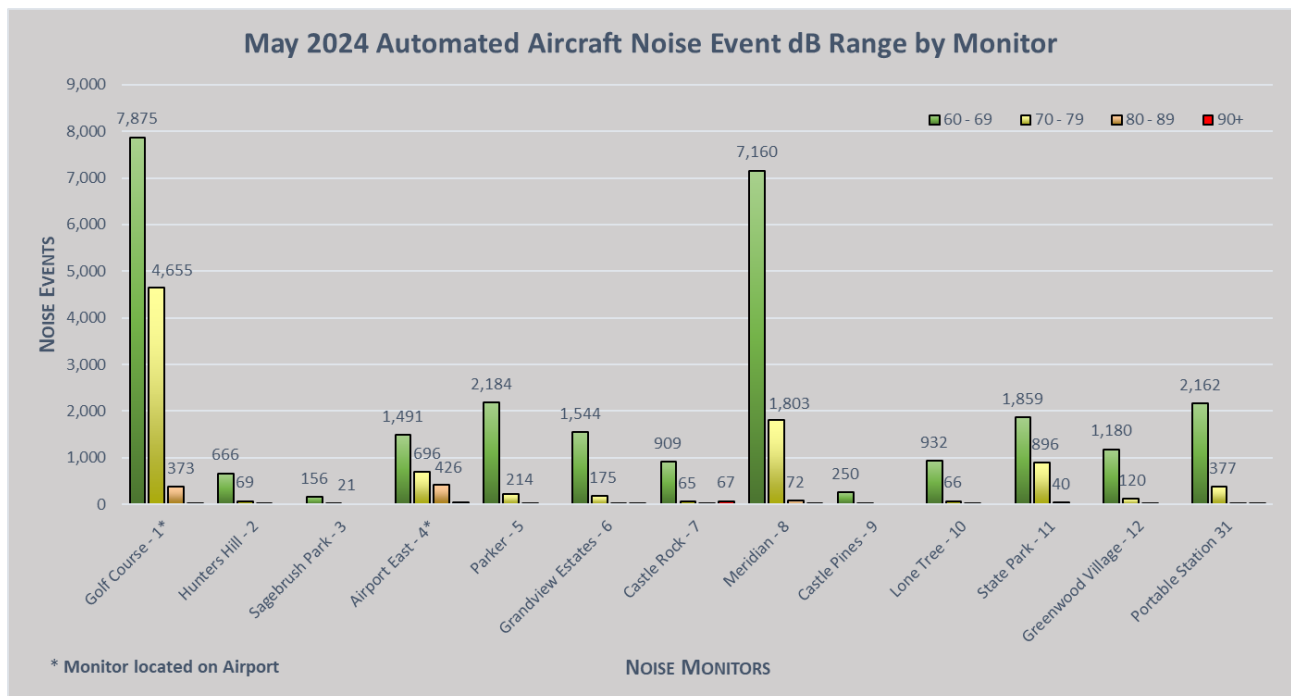
The following data displays the amount and associated decibel level of aircraft noise events at a given monitor. An aircraft noise event must contain the following characteristics:

First, the noise event must exceed the ambient noise level. This number varies at every monitor, but is generally greater than 50-55db. Secondly, the noise event must last longer than 5 seconds. Lastly, using radar data, the system must correlate an aircraft with the noise event. This ensures that the sound is not associated with a 'community noise event' such as a lawn mowers or emergency sirens.

The information below reflects only aircraft noise events as described above.

Automated Aircraft Noise Event Decibel Range By Monitor					
Monitor	60-69	70-79	80-89	90+	Totals
Golf Course- 1*	7,875	4,655	373	11	12,914
Hunters Hill- 2	666	69	8	0	743
Sagebrush Park- 3	156	21	0	0	177
Airport East- 4*	1,491	696	426	48	2,661
Parker- 5	2,184	214	6	0	2,404
Grandview Estates- 6	1,544	175	4	1	1,724
Castle Rock- 7	909	65	14	67	1,055
Meridian- 8	7,160	1,803	72	5	9,040
Castle Pines- 9	250	20	0	0	270
Lone Tree- 10	932	66	3	0	1,001
State Park- 11	1,859	896	40	0	2,795
Greenwood Village- 12	1,180	120	9	0	1,309
Portable Station 31	2,162	377	15	1	2,555
Totals	28,368	9,177	970	133	38,648

*Monitor located on Airport



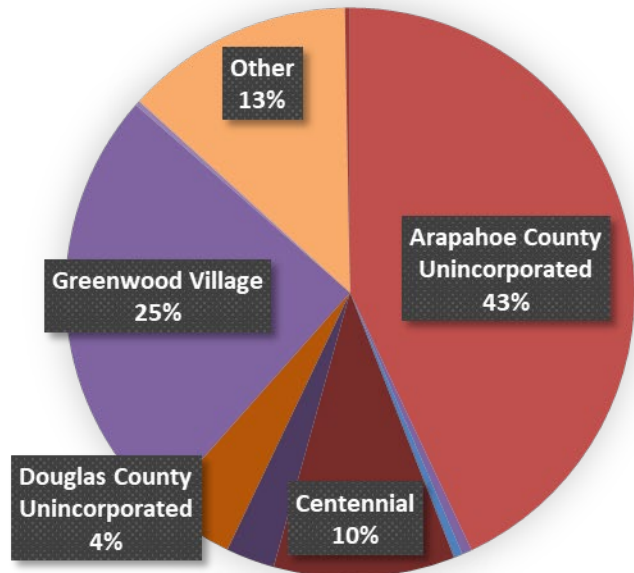
7 MAY 2024 NOISE COMPLAINT STATISTICS

In May, Centennial Airport received 1,410 complaints from 95 households.

May Noise Complaints			YTD		Population
Municipality	Complaints	Households	Complaints	Households	
Arapahoe County Unincorporated	606	42	2,390	59	98,066
Aurora	8	2	19	4	399,913
Castle Pines	0	0	3	2	14,000
Castle Rock	7	1	45	4	86,000
Centennial	145	2	445	6	108,422
Cherry Hills Village	0	0	0	0	6,442
Denver	39	1	151	2	715,522
Douglas County Unincorporated	63	8	196	11	276,493*
Greenwood Village	351	26	1,658	50	15,691
Highlands Ranch	0	0	5	3	103,444
Lone Tree	4	2	12	6	14,253
Parker	4	2	24	5	68,000
Other	183	9	260	21	UNK
Total	1,410	95	5,208	173	1,906,246

*Douglas County Unincorporated Population with Highlands Ranch Removed

Complaints per Municipality



May 2024 Noise Complaint Responses Completed	
Email	112
Phone	18
Total	130

Time Complaint Received	May
Day Hours (7:00 am - 9:59pm)	1,268
Night Hours (10:00 pm - 6:59 am)	142
TOTAL	1,410

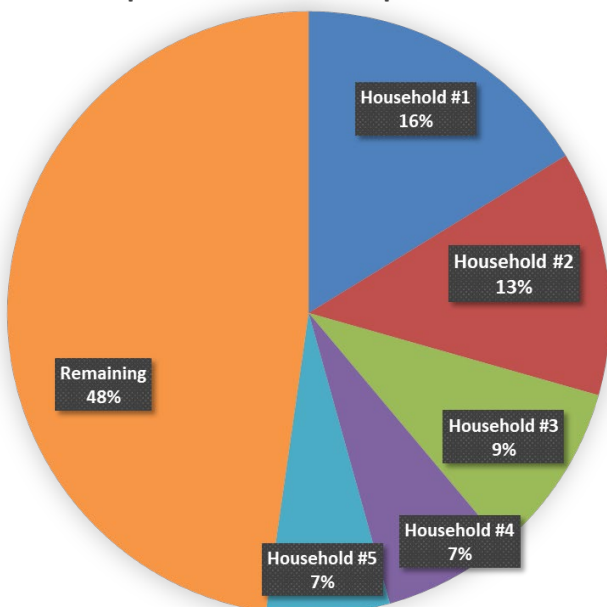
Current 12 Month Trend



Previous Year 13 Month Trend



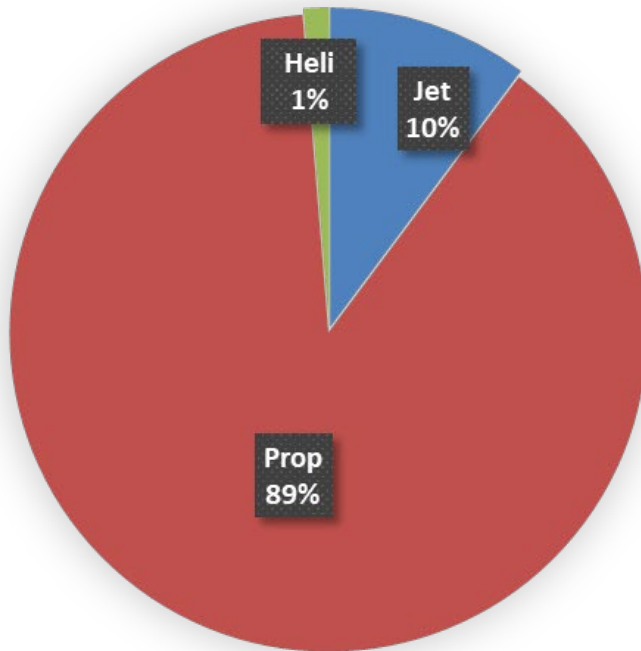
Top 5 Household Complaints YTD



Top 5 Household Complaints YTD

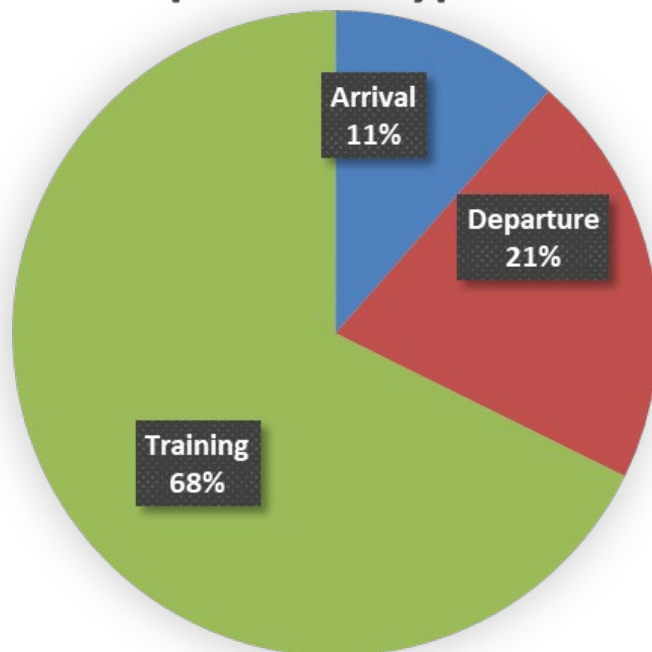
Household	Complaints	Resides In
Household #1	847	Arapahoe County
Household #2	684	Greenwood Village
Household #3	494	Centennial
Household #4	353	Arapahoe County
Household #5	344	Greenwood Village
Remaining	2,486	
Total	5,208	

Complaints by Aircraft Type

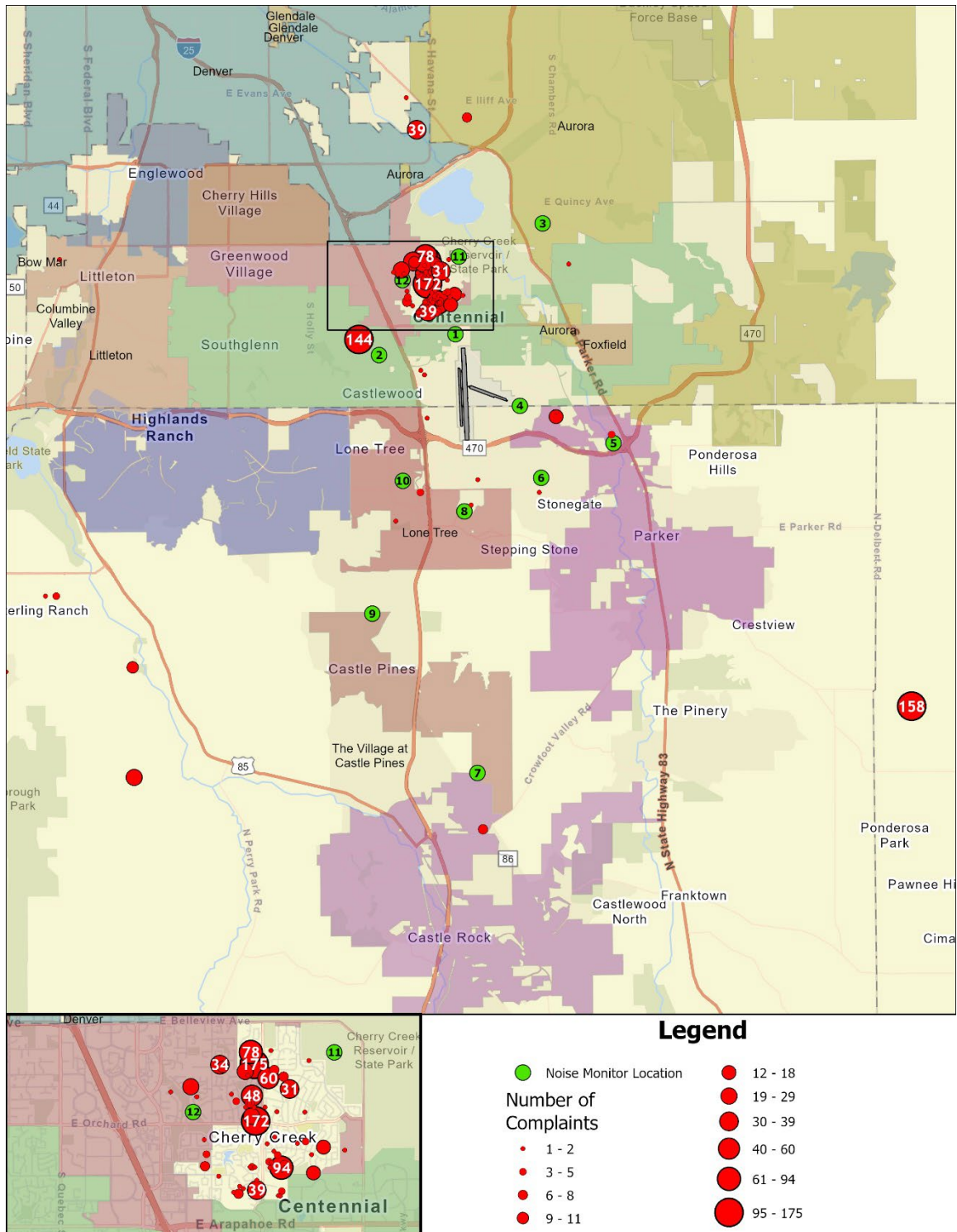


*#1
Household
Removed

Complaints by Operation Type



8 CENTENNIAL AIRPORT COMPLAINT MAP



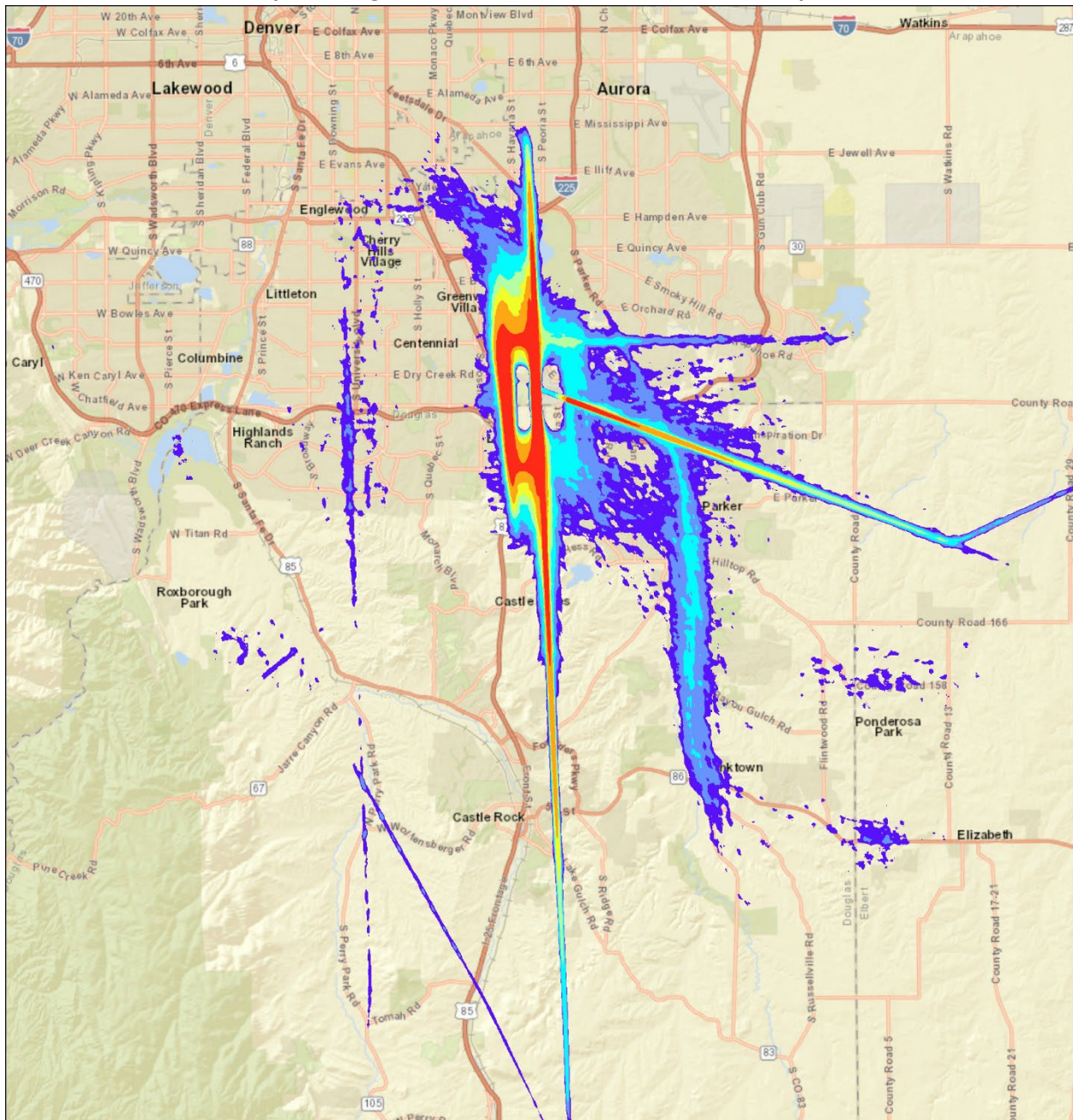
**Larger dots equate to more complaints for that household.

**6 households not visible in map view.

9 CENTENNIAL AIRPORT RADAR TRACK DENSITY MAP

The following maps take all of the flight track data for the given time period and create a line density plot. This enables everyone to have a better understanding of where the flight tracks are at, while allowing for historical comparisons. Dark red in the middle of the picture shows the highest density of flight tracks over the runways. The colors gradually move out to blue as the least dense.

May 2024 Flight Tracks associated with Centennial Airport



Lower Density Traffic

Higher Density Traffic

10 NOTES AND DISCLAIMER

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Centennial Airport disclaims any responsibility or liability for any direct or indirect damages resulting from the use of this data. We hope this information provides you with a valuable tool in which to review noise data and characteristics in your area. If you have questions or concerns, please contact the Centennial Airport Noise office at **303-790-0598**.



Noise Hotline: 303-790-4709

www.centennialairport.com



Centennial Airport Monthly Noise Report



June 2024

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2. Definitions	3
3. About APA’s Noise Monitoring Program.....	4
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10. Notes and Disclaimer	13

2. DEFINITIONS

A-weighted Sound Level – A measure of sound level with weighted frequency characteristics that correspond to human subjective response to noise.

Arrival – The act of an aircraft approaching and landing at an airport.

Ambient Noise Level – The level of noise that is all-encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the noise monitor.

Community Noise Event Level (CNEL) – The average sound level over a 24-hour period, with a penalty of 10dB for nighttime hours between 10:00 PM and 7:00 AM.

Day Night Average Sound Level (DNL) – A measure of the average noise level over a 24-hour day. It is the 24-hour, logarithmic (or energy) average, A-weighted sound pressure level with a 10-decibel penalty applied to the nighttime event levels that occur between 10:00 PM and 7:00 AM.

Decibel (dB) – A logarithmic quantity reflecting the ratio of the sound pressure of the source to a reference pressure. This results in a sound pressure level of about 0 dB for the quietest sounds that we can detect and sound pressure levels of about 120 dB for the loudest sounds that can be heard without pain.

Departure – The act of an aircraft taking flight and leaving the airport.

Energy-Averaged Sound Pressure Level (Leq) – The value or level of a steady, non-fluctuating sound that represents the same sound energy as the actual time-varying sound evaluated over the same time period.

Flight Track – The path along the ground followed by an aircraft in flight.

Instrument Flight Rules (IFR) Rules and regulations established by the FAA to govern flight under conditions in which flight by outside visual reference is not safe. IFR flight depends upon flying by reference to instruments, and navigation is accomplished by reference to electronic signals. It is also a term used by pilots and controllers to indicate the type of flight plan an aircraft is flying, such as an IFR or VFR flight plan.

Local Operations – Operations in the local traffic pattern or within sight of the airport; flight in local practice areas within a 20 mile radius; execute simulated instrument approaches or low airport passes.

Maximum Noise Level ($L_{\max}$) – The peak noise level for a single noise event.

Noise Exposure – The cumulative sound energy affecting a person over a specified period of time.

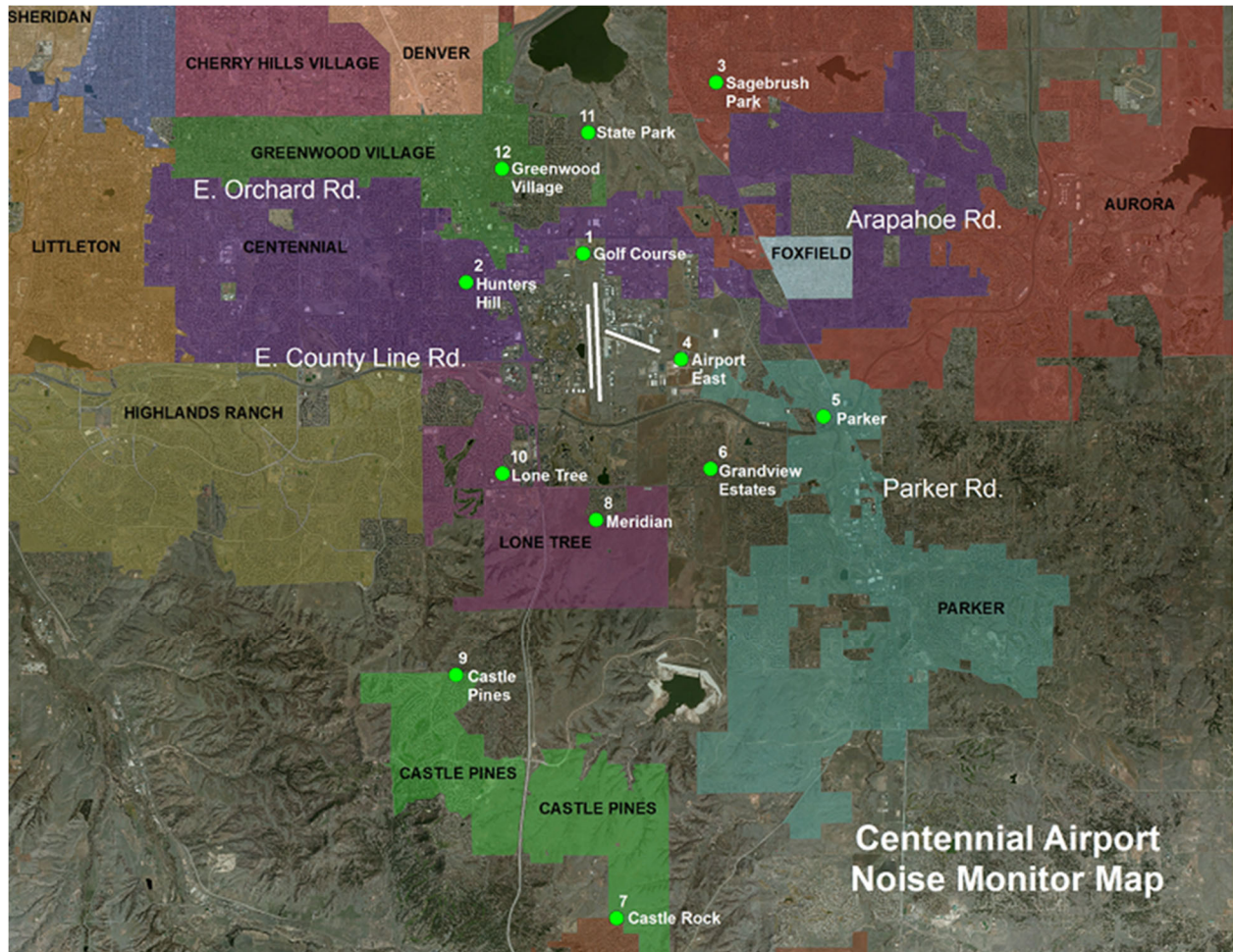
Overflight – Aircraft flight originating and terminating outside the area that transits the airspace without landing.

Visual Flight Rules (VFR) – A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. A flight plan is not required when the pilot is operating under Visual Flight Rules.

Sound Exposure Level (SEL) – The total energy in the A-weighted sound level measured during a transient noise event. SEL accounts for both the duration and the loudness of a noise event.

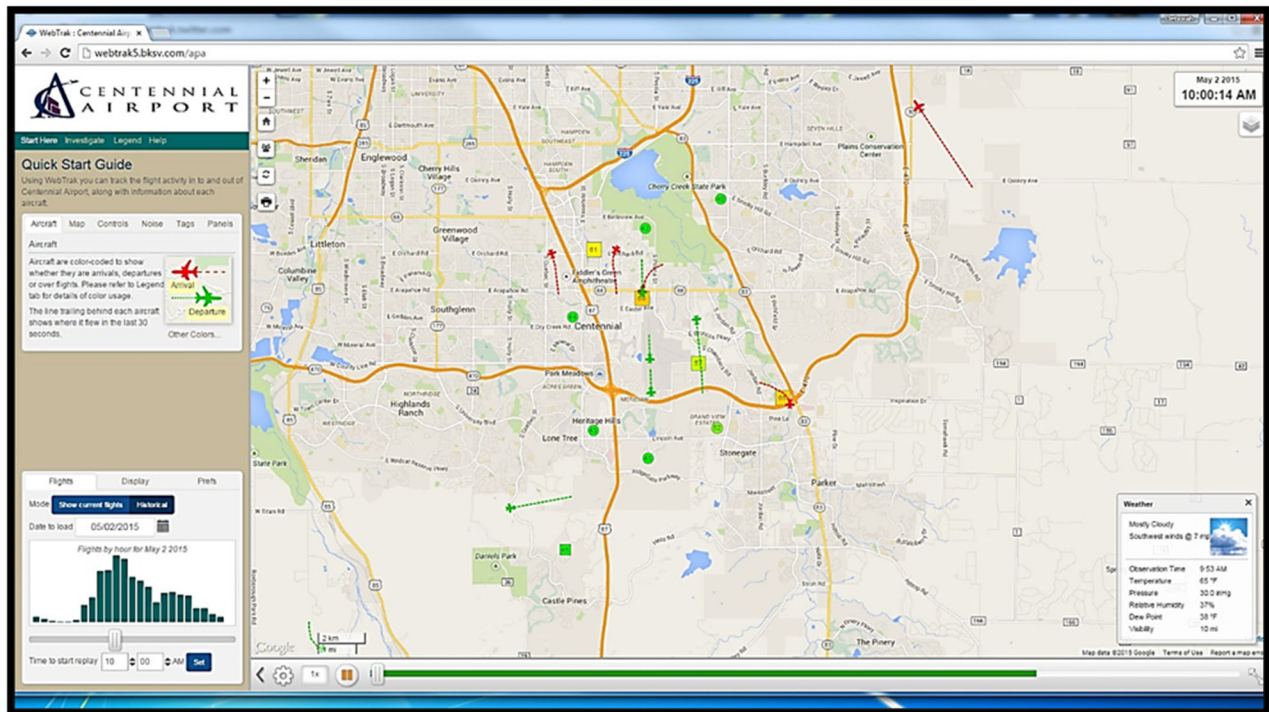
3. ABOUT APA’S NOISE MONITORING PROGRAM

Centennial Airport’s (KAPA) Noise and Operations Monitoring System (ANOMS) is a new state of the art system that enables the Arapahoe County Public Airport Authority to monitor and better understand aircraft noise in the vicinity of Centennial Airport. This system is comprised of 12 fixed noise monitoring terminals in the community, as well as 2 portable monitors that are available for short term monitoring anywhere in the community.



4. ABOUT WEBTRAK™

As part of an ongoing program, Centennial Airport now offers an online tracking system for the movement of flights and air traffic patterns within the Denver Metro area. **WebTrak** Flight Tracking and Noise Information System allows concerned individuals to research data about flights to and from Centennial Airport, Denver International Airport, Rocky Mountain Metropolitan Airport, Front Range Airport and Buckley Air Force Base, as well as any transitional air traffic through the region.



How to participate

The general public may use **WebTrak** to investigate a noise or flight that occurred near their location. The system also simplifies the process of filing a noise complaint, offering an easy, online option for residents to register concerns regarding noise levels at the following web addresses:

APA WebTrak:

[https://webtrak.emsbk.com/apa?](https://webtrak.emsbk.com/apa?fbclid=IwAR1xnXwQ2sVwisSZ_szUAIHFtyYBNIZTACOI1PF7ZSH8PPbBxORnnaidUUE)

[fbclid=IwAR1xnXwQ2sVwisSZ_szUAIHFtyYBNIZTACOI1PF7ZSH8PPbBxORnnaidUUE](https://webtrak.emsbk.com/apa?fbclid=IwAR1xnXwQ2sVwisSZ_szUAIHFtyYBNIZTACOI1PF7ZSH8PPbBxORnnaidUUE)

Centennial Airport Website: <http://www.centennialairport.com>

In addition, noise complaints can also be submitted on our noise hotline:

APA Noise Hotline:

303-790-4709

5. OPERATIONS STATISTICS

	IFR ITINERANT				VFR ITINERANT				LOCAL		
	AIR TAXI	G.A.	MILITARY	TOTAL ITINERANT	AIR TAXI	G.A.	MILITARY	TOTAL	G.A.	MILITARY	TOTAL LOCAL
January	2,483	2,640	172	5,295	1,607	5,408	132	7,147	13,881	2	13,883
February	2,374	2,702	161	5,237	1,709	5,384	83	7,176	13,797	2	13,799
March	2,527	2,771	133	5,431	1,947	6,487	89	8,523	16,676	13	16,689
April	2,247	2,606	140	4,993	1,592	5,580	105	7,277	15,502	29	15,531
May	2,659	2,833	164	5,656	1,933	6,068	112	8,113	15,677	24	15,701
June	2,743	2,961	190	5,894	2,145	6,599	97	8,841	14,805	5	14,810
July				0				0			0
August				0				0			0
September				0				0			0
October				0				0			0
November				0				0			0
December				0				0			0
Y-T-D Totals	15,033	16,513	960	32,506	10,933	35,526	618	47,077	90,338	75	90,413

	IFR OVERFLIGHTS				VFR OVERFLIGHTS					TOTAL OPERATIONS
	AIR TAXI	G.A.	MILITARY	TOTAL INTINERANT	AIR TAXI	G.A.	MILITARY	TOTAL		
January	3	4	4	11	35	61	12	108	January	26,444
February	4	8	1	13	21	36	5	62	February	26,287
March	0	10	1	11	31	31	6	68	March	30,722
April	3	5	3	11	39	47	4	90	April	27,902
May	8	7	0	15	16	60	6	82	May	29,567
June	4	5	1	10	21	61	7	89	June	29,644
July				0				0	July	
August				0				0	August	
September				0				0	September	
October				0				0	October	
November				0				0	November	
December				0				0	December	
Y-T-D Totals	22	39	10	71	163	296	40	499	Y-T-D Totals	170,566

Definitions

Air Taxi – A company that operates aircraft that carry cargo or mail, or passengers on an on demand or charter basis.

General Aviation (G.A.) – All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire.

Local – Operations are performed by aircraft which operate in the local traffic pattern or within sight of the airport; flight in local practice areas located within a 20-mile radius of the airport; execute simulated instrument approaches or low passes at the airport.

IFR Itinerant – Operations other than local operations conducted under Instrument Flight Rules.

VFR Itinerant – Operations other than local operations conducted under Visual Flight Rules.

Overflight – Operation performed by aircraft that transit the area and did not originate or did not terminate within the airspace.

6. NOISE MONITOR REPORTS

The following data displays the amount and associated decibel level of aircraft noise events at a given monitor. An aircraft noise event must contain the following characteristics:

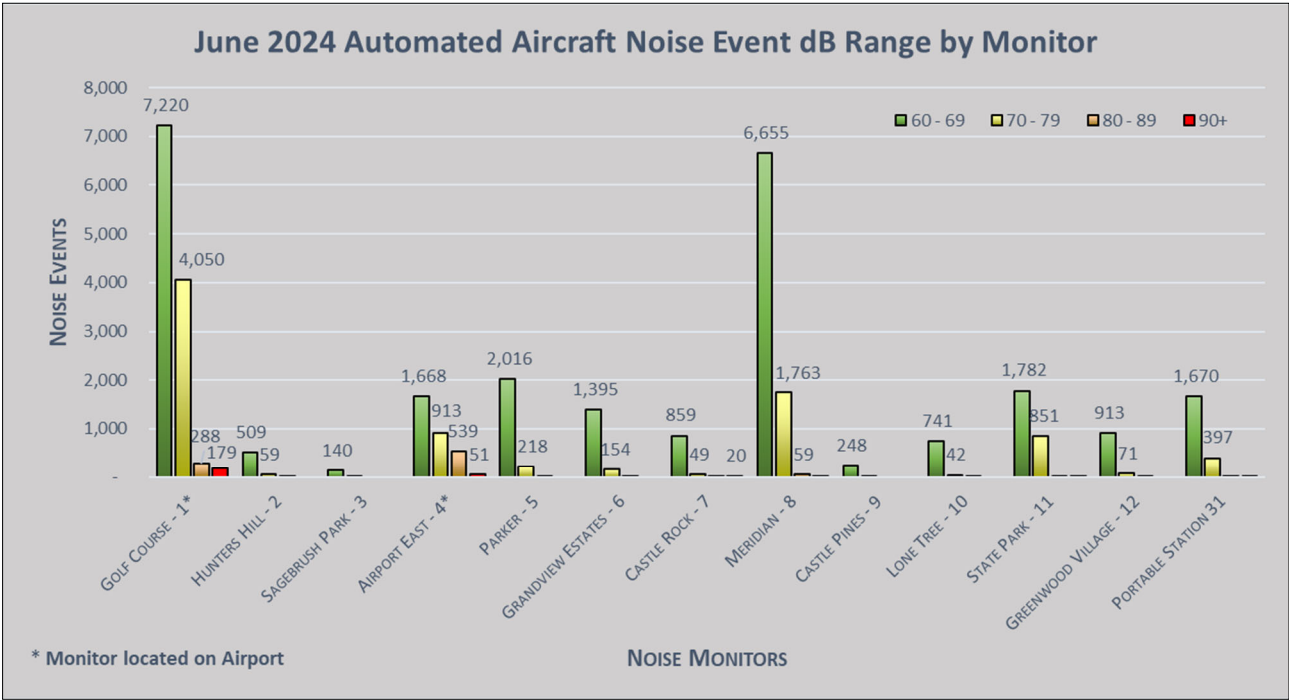
First, the noise event must exceed the ambient noise level. This number varies at every monitor, but is generally greater than 50-55db. Secondly, the noise event must last longer than 5 seconds. Lastly, using radar data, the system must correlate an aircraft with the noise event. This ensures that the sound is not associated with a ‘community noise event’ such as a lawn mowers or emergency sirens.

The information below reflects only aircraft noise events as described above.

Automated Aircraft Noise Event Decibel Range By Monitor					
Monitor	60-69	70-79	80-89	90+	Totals
Golf Course- 1*	7,220	4,050	288	179	11,737
Hunters Hill- 2	509	59	10	0	578
Sagebrush Park- 3	140	11	0	0	151
Airport East- 4*	1,668	913	539	51	3,171
Parker- 5	2,016	218	7	0	2,241
Grandview Estates- 6	1,395	154	6	0	1,555
Castle Rock- 7	859	49	9	20	937
Meridian- 8	6,655	1,763	59	3	8,480
Castle Pines- 9	248	19	0	0	267
Lone Tree- 10	741	42	4	0	787
State Park- 11	1,782	851	8	1	2,642
Greenwood Village- 12	913	71	5	0	989
Portable Station 31	1,670	397	16	2	2,085
Totals	25,816	8,597	951	256	35,620

**Construction in progress adjacent Noise Monitor 1. Sound events may not be fully be represented by aircraft noise events.

*Monitor located on Airport



7. JUNE 2024 NOISE COMPLAINT STATISTICS

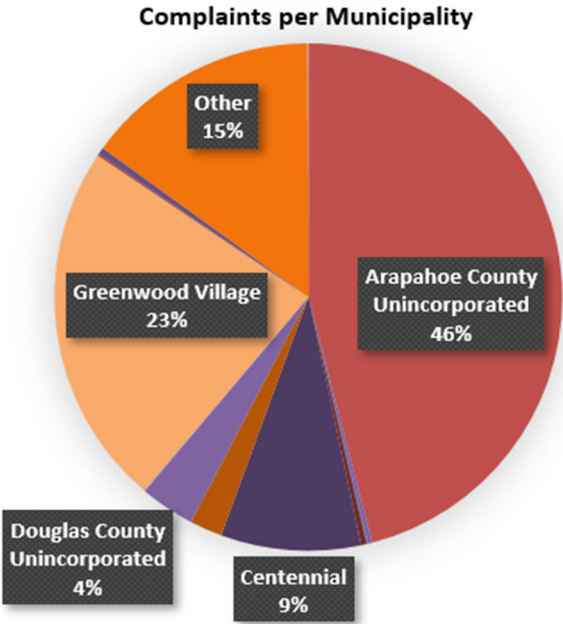
In June, Centennial Airport received 1,639 complaints from 114 households

June Noise Complaints			YTD		Population
Municipality	Complaints	Households	Complaints	Households	
Arapahoe County Unincorporated	754	51	3,144	78	98,066
Aurora	5	2	24	5	399,913
Castle Pines	1	1	4	2	14,000
Castle Rock	6	1	51	4	86,000
Centennial	146	3	591	7	108,422
Cherry Hills Village	0	0	0	0	6,442
Denver	34	2	185	3	715,522
Douglas County Unincorporated	57	10	253	14	276,493*
Greenwood Village	381	28	2,039	62	15,691
Highlands Ranch	2	2	7	4	103,444
Lone Tree	7	4	19	9	14,253
Parker	1	1	25	6	68,000
Other	245	9	505	23	UNK
Total	1,639	114	6,847	217	1,906,246

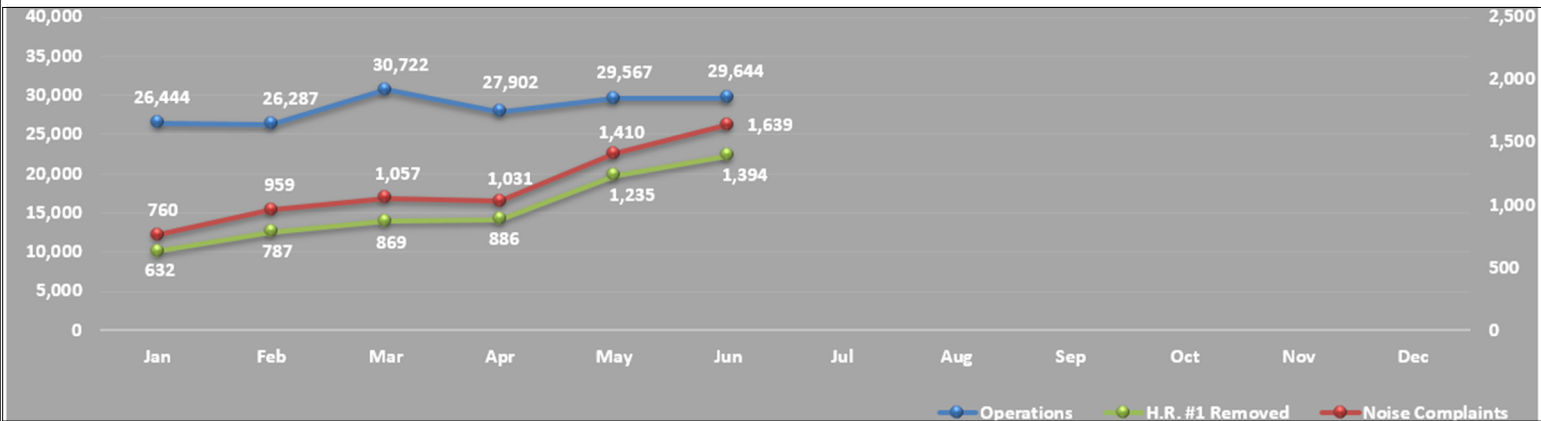
*Douglas County Unincorporated Population with Highlands Ranch Removed

June 2024 Noise Complaint Responses Completed	
Email	141
Phone	15
Total	156

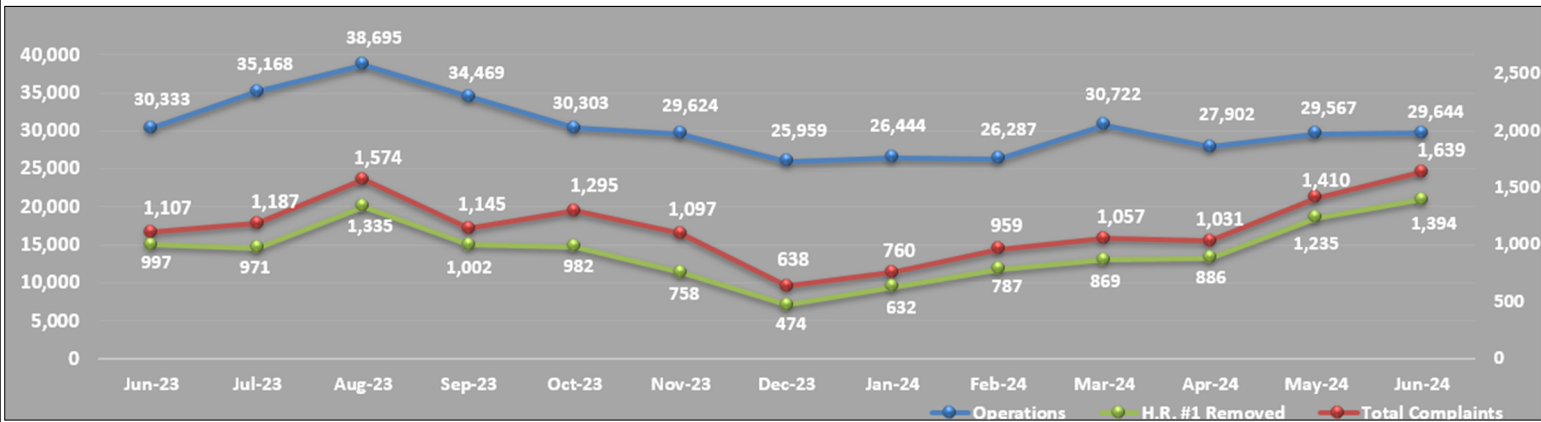
Time Complaint Received	Jun
Day Hours (7:00 am - 9:59pm)	1,264
Night Hours (10:00 pm - 6:59 am)	375
TOTAL	1,639



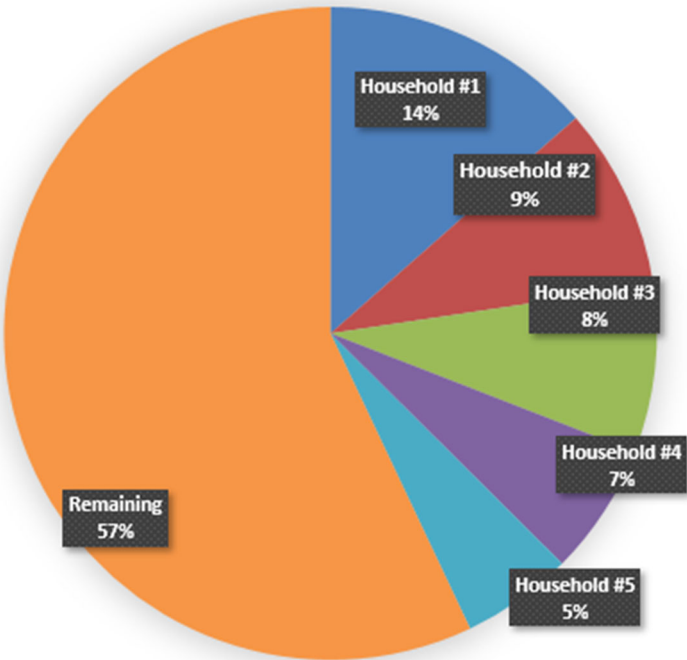
Current 12 Month Trend



Previous Year 13 Month Trend



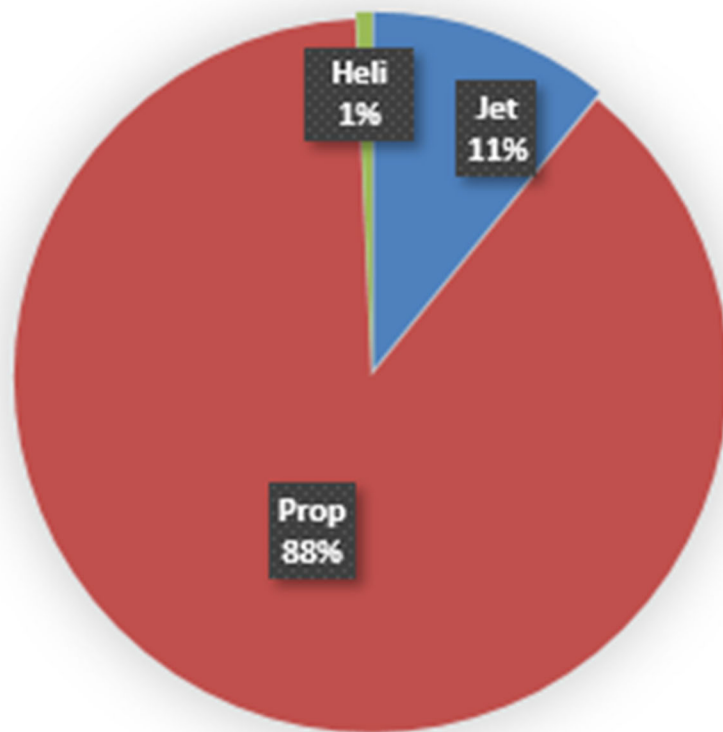
Top 5 Household Complaints YTD



Top 5 Household Complaints YTD

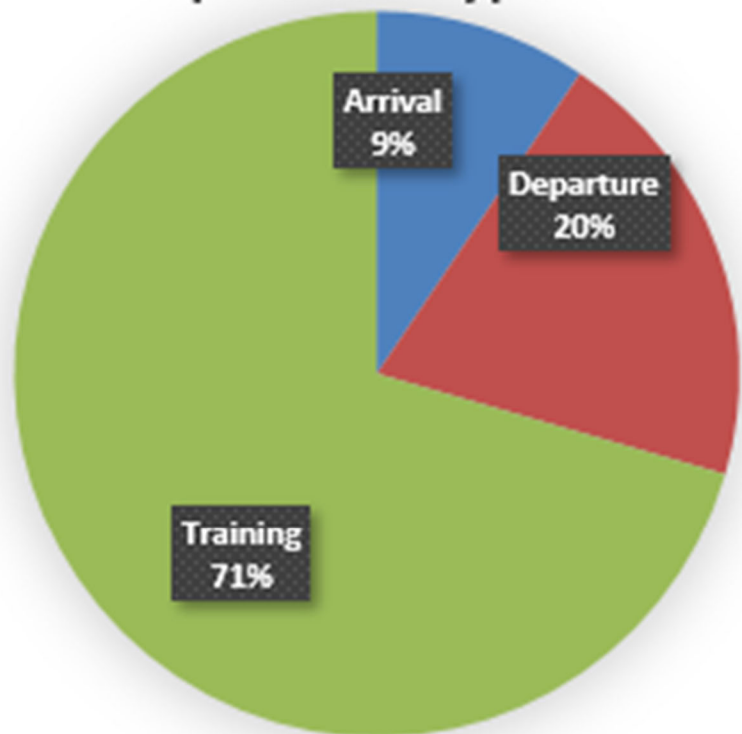
Household	Complaints	Resides In
Household #1	927	Arapahoe County
Household #2	622	Centennial
Household #3	567	Arapahoe County
Household #4	448	Other (Elizabeth)
Household #5	378	Greenwood Village
Remaining	3,905	
Total	6,847	

Complaints by Aircraft Type

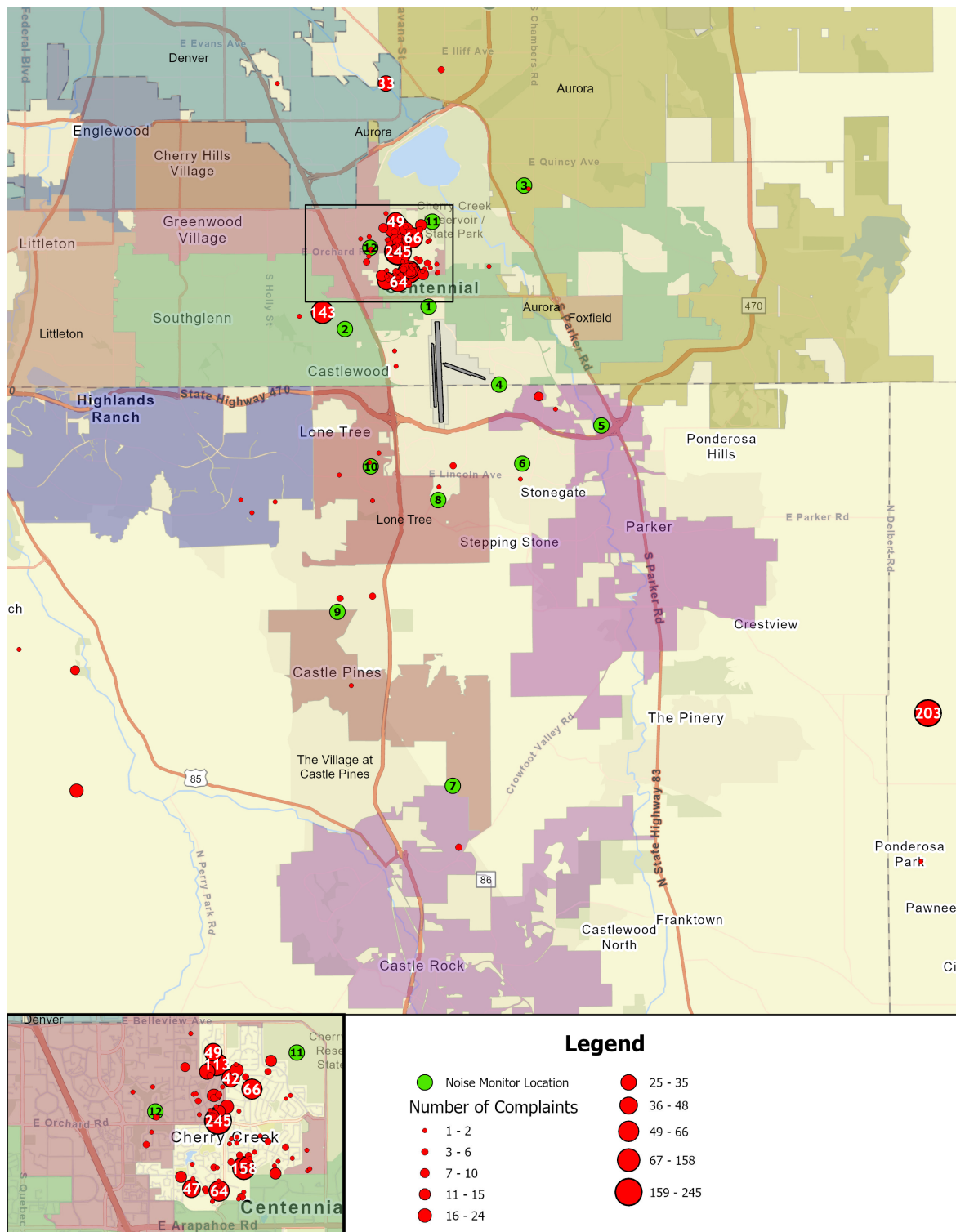


*#1
Household
Removed

Complaints by Operation Type



8. CENTENNIAL AIRPORT COMPLAINT MAP



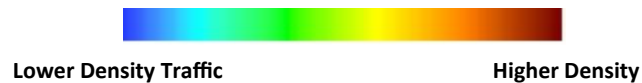
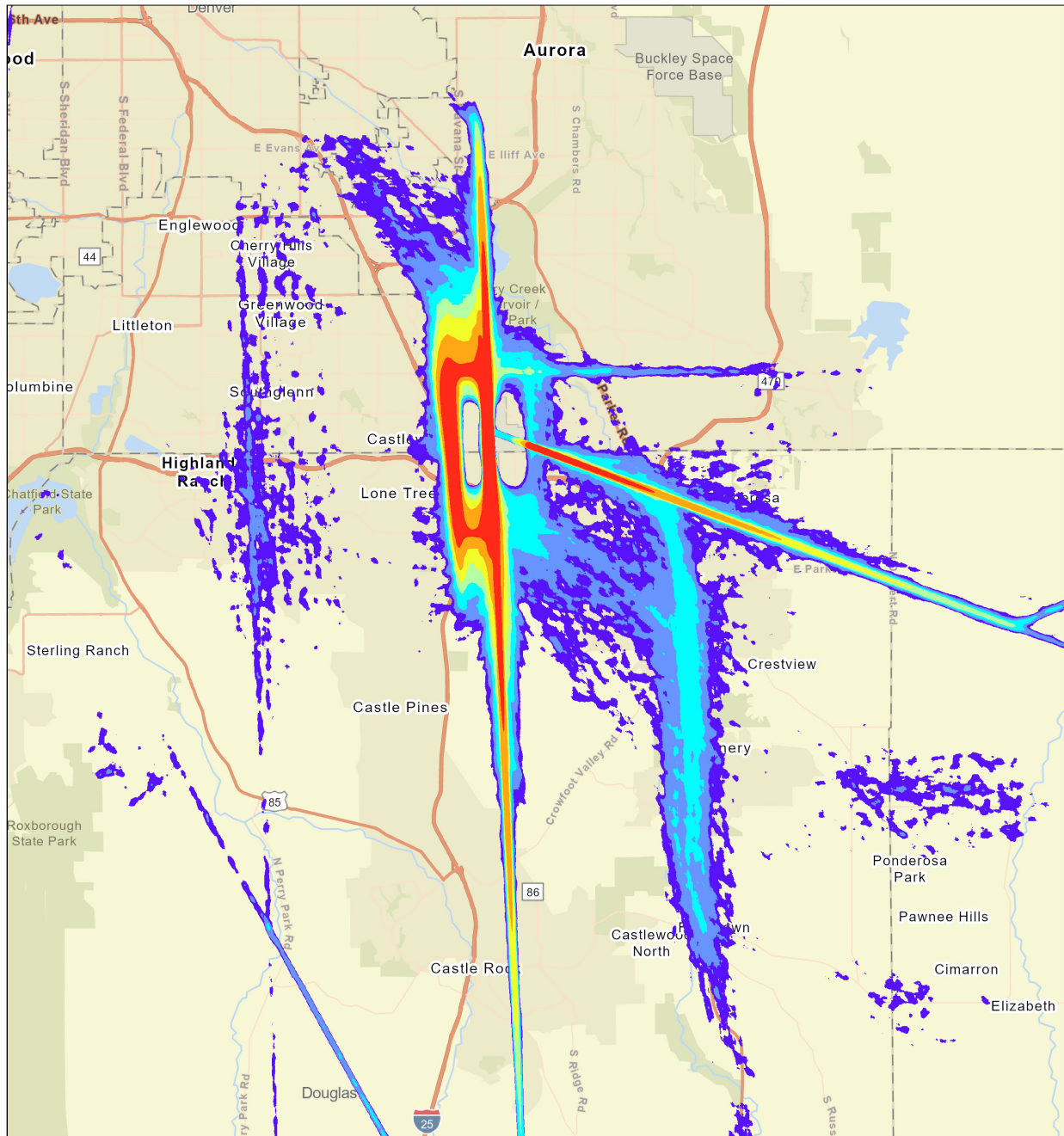
**Larger dots equate to more complaints for that household.

**7 households not visible in map view.

9. CENTENNIAL AIRPORT RADAR TRACK DENSITY MAP

The following maps take all of the flight track data for the given time period and create a line density plot. This enables everyone to have a better understanding of where the flight tracks are at, while allowing for historical comparisons. Dark red in the middle of the picture shows the highest density of flight tracks over the runways. The colors gradually move out to blue as the least dense.

June 2024 Flight Tracks associated with Centennial Airport



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Noise Hotline: 303-790-4709

www.centennialairport.com



Our Vision

Quieter Skies for Our Communities

Mission Statement

CACNR will bring together airport, community, FAA, and aviation industry representatives to collaboratively identify and discuss noise issues at Centennial Airport and recommend courses of action that could reduce noise over affected communities.

CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE

June 5th, 2024 MEETING

- CACNR Study Group 2024 Q1 Report – Adopted Mitigation Strategies
 - Utilize East Side of Airport During Nighttime Hours
 - Noise sensitive Areas on the Tower Radar Display
 - Limit the Number of Aircraft in the Pattern
 - Pilot Education & Awareness Strategies
 - Proactive Outreach & Education to Flight Schools
 - Proactive Checking of Extended Traffic During Nighttime Hours
 - Data Analysis provided by Noise Analyst
 - Analyze Flight Track Data within the Defined Study Area
- Public Comment Received
 - Unincorporated Arapahoe County, Louviers, Dakota Ridge
 - Public initiated inquiry to have a seat at the Roundtable by Ebert County & Jefferson County

SEPTEMBER 2023 RETREAT PRIORITIES

The Summary Report from Jason Schwartz was received and accepted. Comment was made that the retreat was useful, and perhaps such meetings should be held more often. Agreed upon as top priorities from that report were:

- 1) Establish training for roundtable members
- 2) Make recommendations to Airport Authority and other than can reduce noise
- 3) Restructure meeting agendas to make meetings more effective and productive (We approved a revised agenda structure)
- 4) Publish annual reports
- 5) Expand community outreach
- 6) Strengthen relationships with FAA
- 7) Expand industry engagement
- 8) Fly Quiet briefings
- 9) Study Noise Monitor data
 - Correlate complaints to noise levels
 - Do more to leverage available noise data

Other Current / High Priority Issues were:

- 1) FAA Support of Roundtable (this is being handled through the Study Group Committee on extended pattern traffic)
- 2) Flight School Engagement
- 3) Airport Capacity

Finally, from the Consultant's Observations and Recommendations:

- 1) Sometimes roundtable "structures" seem to get in the way of the mission
- 2) Relationship to the Airport and Airport Board
- 3) Meetings with Airport Management
- 4) Value in additional Roundtable training
- 5) Expand community outreach
- 6) Consider additional roundtable support

[illegible]



Chart Supplement Language Update

Centennial Airport Staff in conjunction with the CACNR, the CACNR Study Group, and the FAA are working on updating the noise entry in Section 2 and adding a Special Notice in Section 3 of the Southwest U.S. Chart Supplement to better describe the voluntary Noise Abatement Procedures at Centennial Airport. The Chart Supplement is a pilot's manual that contains data on public use and joint use airports, seaplane bases heliports, VFR airport sketches, NAVAIDs, communications data, and weather data sources. The current as well as proposed language is listed below. Page 2 also shows the proposed Section 3 special graphic notice that the airport plans to have published in the Chart Supplement as well. Proposed changes have been reviewed by the FAA Airports District Office (ADO) and have been submitted for publication. Updates will appear in the September 2, 2024 edition of the SW US Chart Supplement.

Current Language:

NOISE ABATEMENT PROC IN EFCT; NOISE OFFICE—303-790-0598. RWY 35R CROSSWIND/BASE LEG N OF LINCOLN AVE; RWY 17L CROSSWIND/BASE LEG S OF ARAPAHOE ROAD; RWY 17R-35L CLSD TFC REMAIN S OF ARAPAHOE ROAD AND E OF INTERSTATE 25; RWY 10-28 AVOID NOISE SENSITIVE AREA 1 MI S AND E OF RWY.

Proposed Updated Language:

The changes in red are in compliance with Appendix A of the FAA Request for Industry Feedback- "Noise Abatement Entries in the Chart Supplement".

NS ABTMT PROCS IN EFF. ALL ACFT AVOID NOISE SENSITIVE AREAS 1NM N AND W OF APRT AND 1 NM SE OF ARPT. RWY 17R-35L CLSD TFC REMAIN S OF ARAPAHOE ROAD, E OF I-25, AND N OF LINCOLN AVE. QUIET HRS. 2200-0700L. TBJT ACFT USE NBAA PROFILES. NOISE OFFICE – 303-790-0598. SEE SPECIAL NOTICES – KAPA NOISE ABATEMENT GUIDELINES.

Chart Supplement Section 3 Special Notice

Centennial Airport Voluntary Noise Abatement Guidelines

*****IN ALL CASES SAFETY AND ATC INSTRUCTIONS TAKE PRECEDENCE*****

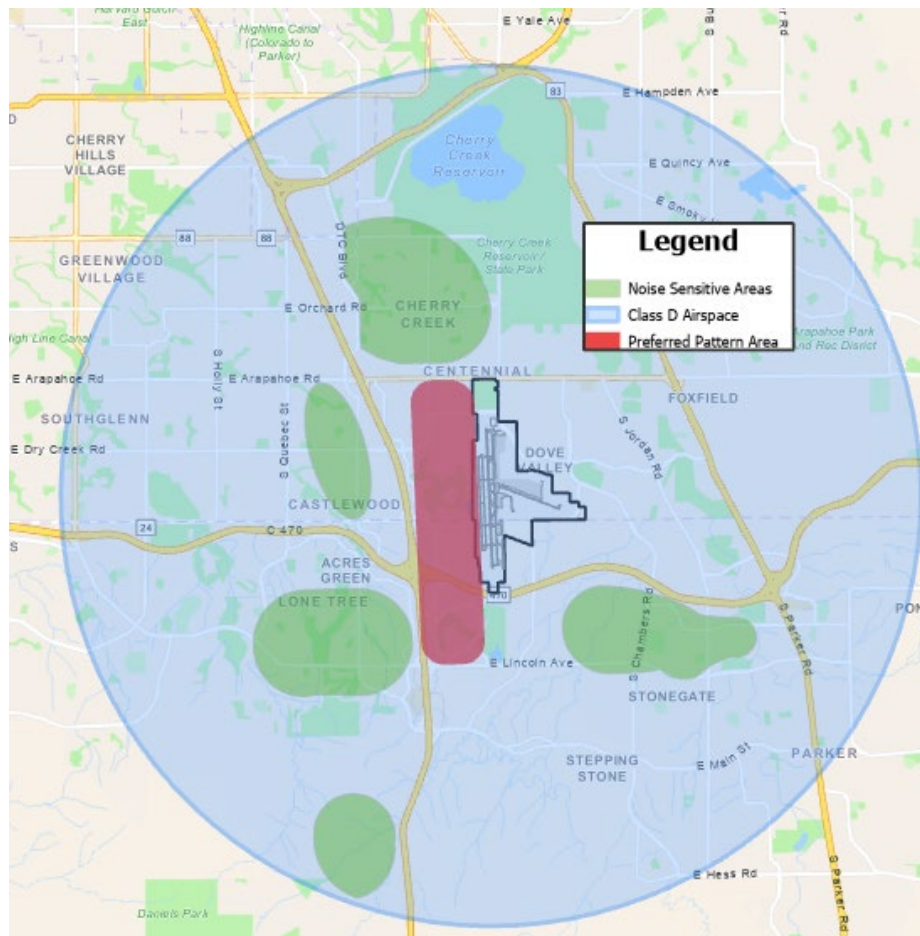
The following guidelines are recommended practices to minimize sound levels in the vicinity of Centennial Airport.

KAPA Noise Office – 303-790-0598

Full Noise Abatement Guide: <https://centennialairport.com/noise-abatement-guide>

General Guidelines:

- Traffic Pattern Altitude 6,885 ft. MSL (1,000 ft. AGL)
- Avoid Noise Sensitive Areas (shown below)
- Avoid Flight Training Operations between 2200-0700L
- Make Power Changes Slowly
- Remain in Preferred Pattern Area (shown below)
- If traffic pattern volume becomes saturated causing an extended pattern North of Arapahoe Road or South of Lincoln Avenue consider returning at a less busy time to remain within the depicted traffic pattern area.





U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Office of the Regional Administrator

2200 S. 216th Street
Des Moines, Washington 98198

April 6, 2023

Brad Pierce
Chair
Centennial Airport Community Noise Roundtable
7565 S. Peoria Street, Unit D9
Englewood, Colorado 80112

Dear Mr. Pierce:

Thank you for inviting us to attend the Centennial Airport Community Noise Roundtable (CACNR) meeting on February 1, 2023. We appreciated the opportunity to provide the Centennial Airport traffic pattern presentation to CACNR and community members and to listen to their concerns.

We received a total of 31 questions and will address them in this letter. Before doing so, we would like to restate a few key items discussed at the CACNR meeting.

First, Federal Aviation Administration (FAA) Air Traffic Control (ATC) is tasked with the safe, orderly, and expeditious flow of air traffic—its primary purpose is to prevent aircraft collisions.

Second, decisions about flight times, number of operations, and aircraft type are in the scope of private industry (not the FAA).

Third, airport traffic pattern procedures are designed to enhance safety and improve the flow of traffic at an airport. At airports with an operating airport traffic control tower, pattern traffic is generally sequenced around other aircraft—especially aircraft that are on an instrument approach procedure or a straight-in approach to a runway. Aircraft are significantly limited in their ability to slow to maintain the required amount of spacing. Absent the ability to slow to maintain or increase the spacing, aircraft must execute S-turns in the pattern, fly extended upwind legs and longer final approach course legs, and, in some instances, execute 270° or 360° turns in the pattern. The use of extended upwind legs and longer final approach course legs are the default technique used by air traffic controllers worldwide in these situations because this method provides the best precision and control over the condition.

The first three questions, below, were submitted to us by Centennial Airport CEO Mike Fronapfel on December 31, 2022. Mr. Fronapfel asked that we include the responses in our letter to you. Our responses follow each question.

Question 1: The communities north of Arapahoe Rd, continue to be severely impacted by the increase in aircraft over their homes due to the extended traffic

pattern implemented after the midair collision. Did the FAA consider the environmental impact on the 1,000's of residents and its alternatives on the quality of the human environment as a result of that change and more specifically, did the FAA consider and meet its NEPA obligations, policy objectives 40 CFR § 1500.2 to the fullest extent possible before changing how the traffic pattern is managed at Centennial Airport and if not, do you plan to consider and meet them?

FAA Response: The FAA conducted an analysis of traffic patterns around Centennial Airport (KAPA) that revealed a significant increase in the volume of visual flight rules (VFR) aircraft flights in the calendar year 2022. It was determined the primary and overriding causal factor for the longer VFR pattern footprint (referred to as the "extended traffic pattern" in your questions) was the increased volume of aircraft competing for the same runway capacity. The FAA did not change how the traffic pattern is managed at KAPA. Rather, as aircraft are added to the VFR pattern, the pattern naturally becomes elongated. 1.

Question 2: In your 12/16 letter you state traffic patterns cannot be confined based on noise abatement. We understand, it could be possible to confine a traffic pattern based on noise abatement through a Part 150 Noise and Land Use Compatibility Study followed by a successful Part 161 Notice and Approval of Airport Noise and Access Restrictions. In lieu of going through these steps, what criteria can be used by the FAA or Airport NOW to confine the pattern area or limit how many aircraft are in the traffic pattern at once? The intent would be to have the aircraft more frequently use a standard pattern area that would reduce the likelihood of having to extend the pattern over the community. (standard pattern for Centennial Airport defined as South of Arapahoe Rd and north of Lincoln Ave and East of I-25)?

FAA Response: Our December 16, 2022, letter to Centennial Airport CEO, Mike Fronapfel, stated:

"Extending either the upwind or downwind of traffic in the pattern to Runway 17R results from sequencing traffic or an increased volume in the touch-and-go pattern and, as such, cannot be confined for noise abatement."

You asked what can be done now to confine the pattern area or limit the number of aircraft in the pattern. As stated earlier in this letter, decisions about the number of aircraft operations fall outside the scope of the FAA. Confining the flight pattern area would require decreasing the number of flight operations, which the FAA cannot require for noise abatement purposes. 2.

To further clarify, Federal Aviation Regulation Part 150 Noise Compatibility Program (NCP) requests are submitted to the FAA by airport operators. KAPA is a public airport, and any limits or restriction to users is not within the FAA's authority.

Question 3: Safety concerns have been expressed not only by the community but also the flight schools that are being directed to extend the traffic pattern over the residential areas. Because of the new procedure, the pattern is extended so frequently that their students aren't getting sufficient training on flying a non-

extended pattern. This becomes a safety concern if the student is expected to fly a normal pattern at other airports and they are unable to stay ahead of the aircraft while transitioning to and from their landing or departure. Another safety concern is by flying over such dense residential areas pilots have limited options in an emergency for safely landing their aircraft and that now it's more likely a midair collision could occur over a neighborhood, unlike the last midair that fortunately occurred over the Cherry Creek State Park. In our opinion having an extended pattern doesn't enhance the safety of the operations when there has been 1 midair accident in over 16.2 million operations at Centennial Airport. Were these factors considered by the FAA prior to the change and if not can they be considered?

FAA Response: There are several facets of this question to address.

First, your question stated, "Because of the new procedure, the pattern is extended..." As explained in our response to Question 1, the FAA did not change how the traffic pattern is managed at KAPA, nor have any new procedures been implemented that direct the extension of traffic patterns over residential areas. The use of extended upwind and downwind legs are the preferred default techniques used by air traffic controllers worldwide in sequencing pattern traffic because this method provides the best precision and control over the condition.

Next, you asked whether the FAA considered the factors you listed prior to the change. As previously stated, the FAA did not change how the traffic pattern is managed at KAPA.

Finally, we are not aware of concerns from local flying schools, and these current ATC practices are used throughout the National Airspace System (NAS).

The following 18 questions were submitted to us by CACNR on behalf of community member Audra Dubler. Our responses follow each question.

Question 4. General aviation, local operations (flight schools) account for nearly 50% of total yearly flight operations at Centennial Airport. A flight pattern or operational sequence change was implemented (2022?) to send these flights over our neighborhoods (north of Arapahoe Road). Where were all these flight operations (approx. 150,000/year) prior to the change? Where were the "pattern boxes"? They were NOT over our homes and it's not due to an increase in total operations. (See the attachment labeled Question 1)

FAA Response: As shared during our presentation at the CACNR meeting on February 1, 2023, there was a significant increase in the volume of aircraft in the pattern as opposed to an increase in total operations. As aircraft are added to the VFR pattern, the pattern naturally becomes elongated.

Question 5. With the FAA solving one "perceived" problem (the midair collision in 2021), the FAA created many more: incessant noise with low flying altitude planes 8-10 hours/day, toxic lead concentrations that are poisoning our children, schools,

parks and homes, and a greater probability of ground casualties over dense residential communities. How can the one “perceived” problem override the problems of these listed above? The mid-air crash happened exactly where it should have!

FAA Response: First, as stated earlier, the FAA did not change how the traffic pattern is managed at KAPA. Second, with respect to community concerns raised regarding leaded aviation fuel, the FAA announced a new initiative in February 2022 outlining how the US can safely eliminate the use of leaded aviation fuel by the end of 2030 without adversely impacting the existing piston-engine fleet. The team, named Eliminate Aviation Gasoline Lead Emissions (EAGLE), is a government-industry partnership encompassing fuel producers and distributors, airport operators, and environmental experts, as well as communities supporting general aviation airports. Additional information about the EAGLE Initiative can be accessed at <https://www.faa.gov/unleaded>.

Question 6. Is this new sequence/pattern change permanent? Is there paperwork or a memo formalizing the changes? May we get a copy?

FAA Response: As stated earlier, the FAA did not change how the traffic pattern is managed at KAPA. Additionally, as shared by the FAA during the CACNR meeting on February 1, 2023, Centennial Airport Traffic Control Tower (APA) ATC received specific refresher training on the requirement of positive control and managing base turns. The intent of positive control is to mitigate potential conflicts with aircraft landing on the parallel runway and help prevent another mid-air collision. 4.

Question 7. The community was never notified or communicated with regarding the pattern or “operational sequence” change that is negatively affecting our homes and schools. Why isn’t the community on the ground considered a “stakeholder” when making decisions that will affect adjacent airport communities?

FAA Response: Please see our earlier responses. Additionally, operational growth at an airport is outside the FAA’s purview.

Question 8. Can air traffic control direct the flight school traffic to fly south of Arapahoe Road and north of Hess Reservoir? The area south of Lincoln Ave is 99% open space. The x’s in the diagram are new or current home developments. (See the attached labeled Question 5)

FAA Response: The lengths of the departure and final legs of an airport traffic pattern are based on the safety of aircraft, and must ensure that aircraft are allowed a stabilized climb and descent. Standard practices for traffic pattern flight are described in the Aeronautical Information Manual, such as propeller-driven aircraft should enter the pattern at and maintain 1,000 feet above ground level (AGL) (based on airport elevation) until abeam the approach end of the runway for landing. Additionally, the manual recommends departure aircraft reach at least 700 feet AGL

and be beyond .5 nautical miles from the departure end of the runway prior to starting a crosswind turn. When a departing aircraft meets these recommendations is dependent on several factors such as aircraft performance, weather, and ambient temperature. The same is true for arriving aircraft; they also must maintain stable flight when turning both the base and final legs and descending for the runway, as turning while slowed is a critical phase of flight, and the pilot must ensure the aircraft is well above stall speed while turning. Thus, directing ATC to regularly confine the crosswind or base legs would become a safety issue since ATC would not be aware of the effects of other factors, such as pilot experience and aircraft characteristics.

Another significant factor that must be considered when predicting traffic pattern size is the number of aircraft in the pattern. Since aircraft following each other in the pattern are generally over one nautical mile apart, maintaining a confined pattern quickly becomes impractical as the number of aircraft increases. Maintaining a reduced or confined traffic pattern regardless of the number of aircraft is unsafe and is not something the FAA will consider.

Question 9. How many planes are allowed in the flight pattern (defined as the touch and go pattern/box)? Can this number be reduced to stop planes flying north of Arapahoe Rd. and south of Lincoln Ave? Can the number of planes in the pattern be regulated (limited) so they do not fly north of Arapahoe and the remaining planes be maintained in a holding pattern on the ground until there is room in the pattern for them to fly? Planes wanting to bypass the waiting period on the ground could be incentivized to purchase a voucher, similar to cars wanting to use a HOV lane, so as not to discriminate those planes wanting to take off. The community is suffering due to the number of "laps" each flight is making in the flight school pattern.

FAA response: As explained earlier, decisions about the number of operations at an airport are not within the FAA's authority. The number of aircraft allowed in a pattern at one time is fluid. It is dependent on controller workload and other factors such as weather, airport environment (e.g., construction), etc., especially during periods of increased traffic volume.

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Question 10. Rationale has been given that the FAA needs to stagger the landings, but planes land together all the time. Why would some planes be allowed to land together and not others? Does this mean the FAA could revert to the original touch & go pattern box. (See the attached labeled Question 7)

FAA Response: Simultaneous operations on parallel runways are allowed based on several factors, such as the types of aircraft and the distance between the runway centerlines. Since the concern is aircraft on base leg overshooting final, once the aircraft are established on final, a faster aircraft aligned for Runway 17L might overtake the slower aircraft aligned for Runway 17R and land simultaneously.

Question 11. As a result of the mid-air collision (May '21), the community believes the FAA changed the flight pattern at Centennial Airport. If the FAA did indeed change the flight pattern because of the mid-air collision, then all airports in this country with a similar, pre-collision, flight patterns to Centennial Airport must have also been changed. How many other airports, nationwide were affected because of the collision over Cheery Creek State Park? If no other airports experienced any change, then what's the rationale to change anything at Centennial Airport? Simply put, if the FAA is not changing the flight pattern at every other airport, why do it at Centennial?

FAA Response: As stated earlier, the FAA did not change how the traffic pattern is managed at KAPA. To our knowledge, the final report for that accident has not been issued by the NTSB; therefore, no changes have been made as a result.

Question 12. Since the midair collision in May of 2021, there have been 3 other crashes associated with Centennial Airport: March 9th 2022, August 2022 (pilot killed because he ran out of fuel) and November 9th, 2022. Thankfully nobody on the ground was injured. But it's only a matter of time before a crash occurs in our community. Since the FAA is concerned only with the safety of the pilots and passengers, what government agency is concerned that our community now has 150,000, local, G.A. operations/year, with novice pilots, over dense residential communities where OUR safety is in imminent danger?

FAA Response: We respectfully disagree with your statement that the FAA is concerned only with the safety of pilots and passengers. The FAA created the NAS to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS helps people and goods travel safely and freely. The FAA carries a huge responsibility—our workforce is dedicated to providing the American public with the safest, most efficient, and environmentally responsible civil aviation systems and airspace possible. The FAA is responsible for:

- Directing air traffic throughout the nation and helping to ensure public safety during space launches.
- Airport safety and inspections and setting the standard for airport design, construction, and operation.
- Flight inspection standards and advancing satellite and navigation technology.
- Developing and maintaining the Next Generation Air Transportation System (NextGen).

Question 13. When there are only a few planes in the pattern and no staggering needed, for example 2 planes, why do the planes still fly north of Arapahoe Rd. and south of Lincoln Ave.? In fact, occasionally a single plane in the pattern will fly repeatedly north of Arapahoe Rd. Why? (See the attachment labeled Question 10.)

FAA Response: There are many reasons a pilot might decide to fly north of Arapahoe Road, such as his/her experience level, aircraft performance characteristics, and weather.

Question 14. How do pre- and post- mid-air collision flight patterns compare to the other 100 top general aviation airports in the country? How similar or dissimilar are the pre-and post- crash patterns to other airports? Why was our flight pattern/sequence changed when others were not? For example, the midair collision in Niwot, CO in September '22 that killed 3 people?

FAA Response: As stated earlier, the FAA has not changed the traffic pattern at KAPA. The preliminary NTSB report for the accident at Niwot, Colorado, indicates that neither aircraft were in an airport traffic pattern.

Question 15. Was the mid-air collision (May '21) the result of a faulty flight pattern, tower error or pilot error?

FAA Response: The accident investigation, led by National Transportation Safety Board (NTSB) is ongoing.

Question 16. What is most important to the FAA: pilot safety or innocent children and families on the ground, or both?

FAA Response: Both. Please see our response to Question 12.

Question 17. The Centennial Airport Voluntary Noise Abatement Guidelines map out specific noise sensitive areas. Nearly all pilots (not just flight schools) completely ignore the noise abatement guidelines? How can formal noise abatement be achieved?

FAA Response: Please address your question to KAPA, as it is the appropriate entity to respond to this concern. 7

Question 18. CACNR is comprised of various group, including airport users (flight schools). Why are the flight schools not obligated to be at every CACNR meeting?

FAA Response: Attendance at meetings is not under the FAA's authority.

Question 19. Can there be ONE spokesperson from the FAA assigned to this situation to get back with our community in a timely manner? Also, can there be a formal acknowledgment of the questions received and a timeline given for a response and/or resolution.

FAA Response: The FAA Noise Portal serves as a conduit for communities to submit their questions and concerns. The CACNR and its associated communities

are encouraged to utilize the FAA Noise Portal to ensure that their questions are researched, processed and answered by the FAA within 30 business days.

Question 20. The community is requesting the FAA's attendance at each roundtable meeting either in person or remotely until this issue is resolved. Will the FAA agree to that request?

FAA Response: FAA representatives can participate in roundtable meetings to provide technical information and advice. The most productive roundtables invite FAA representatives on an as-needed basis, providing a clear agenda topic with sufficient advance notice to enable FAA to identify appropriate representation and prepare information.

Question 21. When did flight schools get instituted to Centennial Airport and when did touch and goes start at the airport?

FAA Response: Please address your question to KAPA, as it is the appropriate entity to respond to this concern.

The additional 10 questions below were raised by the public at the February 1, 2023, CACNR meeting and submitted to us by CACNR. Our responses follow each question.

Question 22. Pinning down the cause of the increase in the flight pattern north of Arapahoe Road, is it possible there was a slight overcorrection in what the FAA has been communicated to air traffic controllers after the mid-air crash? Is it possible for the air traffic controllers to back off a bit so we can have more parallel landings?

FAA Response: Please see our response to Question 1.

Question 23. How does the FAA factor in the safety of residents on the ground when it makes decisions?

FAA Response: Please see our response to Question 12.

Question 24. Did the FAA coordinate with Arapahoe County or other authorities when it expanded the Airport Influence Area extending pattern traffic north of Arapahoe Road?

FAA Response: Aircraft were previously overflying the area north of Arapahoe Road prior to May 2021. Please see our response to Question 1.

Question 25. What is the capacity for the number of planes that can fly in the area at any given time?

FAA Response: Please see our response to Question 9.

Question 26. How does the FAA determine if there are too many planes in the pattern?

FAA Response: Please see our response to Question 9.

Question 27. Can the FAA extend the pattern south or in any other direction?

FAA Response: As explained earlier (the fourth paragraph of this letter) and depending on traffic, ATC already has aircraft fly farther to the south by extending the upwind leg.

Question 28. Can the FAA implement formal noise abatement?

FAA Response: Please see our responses to Questions 2 and 17.

Question 29. Is the increase in the flight pattern north of Arapahoe Road related to Metroplex?

FAA Response: No, please see our response to Question 1.

Question 30. How does the FAA determine the capacity/growth limit for Centennial Airport?

FAA Response: As discussed earlier, decisions about the number of operations are in the scope of private industry (not the FAA).

Question 31. Has the FAA conducted an environmental study for Centennial Airport? Has the FAA participated in any other federal, state, or local air quality or health studies?

FAA Response: The FAA conducted environmental reviews on instrument flight procedure changes that were implemented in 2020, 2021, and 2022. These reviews were unrelated to the airport traffic pattern operations.

Thank you for this opportunity to review and respond to your concerns. We look forward to continued communication with the CACNR.

Sincerely,

A handwritten signature in blue ink, appearing to read "Grady Stone".

Grady Stone
Regional Administrator
Northwest Mountain Region