



## **CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE**

**AGENDA**  
**May 3, 2023**  
**6:30 p.m. – 8:30 p.m.**

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

**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: Utilizing Partnerships to Reduce Airport Noise for the Benefit of Neighboring Communities***

**Chair:** Brad Pierce **Vice Chair:** Paul Krier **Treasurer:** Andy Jones **Secretary:** Alison Biggs

1. **CALL TO ORDER AND DETERMINATION OF QUORUM:**

<i>Arapahoe County:</i>	Leslie Summey/Vacant Paul Krier/Evan Colvin	<i>Foxfield:</i>	Pam Thompson/Frank Lawrence
<i>Douglas County:</i>	Abe Laydon/Dan Avery Alison Biggs/Mark Adams	<i>Greenwood Village:</i>	Donna Johnston/Libby Barnacle
<i>Aurora:</i>	Brad Pierce/Mindy Parnes	<i>Highlands Ranch Metro Dist.</i>	Andy Jones/Renee Anderson
<i>Castle Pines:</i>	Chris Eubanks/Ben Price	<i>Lone Tree:</i>	Mike Anderson/Chuck Darnell
<i>Castle Rock:</i>	Laura Cavey/Sandy Vossler	<i>Parker:</i>	Ashley Chasez/Vacant
<i>Centennial:</i>	Candace Moon/Don Sheehan	<i>ACPAA:</i>	Michael Fronapfel/Vacant
<i>Cherry Hills Village</i>	Robert Eber/Randy Weil	<i>AOPA:</i>	John Hirshman/Vacant
		<i>CABA:</i>	Don Kuskie/Mike Straka
		<i>CDOT Aeronautics Div:</i>	Todd Green/Vacant
		<i>Wings Over the Rockies:</i>	Bill Wasmund/Jordan Ashley

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

1. DRAFT MINUTES, April 5, 2023 – Alison Biggs, Secretary
2. TREASURER'S REPORT, April 2023 – Andy Jones, Treasurer
3. NOISE REPORT, March 2023 – Samantha Blymyer, ACPAA Staff

3. **ITEMS REMOVED FROM CONSENT AGENDA:**

4. **EXECUTIVE COMMITTEE:**

- A. CACNR REPRESENTATIVE TO ACPAA MEETING ON MAY 11, 2023
- B. CACNR REQUEST FOR ACPAA PRIORITY
- C. DRAFT 2023-2025 CACNR WORK PROGRAM
- D. LETTER TO SENATOR HICKENLOOPER et al
- E. RETREAT PLANNING
- F. PART 150 SCOPE OF WORK

5. **FAA RESPONSES TO CACNR QUESTIONS OF 2/27/23 (included), 1/16/23 and 12/31/22 (previously sent in March 2023):**

Grady Stone, Regional Administrator, Northwest Mountain Region, Federal Aviation Administration, U.S. Department of Transportation

6. **PUBLIC COMMENT/DISCUSSION:** 3 minutes per person time limit

7. **COMMITTEE REPORTS:**

- A. COMMUNITY OUTREACH – Mike Anderson, Chair
- B. FLY QUIET – Bill Wasmund, Chair
- C. NOISE MONITORS – Candace Moon, Chair

8. **FAA REPORTS/COMMENTS:**

1. CENTENNIAL AIRPORT AIR TRAFFIC CONTROL TOWER – Mike Sackett/Ron Curry
2. FAA DISTRICT OFFICE – John Bauer/John Sweeney

3. FAA TRACON – Steve Martin/Bill Dunn
4. FAA DENVER DISTRICT GENERAL MANAGER – Michael Valencia
5. FAA NORTHWEST MOUNTAIN REGION/ALASKAN REGION COMMUNITY ENGAGEMENT OFFICER – Justin Biassou
6. FAA SENIOR ADVISOR, OFFICE OF THE REGIONAL ADMINISTRATOR, NORTHWEST MOUNTAIN REGION – Leslie Lardie

9. **OTHER REGULAR REPORTS:**

- A. ACPAA April 13, 2023 – Chris Eubanks
- B. AIRPORT DIRECTOR'S REPORT – Mike Fronapfel
  1. Community Related Activity – Launch of Availability/Use of Unleaded Fuel
  2. FAA Response re Sub-Roundtable Technical Working Group
  3. Legislative/Washington, D.C. Trip Activity
  4. Flight School Activity – Meeting on April 27, 2023
  5. Other Airport Activity
  6. Status of Follow Up Items
  7. Other
- C. FLIGHT SCHOOLS:
  1. Aspen Flying Club – Justin Mazza
  2. ATP – John Herman
  3. Flights Inc. – Kimber Bauer
  4. Independence Aviation – Jason Ahbe

10. **OLD BUSINESS:**

11. **NEW BUSINESS:**

- A. INFORMATION SHARING – NTSB FINAL REPORT ON 2021 MID-AIR COLLISION

12. **PUBLIC COMMENT:** (3 minutes per person time limit):

13. **NEXT MEETINGS:**

- |                   |                 |   |
|-------------------|-----------------|---|
| A. <b>CACNR</b> – | June 7, 2023    | 6:30 p.m. 7565 S. Peoria Street, Unit 9D, Englewood, CO |
|                   | July 2023       | NO MEETING  |
|                   | August 2, 2023  | 6:30 p.m. 7565 S. Peoria Street, Unit 9D, Englewood, CO |
|                   |                 |   |
| B. <b>ACPAA</b> – | May 11, 2023    | 3:00 p.m. 7565 S. Peoria Street, Unit 9D, Englewood, CO |
|                   | June 8, 2023    | 3:00 p.m. 7565 S. Peoria Street, Unit 9D, Englewood, CO |
|                   | July 2023       | NO MEETING  |
|                   | August 10, 2023 | 3:00 p.m. 7565 S. Peoria Street, Unit 9D, Englewood, CO |

14. **ADJOURN**



CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE  
MINUTES  
April 5, 2023  
**DRAFT**

VISION – QUIETER SKIES FOR OUR COMMUNITIES

MISSION – UTILIZING PARTNERSHIPS TO REDUCE AIRPORT NOISE FOR THE BENEFIT OF NEIGHBORING COMMUNITIES

**Chair:** Brad Pierce **Vice Chair:** Paul Krier **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 Brad Pierce. The following were in attendance, and a quorum was present:

Arapahoe County:	Leslie Summey	Centennial:	Candace Moon
Arapahoe County:	Paul Krier	Foxfield:	Pam Thompson
Douglas County:	Dan Avery	Greenwood Village:	Donna Johnston
Douglas County:	Alison Biggs	Highlands Ranch:	Andy Jones
Aurora:	Brad Pierce	Parker:	Ashley Chasez
Castle Pines:	Chris Eubanks	ACPAA:	Mike Fronapfel
Castle Rock:	Sandy Vossler (virtual)	AOPA:	John Hirshman

Others in attendance were ACPAA staff Samantha Blymyer, Chris Thompson, and Lauren Wiarda.

Those absent were: Cherry Hills Village: Robert Eber/Randy Weil CDOT Aeronautics Div: Todd Green/Vacant  
Lone Tree: Mike Anderson/Chuck Darnell Wings Over the Rockies: Bill Wasmund  
CABA: Don Kuskie/Mike Straka

2. **CONSENT AGENDA:** The Consent Agenda included the Draft CACNR Minutes from March 1, 2023; the Treasurer’s Report from March 31, 2023, 2023, showing a balance of \$23,251.15; and the February 2023 Noise Report. On the motion of Alison Biggs, duly seconded and passed, the March minutes were removed from the Consent Agenda. On the motion of Andy Jones, duly seconded, the remainder of the Consent Agenda was approved.

The February 2023 Noise Report included the following information:

<b>February Local Operations:</b>	<b>12,446</b>	<b>February Total Operations:</b>	<b>24,275</b>
<b>Year to Date Local Operations:</b>	<b>24,407</b>	<b>Year to Date Total Operations:</b>	<b>48,009</b>

**24,275 Total Operations in February resulted in 451 complaints from 67 households.**

**February Noise Events:**

<b>February Total:</b>	<b>Feb. 60 – 69 db:</b>	<b>Feb. 70 – 79 db:</b>	<b>Feb. 80 – 89 db:</b>
7,933 Golf Course	5,208 Golf Course	2,489 Golf Course	391 Airport East
6,242 Meridian	5,136 Meridian	1,063 Meridian	226 Golf Course
2,379 Airport East	1,591 Parker	682 Airport East	76 Castle Rock
2,079 State Park	1,505 State Park	562 State Park	40 Meridian
1,762 Parker	1,269 Airport East	167 Parker	10 State Park
1,296 Grandview Estates	1,210 Grandview Estates	166 Castle Rock	4 Grandview Estates
781 Castle Rock	581 Greenwood Village	82 Grandview Estates	4 Parker
632 Greenwood Village	571 Lone Tree	51 Greenwood Village	2 Hunters Hill
599 Lone Tree	531 Castle Rock	28 Lone Tree	0 Castle Pines
354 Hunters Hill	326 Hunters Hill	26 Hunters Hill	0 Greenwood Village
98 Castle Pines	92 Castle Pines	7 Sagebrush Park	0 Lone Tree
95 Sagebrush Park	88 Sagebrush Park	6 Castle Pines	0 Sagebrush Park

**February Noise events in the 90+ decibel range:** Airport East – 37 Golf Course – 10 Castle Rock – 8 Meridian – 3 State Park – 2

**February Noise Complaints and Numbers of Households:**  
(451) (67)

**YTD Complaints & Number of Households:**  
(1,225) (98)

<b>Noise Complaints:</b>	<b>Number of Households:</b>	<b>Noise Complaints:</b>	<b>Households:</b>
179 Unincorporated Arapahoe County (38%)	33 UAC (49%)	561 Greenwood Village	47 UAC
161 Greenwood Village (34%)	15 Greenwood Village (22%)	420 UAC	23 Greenwood Village
51 Centennial (11%)	5 Other (7%)	125 Centennial	8 Other
20 Castle Rock (4%)	3 Centennial (4%)	40 Castle Rock	4 Centennial
17 Unincorporated Douglas County (4%)	3 UDC (4%)	32 Other	4 UDC
10 Lone Tree	3 Lone Tree	24 UDC	3 Castle Rock
10 Other	2 Aurora	11 Lone Tree	3 Lone Tree

2 Aurora  
1 Castle Pines  
0 Cherry Hills Village  
0 Denver  
0 Highlands Ranch  
0 Parker

2 Castle Rock  
1 Castle Pines  
0 Cherry Hills Village  
0 Denver  
0 Highlands Ranch  
0 Parker

6 Aurora  
4 Highlands Ranch  
1 Castle Pines  
1 Parker  
0 Cherry Hills Village  
0 Denver

2 Aurora  
2 Highlands Ranch  
1 Castle Pines  
1 Parker  
0 Cherry Hills Village  
0 Denver

**Year to Date, the top five household complaints were:**

Household #1	379 Greenwood Village	Household #4	59 Unincorporated Arapahoe County
Household #2	122 Centennial	Household #5	55 Castle Rock
Household #3	62 Unincorporated Arapahoe County		

In February, 56 responses were requested from 451 noise complaints, with 49 of those requests made by email (87.5%), and 7 made by telephone (12.5%).

In February, 419 complaints were made about daytime flights (7:00 a.m. – 9:59 p.m.) – 93%.  
32 complaints were made about nighttime flights (10:00 p.m. – 6:59 a.m.) – 7%.

In February, props accounted for 78% of the complaints by aircraft type; jets accounted for 21% of the complaints, and helicopters caused 1%.

In February, training was responsible for 47% of the complaints; departures were responsible for 33% of the complaints, and arrivals were responsible for 20% of the complaints.

The February Complaint Map and a February Radar Track Density Map were provided.

3. **ITEMS REMOVED FROM THE CONSENT AGENDA:** Following brief discussion, the following changes were made to the March 1, 2023 draft minutes by consent:
- page 1, #2, second sentence in the first paragraph, amended to read “He had spoken to ACPAA in Executive Session in February.”
  - Page 3, #9, second sentence in the first paragraph, amended to read “Comments came from the Cherry Creek Farms and Sundance Hills areas of Greenwood Village, Englewood Centennial, Greenwood Village, the Cherry Hills Vista area of Denver, and Louviers.

On the motion of Alison Biggs, duly seconded, the amended March 1, 2023 minutes were approved.

4. **EXECUTIVE COMMITTEE:**

A. CACNR Representative to ACPAA Meeting on April 13, 2023 – Chris Eubanks Volunteered to represent CACNR.

B. Draft Work for Preparation and Adoption of 2023-2025 CACNR Work Program – There was general discussion of the latest draft of the Work Program. Any further changes were asked to be provided to the Executive Committee prior to the mailing for the May CACNR meeting or brought to that meeting.

During discussion, it was agreed to return to the idea of holding a retreat that had been brought up toward the end of last year. Initial work on this project was referred to the Executive Committee. Another topic brought up was the desire for the data from the portable noise monitors to be routinely included with the monthly Noise Report. Samantha Blymyer indicated this could and would be done.

5. **FAA RESPONSES TO 12/31/22, 1/16/23 and 2/27/23, QUESTIONS:** There had as yet been no written responses to the questions which had been submitted to the FAA. Leslie Lardie had recently indicated answers would be coming next week.

6. **PUBLIC COMMENT/DISCUSSION:** Chair Pierce opened the meeting for public comment.

- On behalf of the Greenwood Village Mayor and City Council, Donna Johnston presented a request for CACNR to recommend ACPAA make reverting the traffic pattern at Centennial Airport back to the way it was before the mid-air crash a top priority, legislatively and otherwise. Following considerable discussion about the wording, but in agreement with the concept, Chris Eubanks made a motion for the Executive Committee to prepare the final wording of CACNR’s communication to ACPAA. Motion was seconded and carried. There was agreement that, if the timing was appropriate, the adoption of the final wording could be done virtually. Also, if appropriate, consideration would be given to sending the communication directly to the FAA.
- Other comments came from the Sundance Hills area of Greenwood Village, Centennial, Greenwood Village, Cherry Creek Vista South, Arapahoe County and Unincorporated Arapahoe County. There were 38 attendees on line.
- Disappointed and insulted the FAA was not in attendance, and no one from ACPAA was present as well.
- Many seem to miss that there are too many planes in the air over homes here, regardless of the pattern.
- Unacceptable the FAA is not here – they are or should be responsible to the public which pays their salaries – the FAA is hiding and they are the only ones who can fix or reroute traffic – cannot use own home because of the noise – it is stupid to be here if the FAA is not.
- Concern regarding the use of leaded gas and the scientific studies done on the harm it does children – it is a massive crisis.

- Has been trying to get something done for eight months – the airport is a public nuisance – frustration that nothing has been done – does airport pay property taxes, as it is on prime real estate – what taxes does it pay to the county that benefit the county – the land should be rezoned and redeveloped for the benefit of the community.
- From 4:30 a.m. on and all day long, the noise is incessant – the FAA does not care about people – there is spending for the benefit of the airport but not for people and their communities – asked CACNR to be more formalized in demanding the FAA attend these meetings and activate the Sub-Roundtable Technical Working Group (Committee).
- The ACPAA is biased toward the airport, and is unwilling to help – it needs to do the right thing – authority should be taken from the ACPAA as it did nothing when more traffic was moved over people – the airport wants its cake and eat it too – it is not truthful – it has taken over lives so it can thrive – there is understaffing – it is only when and not if there will be an accident over homes – called on ACPAA and the community to do the right thing – individual reported receiving retaliation since speaking out, and wants the airport gone.
- An environmental study needs to be done about the impact of the current flight pattern – overpopulation causes many problems – flying over homes causes a decrease in property values – on his own, son wrote a letter to Senator Hickenlooper about the noise and the lead problem which was quite good for a 7<sup>th</sup> grader – who want to be worried about a plane crashing into his home or school when he is still in school?
- Reported regret about moving to Greenwood Village with the problems of night and early morning flights, the concern about lead pollution, low flights, major problems with touch and go activity – supported the letter to ACPAA re higher priority.
- Another inquiry if an environmental impact study was done before the FAA instituted the action which has caused the increased noise over Greenwood Village? Mike Fronapfel responded the FAA insists no procedural change was made, so there was no need for an environmental study to be done.
- There is a public health/mental health/physical health emergency here, and wanted to see all municipalities take on this situation, not just Greenwood Village.
- One area reported things not as consistently loud as it used to be, but on some days they are worse. Data from the portable noise monitor at this home should be provided to CACNR.
- Working from home is difficult with noise seemingly 24/7 – cannot go outside – no relief anywhere – the FAA lied to us as no one is here for/with us as promised – 2 years is too long to get the report of the mid-air collision.

## 7. COMMITTEE REPORTS

A. COMMUNITY OUTREACH – Pam Thompson reported the CACNR website had been updated with minutes. The committee would like more information as to how it can help with the various processes going on, reporting on such things as the mid-air crisis report, adding information, etc.

Inquiry was made about getting Congressman Crow, Senator Hickenlooper and/or Governor Polis to attend one of these meetings. Suggestion was made for CACNR to more actively use social media, or to tap into the airport's use of existing social media platforms.

B. FLY QUIET – A written report had been provided in the pre-meeting mailing. It included information about the County of San Mateo which owns San Carlos Airport (KSQL) and Half Moon Bay Airport(KHAF) in the San Francisco Bay Area of California and which has launched its Friendly Approach Program. The noise abatement procedure videos were considered noteworthy. FlySMCFriendly.com

Mass Hanscom Field (KBED) <https://www.massport.com/hanscom-field/about-hanscom/airport-activity-monitor/> had also been reviewed. Voluntary noise abatement procedures there were provided, which might possibly be used here. Voluntary arrival and departure procedures might also be considered for possible adoption at Centennial Airport. Mike Fronapfel indicated such items might be considered as general noise abatement guidelines right now, but the FAA would likely want to approve their use on any more formalized basis.

C. NOISE MONITORS – Had been covered under discussion of the Work Program earlier on the agenda.

## 9. OTHER REGULAR REPORTS

A. ACPAA MARCH 16, 2003 – Bill Wasmund had attended for CACNR, and his report was provided. He had earlier noted he had commented on the changes related to the southwest practice area, and the need to coordinate use there with the Air Force Academy.

B. AIRPORT DIRECTOR'S REPORT – Mike Fronapfel reported on Resolution 2023-06, 100 LL Avgas to Unleaded Fuel Transition, adopted by ACPAA. The resolution supports a transition to the use of unleaded fuel and the ability of planes to use that fuel. ACPAA has authorized airport staff to work with all stakeholders to explore and implement strategies necessary to facilitate a safe transition to an FAA approved alternative unleaded fuel as soon as practical.

Some of the strategies being explored include the airport paying for necessary Supplemental Type Certificates that are required by the FAA before using FAA approved alternative unleaded fuels, and financial assistance to FBOs as they adapt their equipment to make the transition. Three of the major flight schools based at the airport have already indicated they support the

transition and will do so, and all other owners – approximately 500 – will be asked to do so as well; tenancy will need to be proven for financial assistance if needed. Question was asked if there would be a record of who uses the unleaded fuel. It is hoped the unleaded fuel will be available by Summer of 2023. More details can be found at [www.centennialairport.com/94u](http://www.centennialairport.com/94u)

Fronapfel had met with Tower personnel to explore any viable options for managing the traffic patterns at Centennial. Once determined, options will initially be taken to FAA Denver District Manager Michael Valencia.

A meeting had been held with Greenwood Village and Arapahoe County where a letter to Senator Hickenlooper was developed; CACNR was asked if it wished to be included as a signatory. The letter would request the Senator's support to ensure the FAA engaged in good faith discussions to help address ongoing noise-related issues, and his advocacy for long-term review. Motion was made by Andy Jones to authorize Chair Brad Pierce to review and sign the letter on behalf of CACNR; the use of the CACNR logo would also be allowed. Motion was seconded and carried.

Fronapfel reported the ACPAA and Greenwood Village had engaged the services of the Normandy Group, a lobbying firm, to work at the national level on behalf of the airport's (and CACNR's) concerns. The firm has experience in dealing with the FAA.

The FAA had not responded to the request for the formation of the Sub-Roundtable Technical Working Group, so another letter had been sent on March 22, 2023. Even though there are two such groups already in existence with FAA involvement, Leslie Lardie, FAA Senior Advisor, Office of the Regional Administrator, Northwest Mountain Region, responded negatively to recognition of such a group proposed here. Next steps in pursuit of the FAA's cooperation will be determined.

The National Transportation Safety Board's report on the 2021 mid-air collision here had finally been issued. The cause was determined to be pilot error, with air traffic control issues such as the failure of an air traffic controller to issue a traffic advisory to one of the involved aircraft, the use of two different radio frequencies, and a short-staffed control tower also noted.

Another meeting with the flight schools had not as yet been scheduled. Candace Moon asked to attend the next meeting, as Chair of the CACNR Noise Monitor Committee.

12. **PUBLIC COMMENT** – It was suggested that if possible, CACNR and ACPAA look at what would be in the Federal Reauthorization legislation in relation to general aviation, before the bill is submitted.

Question was asked how individuals are elected to CACNR. It was explained that CACNR's Members are Arapahoe and Douglas Counties, and the Cities and Towns surrounding the airport, per a Memorandum of Understanding among them. Those Members designate who will represent them on CACNR; the appointments or designations are usually made by each jurisdiction's governing body.

**POSTPONEMENT** – Due to the time, the remainder of the meeting's agenda was postponed again.

13. **NEXT MEETINGS:**

A. CACNR – June 7, 2023	6:30 p.m.	7565 South Peoria Street, Unit 9D, Englewood, CO
July 2023	NO MEETING	
August 2, 2023	6:30 p.m.	7565 South Peoria Street, Unit 9D, Englewood, CO
B. ACPAA – May 11, 2023	3:00 p.m.	7565 South Peoria Street, Unit 9D, Englewood, CO
June 8, 2023	3:00 p.m.	7565 South Peoria Street, Unit 9D, Englewood, CO
July 2023	NO MEETING	
August 10, 2023	3:00 p.m.	7565 South Peoria Street, Unit 9D, Englewood, CO

14. **ADJOURNMENT:** The meeting was adjourned at 9:13 p.m.

Alison Biggs, Secretary

CENTENNIAL AIRPORT COMMUNITY NOISE ROUNDTABLE		2023 BUDGET - Approved October 5, 2022; Updated as of 4/28/23		
		BUDGET	ACTUAL	
INCOME:			as of 04/28/23	NOTES
CARRY OVER FROM PRIOR YEAR		\$ 23,000.00	\$ 23,251.15	estimated carry over from prior year - exact amount to be determined
ACPAA		\$ 10,000.00		
CACNR REGULAR MEMBERS		\$ -		Members not invoiced for 2023 due to amount of carry over available
TOTAL INCOME:		\$ 33,000.00		
<b>EXPENDITURES:</b>				
<b>WORK PROGRAM:</b>				
COMMUNITY OUTREACH		\$ 2,000		WebsiteUpdating and Maintenance
		\$ 5,000		MediaOutreach 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
<b>EDUCATION</b>				
2 Reps to UC Davis Symposium		\$ 5,000	610.21	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		\$ 3,000		Projects with Jason Schwartz
MEMBERSHIP DUES		\$ 1,000		N.O.I.S.E.
ADMINISTRATIVE		\$ 1,000		Part time secretarial assistance
		\$ -		Legal
RESERVE		\$ 9,500.00		for presently unidentified and unanticipated expenses and/or work CACNR activities consistent with the approved Work Plan.
TOTAL EXPENDITURES:		\$ 33,000.00	22640.94	
CARRY OVER TO 2024		\$ -		Actual to be determined at the end of 2023
** 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. "Hereafter, 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



**13. March 2023**



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**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.

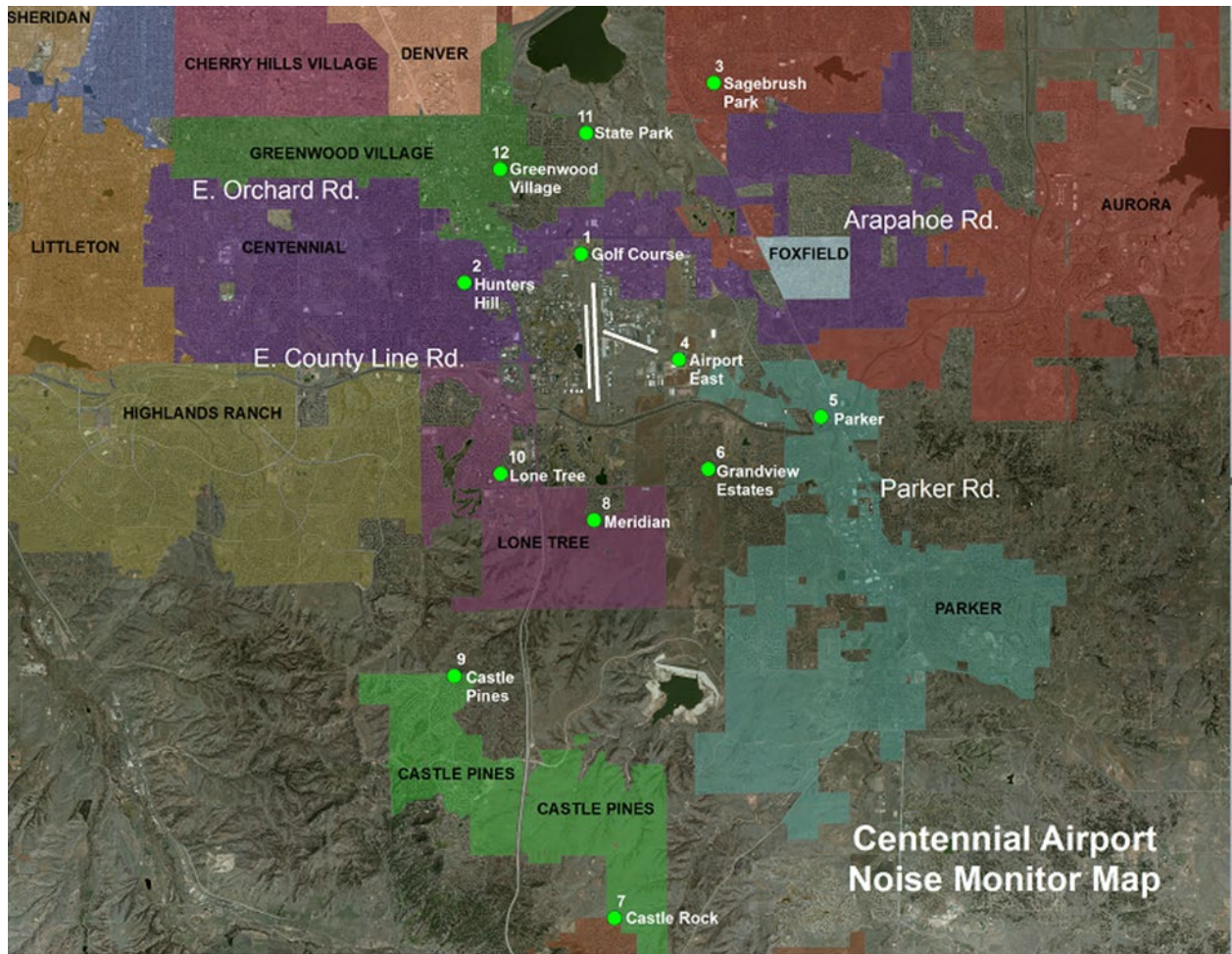
**Visual Flight Rules (VFR)** – A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. A flight plan is not required when the pilot is operating under Visual Flight Rules.

**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

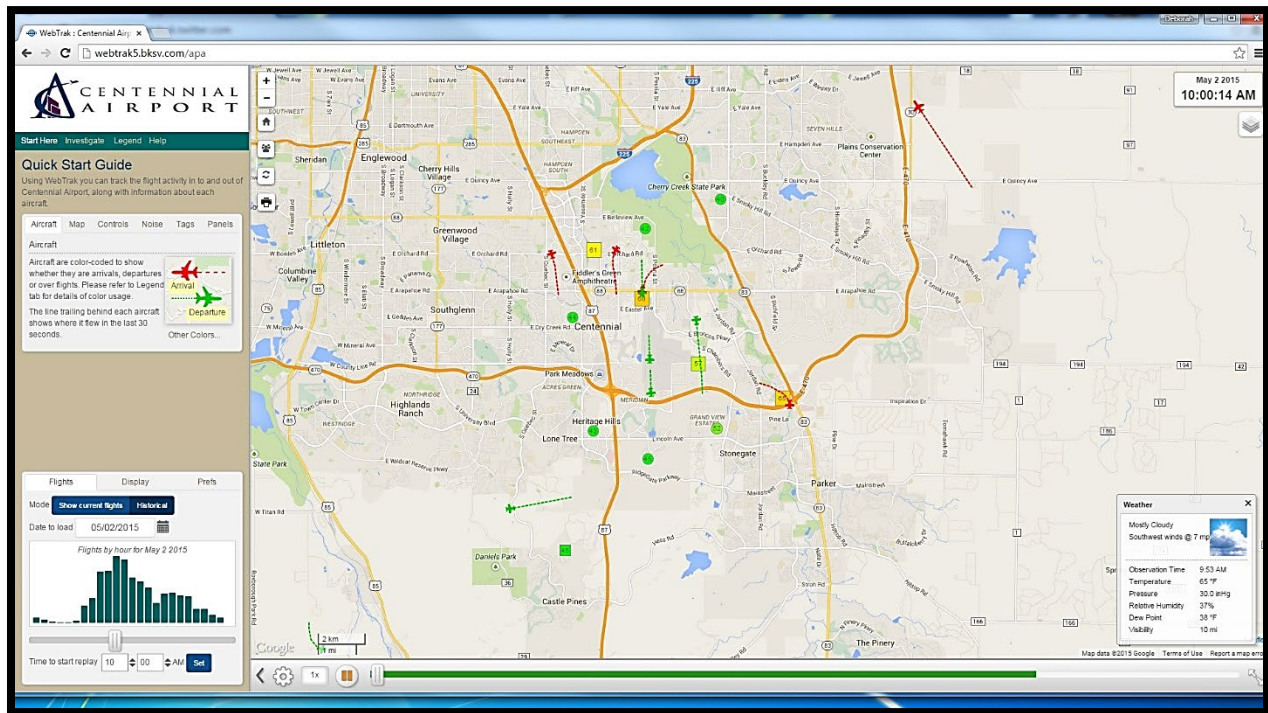
## 3 ABOUT APA'S NOISE MONITORING PROGRAM

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](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 ININERANT				LOCAL		
	AIR TAXI	G.A.	MILITARY	TOTAL INTINERANT	AIR TAXI	G.A.	MILITARY	TOTAL	G.A.	MILITARY	TOTAL LOCAL
January	2,304	3,055	99	5,458	896	5,213	69	6,178	11,936	25	11,961
February	2,180	2,883	123	5,186	1,046	5,388	85	6,519	12,426	20	12,446
March	2,512	3,260	187	5,959	1,555	5,523	100	7,178	14,989	20	15,009
April				0				0			0
May				0				0			0
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
<b>Y-T-D Totals</b>	<b>6,996</b>	<b>9,198</b>	<b>409</b>	<b>16,603</b>	<b>3,497</b>	<b>16,124</b>	<b>254</b>	<b>19,875</b>	<b>39,351</b>	<b>65</b>	<b>39,416</b>

	IFR OVERFLIGHTS				VFR OVERFLIGHTS				TOTAL OPERATIONS	
	AIR TAXI	G.A.	MILITARY	TOTAL INTINERANT	AIR TAXI	G.A.	MILITARY	TOTAL		
January	2	4	4	10	43	73	11	127	January	23,734
February	6	4	2	12	31	80	1	112	February	24,275
March	0	0	3	3	24	90	4	118	March	28,267
April				0				0	April	
May				0				0	May	
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	
<b>Y-T-D Totals</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>25</b>	<b>98</b>	<b>243</b>	<b>16</b>	<b>357</b>	<b>Y-T-D Totals</b>	<b>76,276</b>

### 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

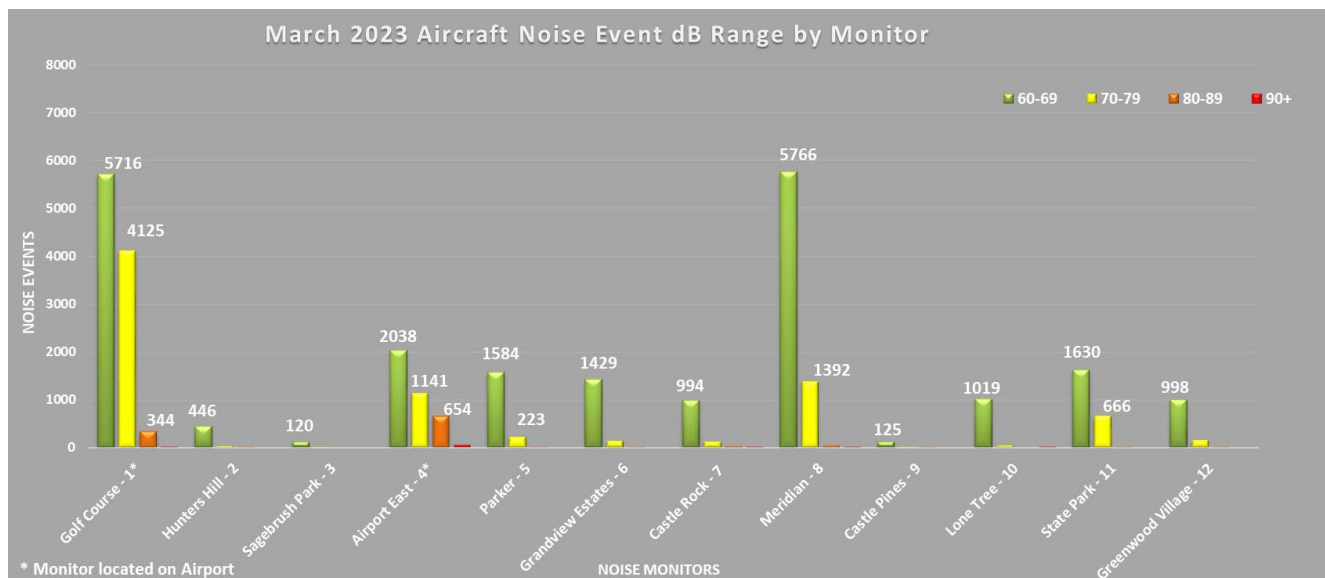
The following data displays the amount and associated decibel level of aircraft noise events at a given monitor. An aircraft noise event must contain the following characteristics:

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.

March 2023 Aircraft Noise Event Decibel Range By Monitor					
Monitor	60-69	70-79	80-89	90+	Totals
Golf Course- 1*	5716	4125	344	8	10193
Hunters Hill- 2	446	36	2	0	484
Sagebrush Park- 3	120	9	0	0	129
Airport East- 4*	2038	1141	654	53	3886
Parker- 5	1584	223	4	0	1811
Grandview Estates- 6	1429	147	3	0	1579
Castle Rock- 7	994	124	32	1	1151
Meridian- 8	5766	1392	45	1	7204
Castle Pines- 9	125	14	2	0	141
Lone Tree- 10	1019	53	0	5	1077
State Park- 11	1630	666	13	0	2309
Greenwood Village- 12	998	156	1	0	1155
<b>Totals</b>	<b>21865</b>	<b>8086</b>	<b>1100</b>	<b>68</b>	<b>31119</b>

\*Monitor located on Airport



## 7 MARCH 2023 NOISE COMPLAINT STATISTICS

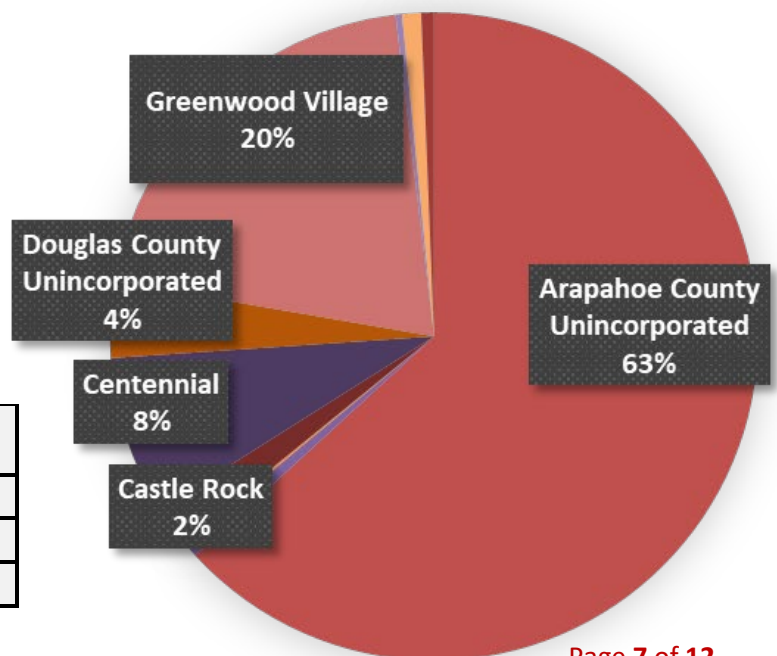
In March, Centennial Airport received 633 complaints from 89 households.

March Noise Complaints			YTD		Population
Municipality	Complaints	Households	Complaints	Households	Census 2018
Arapahoe County Unincorporated	400	46	820	67	83,764
Aurora	5	2	11	2	374,114
Castle Pines	1	1	2	2	10,507
Castle Rock	12	3	52	4	64,827
Centennial	50	3	175	5	110,831
Cherry Hills Village	0	0	0	0	6,650
Denver	0	0	0	0	716,492
Douglas County Unincorporated	24	4	48	6	100,536*
Greenwood Village	129	23	690	33	15,801
Highlands Ranch	2	1	6	3	105,264
Lone Tree	0	0	11	3	14,653
Parker	4	2	5	3	55,636
Other	6	4	38	7	UNK
<b>Total</b>	<b>633</b>	<b>89</b>	<b>1858</b>	<b>135</b>	<b>1,659,075</b>

\*Douglas County Unincorporated Population with Highlands Ranch Removed

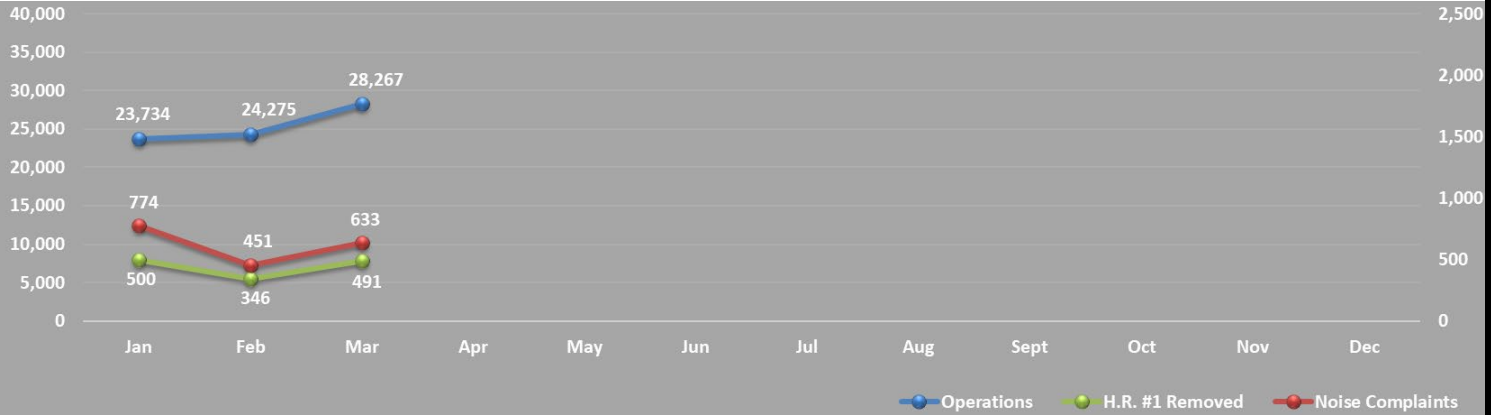
Complaints per Municipality

March 2023 Noise Complaint Responses Completed	
Email	55
Phone	20
<b>Total</b>	<b>75</b>



Time Complaint Received	Mar
Day Hours (7:00 am - 9:59pm)	587
Night Hours (10:00 pm - 6:59 am)	46
<b>TOTAL</b>	<b>633</b>

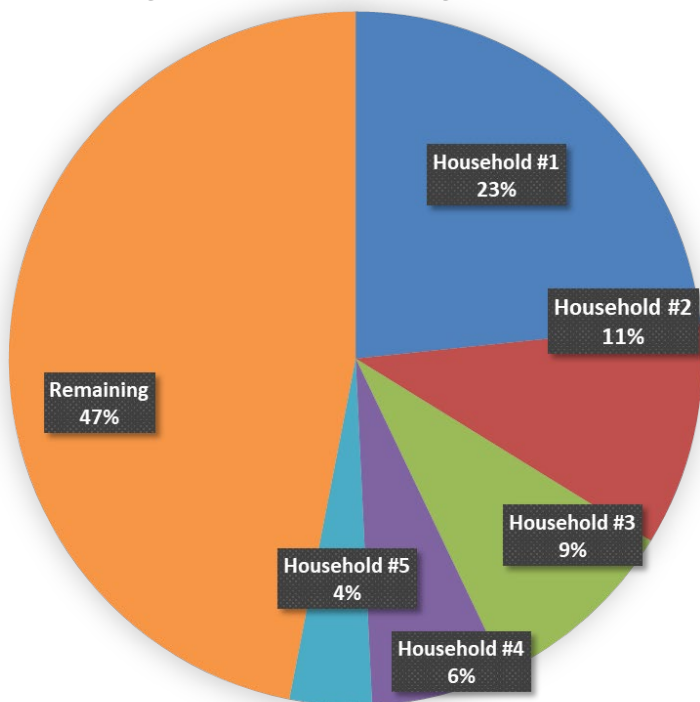
## Current 12 Month Trend



## Previous Year 13 Month Trend



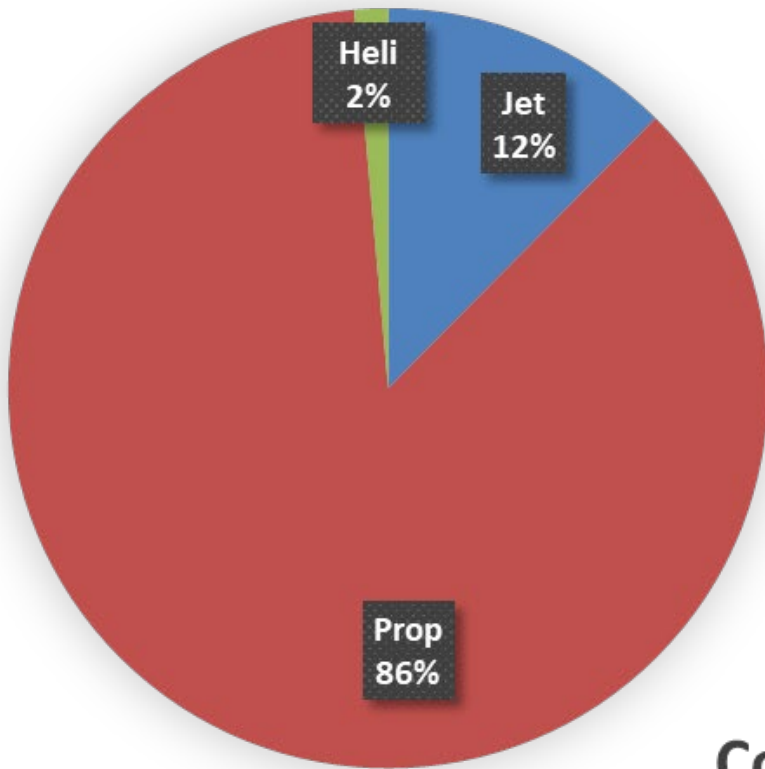
## Top 5 Household Complaints YTD



Top 5 Household Complaints		
Household	Complaints	Households
Household #1	434	Greenwood Village
Household #2	194	Arapahoe County
Household #3	169	Centennial
Household #4	118	Arapahoe County
Household #5	71	Arapahoe County
Remaining	872	
<b>Total</b>	<b>1,858</b>	

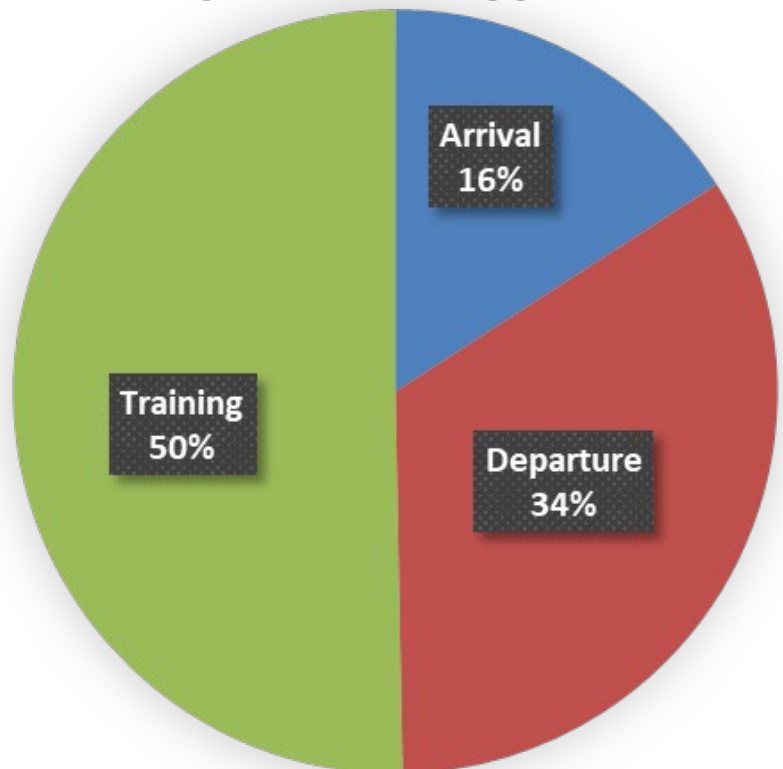


### Complaints by Aircraft Type

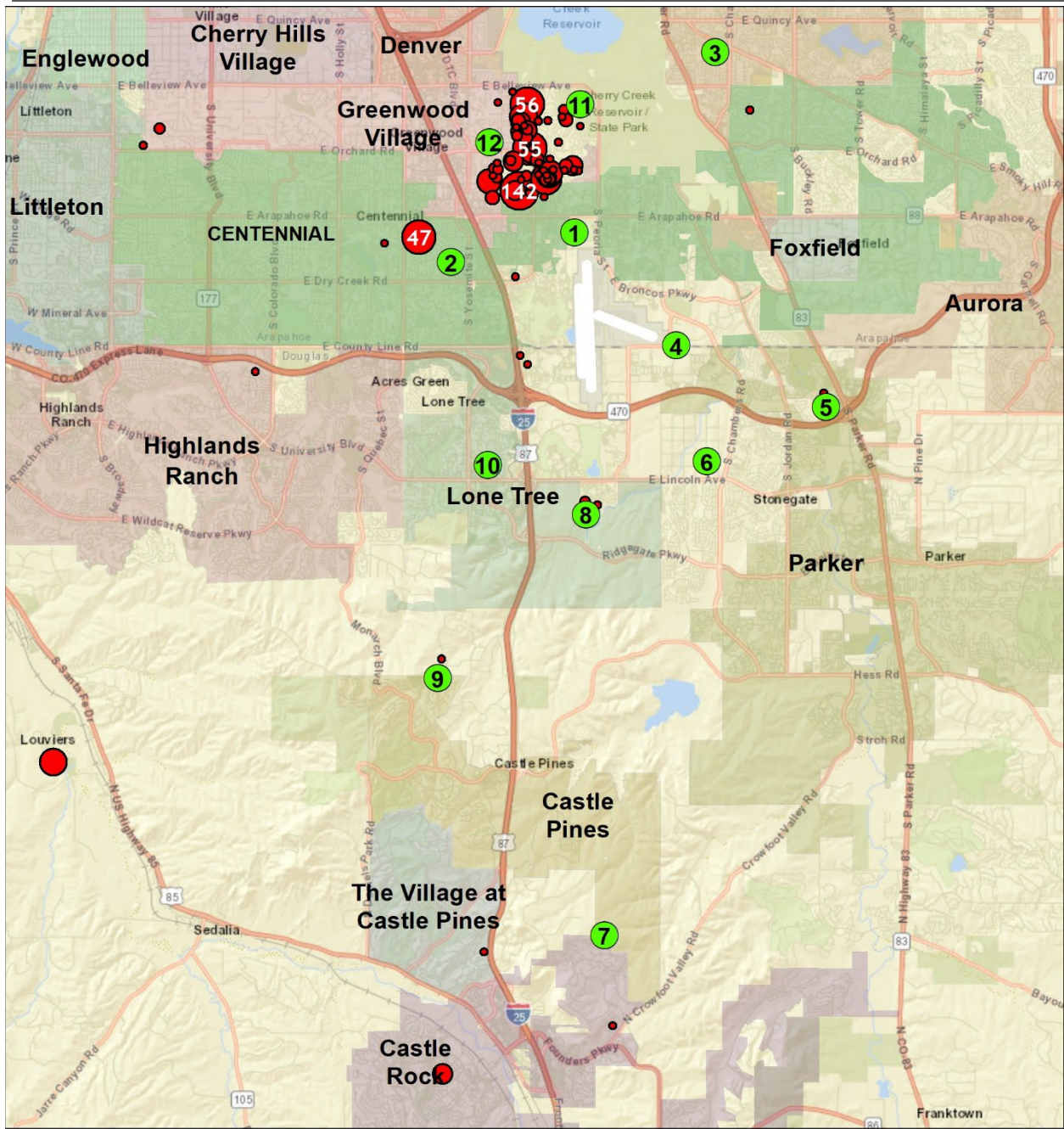


\*#1 Household Removed

### Complaints by Operation Type



# 8 CENTENNIAL AIRPORT COMPLAINT MAP



**March 2023 Complaints**

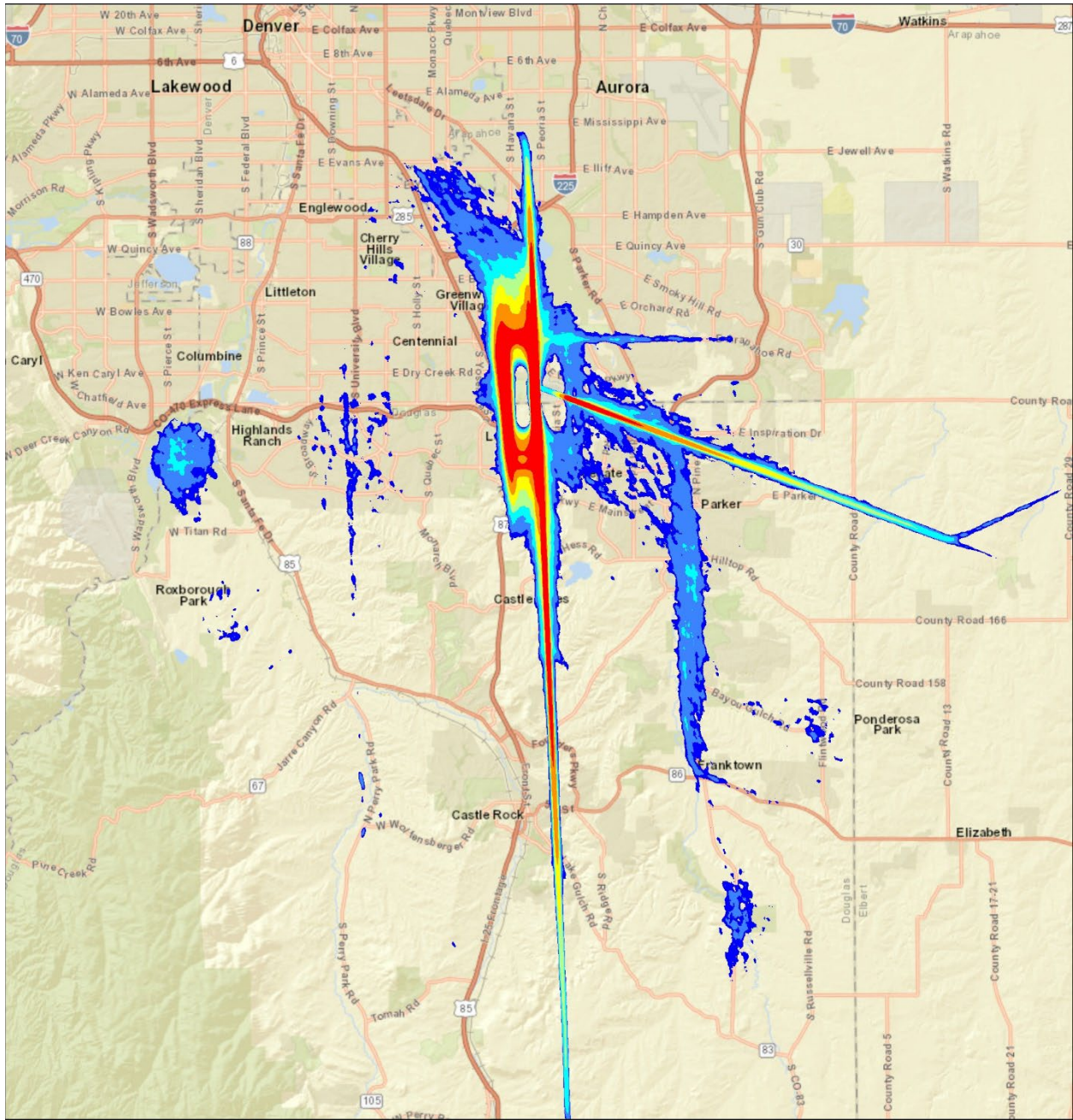


\*\*Larger dots equate to more complaints for that particular households

# 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.

March 2023 Flight Tracks associated with Centennial Airport



## 10 NOTES AND DISCLAIMER

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This report is for informational use only. Every effort has been made to ensure the accuracy of this data; however, the material may be altered as new information is added or updated in the system.

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](http://www.centennialairport.com)

## CACNR/ACPAA 2023 MEETING SCHEDULES

### CACNR REPRESENTATIVES TO 2023 MEETINGS OF THE ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY

CACNR meets at 6:30 p.m., 7565 South Peoria Street, Englewood, CO 80112

ACPAA meets at 3:00 p.m., 7565 South Peoria Street, Englewood, CO 80112

<u>CACNR MEETINGS</u>	<u>CACNR REPRESENTATIVE</u>	<u>REPORT DUE DATE</u>	<u>ACPAA MEETINGS</u>
(To sblymyer@centennialairport.com)			
January 04	-----	combines with February report	NO ACPAA MEETING
February 01	Donna Johnston	February 03	February 09
March 01	Bill Wasmund	March 10	March 16 (note 3 <sup>rd</sup> Thursday)
April 05	Chris Eubanks	April 07	April 13
May 03		May 05	May 11
June 07		June 07/08, or verbal	June 08
July 05 - NO CACNR MEETING	---	----	NO ACPAA MEETING
August 02		August 04	August 10
September 06		September 08	September 14
October 04		October 06	October 12
November 01		November 03	November 09
Dec 06 – NO CACNR MEETING	---	---	December 14

To: Arapahoe County Public Airport Authority

From: Centennial Airport Community Noise Roundtable, Brad Pierce, Chair

Date: May 3, 2023

Re. Request for ACPAA Priority

The Centennial Airport Community Noise Roundtable (CACNR) requests the Arapahoe County Public Airport Authority (ACPAA) place a top priority on reducing the amount of air traffic in the pattern north of Arapahoe Road and addressing the safety concerns highlighted in the recent National Transportation Safety Board report (NTSB).

Since the May 2021 mid-air plane collision over Cherry Creek State Park, there has been a change in pattern traffic that has resulted in a more than 50 percent increase in flight school traffic over heavily populated residential areas and schools north of Arapahoe Road. The recent National Transportation Safety Board report indicates the probable cause of the collision to be pilot error, along with air traffic control issues such as failure of an air traffic controller to issue a traffic advisory, the use of two radio frequencies, and a short-staffed control tower.

We request the ACPAA make addressing the increased noise and safety of citizens a top priority by 1) continuing its efforts to reach the FAA to arrange a technical committee meeting to address the increased traffic in the pattern; 2) working with the FAA and internally to address the safety issues identified in the NTSB report.

We do therefore respectfully request the ACPAA place these issues as a top priority until the matter can be resolved satisfactorily for the citizens who reside in the airport's vicinity.



# Centennial Airport Community Noise Roundtable

## 2023- 2025 Work Program

FINAL DRAFT for 05/03/23

### CACNR MEMBERSHIP

Arapahoe County	City of Lone Tree
Douglas County	Metropolitan District, Highlands Ranch
City of Aurora	Town of Parker
City of Castle Pines	Arapahoe County Public Airport Authority
Town of Castle Rock	Aircraft Owners and Pilots Association
City of Centennial	Colorado Aviation Business Association
City of Cherry Hills Village	Colorado Department of Transportation
Town of Foxfield	Aeronautics Division
City of Greenwood Village	Wings Over the Rockies

The Mission, Vision, and Values of the Centennial Airport Community Noise Roundtable (page 2) are implemented, in part, through the efforts of CACNR's committees, as described on the following pages.

**VISION:** Quieter Skies for Our Communities

**MISSION:** Utilizing Partnerships to Reduce Airport Noise for the Benefit of Neighboring Communities

**VALUES:** In order to develop successful community partnerships, CACNR Members and Representatives value and adhere to the following:

RESPECT

- Mutual respect for all opinions, questions and responses
- Non-judgmental reaction and response to views expressed
- Listening with intention
- Value for the diverse view and perspectives of all Members and Representatives
- Trust of one another

ETHICS

- Honesty
- Keeping commitments
- Refrain from gossip
- No hidden agendas

COMMITMENT TO

- Attendance and participation
- The shared CACNR Vision and Mission Statements
- Team effort
- Continual learning and education
- Sharing of ideas
- An open environment conducive to development and mutual support of common goals
- Transparency of activities and information
- Resolution of conflicts and differences
- The entire community

ACCOUNTABILITY

- To one another
- To our represented communities and constituents
- For the dissemination of information among ourselves, the ACPAA Board, our represented communities, constituents, and other stakeholders

INNOVATION

- Foster an environment which encourages creative thought and implementation
- Seek solutions outside our comfort zone
- Remain persistent and persevere in achieving the CACNR Vision and Mission



## **COMMUNITY OUTREACH COMMITTEE**

### **2023 - 2025 PRIORITY TASKS**

1. Promote FAA participation and engagement with the CACNR  
Develop a sustainable relationship with the FAA built on common goals, collaboration, and public education.
2. CACNR Website – Further improvements in content.  
Evaluate public/stakeholder friendly content enhancements.
3. Publish CACNR accomplishments/Annual Reports on the CACNR website-
4. Establish social media Public outreach.  
Develop CACNR consensus on platforms, topical content, resources, and management

*For reference, the following are the Priority Tasks from the prior Work Program:*

1. Website – Further improvements in content
2. Promote FAA participation/support of the Roundtable
  - FAA directly informing the community
  - Briefings to the public
  - Demonstrate collaboration with Airport > Roundtable > FAA
3. Expand outreach to elected officials (Briefings) and HOAs (Email)
4. Leverage social media as tool for community outreach
  - Social media strategy should focus on providing information to the public
  - Not intended as an outlet for noise complaints
  - Platforms to include NextDoor.com and Twitter

## EXECUTIVE/WORK PLAN COMMITTEE

### 2023 - 2025 PRIORITY TASKS

1. Update CACNR Work Program biennially.
2. Document CACNR accomplishments/ Annual Reports-
3. Establish a roundtable training program.
4. Revise meeting agendas to align with the CACNR Mission and Work Program.
5. Oversee work being done with the community, airport staff, airport users and the FAA to further the CACNR Mission.
6. Engage local jurisdictions to proactively encourage compatibility between airport operations and land-use/zoning.

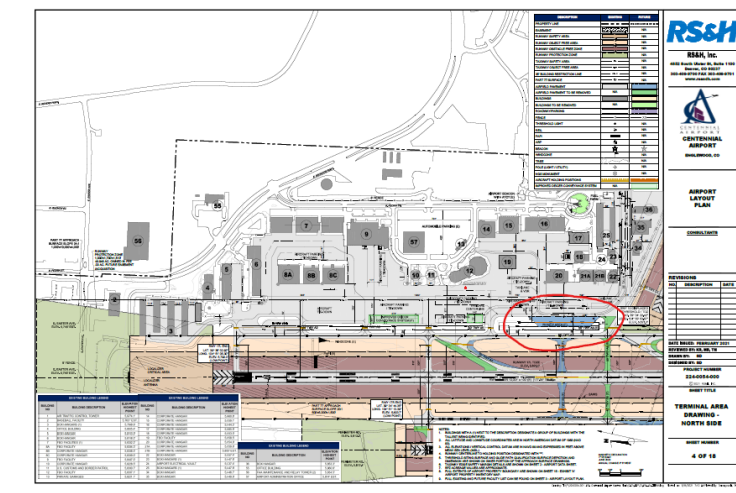
For reference, the following are the Priority Tasks from the Prior Work Program:

1. Update CACNR Work Program biennially.
2. Develop annual reports.
3. Establish a roundtable training program
4. Revise meeting agendas to more closely align with the CACNR mission and work plans.
5. Gain a better understanding of how noise complaints are reviewed and processed by airport staff. Review what noise complaint (and related) information is reported/presented to the Roundtable..
6. **[Secondary Priority]** Engage local jurisdictions to proactively encourage compatibility between airport operations and land-use/zoning

## FLY QUIET COMMITTEE

### 2023 - 2025 PRIORITY TASKS

1. Expand industry engagement efforts to encourage awareness and support of the Centennial Airport Fly Quiet Program and help minimize noise impacts by encouraging pilots to fly the published voluntary Noise Abatement Guidelines. Fly Quiet briefings for key stakeholder groups to include air traffic control, flight schools, and pilots.
2. Create Videos for the CACNR web Site. Use [FlySMCFriendly.com](https://www.flysmcfriendly.com) as a template. The goal would be for all of our pilots to utilize a Friendly Approach toward our neighbors and residents. Familiarize pilots with the voluntary flight procedures through a series of 4K videos. Available for Centennial Airport and possibly others, the short videos would offer an informative look at the airports' best ways to arrive and depart as well as pattern flying.
3. In conjunction with Wings Over The Rockies EOF facility, offering simulated KAPA traffic pattern flights in order to give the public a pilot/instructor perspective to the noise issues around the airport. Goal is to provide an understanding as to what the flight schools can and cannot do to reduce ground noise.
4. Continue looking at airports similar to Centennial to learn if ideas from those airports can benefit noise reduction efforts here. Provide recommended ideas to CACNR.
5. Continue working with airport staff to achieve completion of the installation of sign #2 at new run-up area between A6 and A8



6. Develop additional electronic sign noise abatement messages for approval of CACNR and submission to ACPAA.
7. Continue to collaborate with the Noise Monitors Committee on areas of mutual interest such as developing an incentive program for flight schools.

For reference, the following are the Priority Tasks from the Prior Work Program:

1. Expand industry engagement efforts to encourage awareness and support of APA Fly Quiet Program. This would include Fly Quiet briefings for key stakeholder groups to include air traffic control, flight schools, and pilots.
2. Identify potential modifications to APA airspace and/or flight procedures to reduce community noise impacts.
3. **[Secondary Priority]** Continue research into aircraft technologies to reduce noise, specifically, the use of composite propellers and noise mufflers for piston aircraft.
4. **[Secondary Priority]** Establish incentive program to encourage pilots to overfly APA noise monitors and provide recognition for operations below a specified noise threshold.
5. Airport staff briefing about Noise Complaint Process – Unclear which committee would be responsible.

## **NOISE MONITOR COMMITTEE**

### **2023 - 2025 PRIORITY TASKS**

1. Continue ongoing education with airport staff and share information from FAA conversations.
2. Add additional noise monitors in areas of unincorporated Arapahoe and Douglas County, contingent upon the airport staff obtaining grants.
3. Continue to collaborate with the Fly Quiet Committee on areas of mutual interest, such as developing an incentive program for flight schools.
4. Work more closely with airport staff in the gathering of information on residential noise complaints. Develop a working relationship with FAA, flight schools and community members to educate and resolve noise complaints and have a noise committee member attend meetings with airport staff and flight schools.

#### **For reference, the following are the Priority Tasks from the Prior Work Program:**

1. *The Noise Monitor Committee and CACNR would benefit from getting a better understanding of what data is available through the NOMS (Noise and Operations Management) system and how it can be used in support of the CACNR Mission.*  
ACTION TAKEN: On September 14, 2021, Noise Committee Members met with Centennial Airport staff and discussed the history and location of the 12 noise monitors placed throughout the South Metro Airport Influence Area. This information was presented to CACNR on October 6, 2021. On October 28, 2021, members of the Noise Committee met with Centennial Airport Staff and discussed the capabilities of the monitors' transmission capabilities. At the November 2, 2021, Noise Committee members and Centennial Airport Staff made a presentation to the CACNR. Topics covered were monitor transmission capabilities and adjustments. Also presented was information on the Flight Standard District Office (FSOD) for resident contact information for low flying aircraft and errant, unsafe flying aircraft. Information was presented on the use of portable noise monitors. Class Bravo airspace was discussed and the new impacts to Highlands Ranch, Centennial and Greenwood Village that are being experienced. Minimum air altitude requirements and results were discussed and noted that the air space is congested and takeoffs and landings will vary between 500-1000 feet. It was noted that with increasing weather temperatures, air density will affect low power propellers aircraft and residents will experience more air traffic in the morning and evenings. Airport staff made a NOMS presentation and airspace classification. Through noise monitors and NOMS, airport staff are able to distinguish different types and levels of noise and work with the required operations levels. It was recommended that refresher training be held by CACNR to share NOMS information with the public and how the information can be used to support the CACNR mission. Due to airport staffing changes, regular meetings and presentations on this topic ceased after November.
2. *The Noise Monitor data should be used to help communities understand changes in noise and overflight activity due to changes in conditions such as: seasonal/flow changes, firefighting activities, special events. This can be used to better inform the community, especially of temporary changes.*  
ACTION TAKEN: At the meetings in October and November 2021, information on season/flow changes was shared with the CACNR as noted in Action 1. In 2022, the website was used to notify the public of runway repair closures and the subsequent events that would impact communities as well as runway changes due to the midair collision in March 2022. Due to the absence of a web master posting additional information about the noise that communities might experience was not possible.
3. *Development of Fly Quiet Incentives for pilots and/or companies. Leverage noise monitor data in support of Fly Quiet incentives.*

ACTION TAKEN: In September, October and November 2022, Noise Committee members met with members of the Fly Quiet committee and airport staff to discuss incentives. Members discussed working with Flight Schools and airport staff to obtain their buy-in to incentivize pilot to be in abeyance with noise levels and fly quiet procedures over impacted neighborhoods in Greenwood Village, Centennial, Unincorporated Arapahoe County and areas in Douglas counties. Incentives discussed were the awarding of plaques, notable mentions on the CACNR website and possible monetary awards. Due to an increased demand for action to stop the noise from aircraft, stop the use of leaded gas and decrease airspace crowding from residents of Greenwood Village, Centennial, unincorporated Arapahoe County and Douglas County, progress on the incentives program has been halted. Until these issues are resolved, incentive programs do not appear to be feasible at this time.

4. *Noise complaint processing should include:*

- *Correlating complaints with specific noise events*
- *Identifying specific/single events resulting in multiple complaints*

ACTION TAKEN: Airport staff gather information on noise events and handle calls from residents. Noise committee members recommend to the CACNR actions that could be taken. Noise committee members have requested the use of portable noise monitors that can be placed on consenting residential property to identify noise. The increased use of portable noise monitors has met with success as residents and staff have been able to learn noise levels in neighborhoods and whether the source of noise is from Centennial Airport or other neighboring airports such as Denver International Airport. During the months of December 2022 and January and February 2023, CACNR meetings have been at capacity with residents' complaints about noise from prop aircraft, leaded fuel exposure and crowded airspace. Noise Committee members have attended all meetings. The complaints are catalogued by airport staff. The CACNR met with representatives of the FAA and community members in February and hope to facilitate a resolution of the community residents' complaints.



April 10, 2023

The Honorable Jason Crow  
United States House of Representatives  
1323 Longworth HOB  
Washington, D.C. 20515

The Honorable Michael Bennet  
United States Senate  
261 Russell Senate Office Building  
Washington, D.C. 20510

The Honorable John Hickenlooper  
United States Senate  
374 Russell Senate Office Building  
Washington, D.C. 20510

**Re: Federal Aviation Administration Engagement at Centennial Airport**

Dear Senator Bennet, Senator Hickenlooper, and Congressman Crow,

Thank you for sending a letter to the Federal Aviation Administration (FAA) requesting further engagement by the FAA with our shared constituents. While the FAA has attended at least two of the Centennial Airport Community Noise Roundtable (CACNR) meetings, we're seeking additional congressional support to ensure the agency engages in good faith discussions to help address ongoing noise-related issues as well as your advocacy for long-term solutions that allow greater local leadership.

Since the mid-air collision in 2021, the FAA has changed the way they manage aircraft in the traffic pattern. The extension of the pattern has resulted in an increase in aircraft overflights of the residential area to the northwest of Centennial Airport by at least 50% from 2019 to 2022. Conversely, the FAA's tower records only show a 3% increase in local operations from 2019 to 2022. Because the FAA has jurisdiction over the airspace and control of how aircraft are directed and managed within that airspace, it is critical to have the agency at the table to identify solutions.

**Acknowledgment and Participation in Sub-Roundtable Technical Working Group.** During its March 1 meeting, the CACNR formed a Sub-Roundtable Technical Working Group, which is designed to explore solutions to the extended traffic pattern issue with a small group of experts and representatives from CACNR, the Airport, the flight schools, and the FAA. The FAA currently participates in similar Technical Working Groups at Los Angeles International and San Francisco International Airports. As of this letter, the FAA has not agreed to participate in this technical working group nor have they assigned technical experts to assist.

We need your continued support to have the agency engage consistently with our shared constituents, including:

- Assigning FAA technical experts to the newly created Sub-Roundtable Technical Working Group.
- Regular participation with community groups, CACNR, and the airport to address noise issues.

**Provide Additional Local Tools FAA Reappropriation Bill**

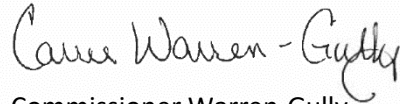
As a member of the Commerce, Science, and Transportation Committee, we hope you will consider inclusion of more local control to address aircraft noise issues as well as provide financial incentives to accelerate the production and distribution of FAA approved alternative unleaded fuels.

Since the passage of the Airport Noise & Capacity Act of 1990, airports have not been allowed to implement mandatory procedures or rules that reflect the desires of both the airport and surrounding communities to reduce the effects of aircraft noise. As an airport, noise roundtable, and community, we request a process by which the FAA is required to work in concert with airports and communities to implement procedures that take both safety and noise abatement into account.

We are pleased with the FAA's EAGLE initiative to safely eliminate the use of leaded aviation fuel across the country by 2030. We would encourage the FAA and EPA to provide regulations to help implement this transition much sooner, including financial incentives to accelerate the production and distribution of approved unleaded fuels, lessening the costs of fuel farm upgrades, fuel truck purchases, and aircraft supplemental type certificates. Centennial Airport is leading the way on making the transition to unleaded aviation fuel and would welcome such assistance.

Thank you again for your leadership and support on these critical concerns that affect our community. We look forward to continuing our work with you to address these issues.

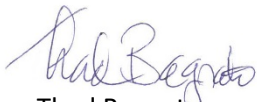
Sincerely,



Commissioner Warren-Gully  
Chair, Arapahoe County Board of Commissioners



George E. Lantz  
Mayor, City of Greenwood Village



Thad Bagnato  
Chair, Arapahoe County Public Airport Authority



Brad Pierce,  
Chair, Centennial Airport Community Noise Roundtable





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.

*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.

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.

*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.

*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.

*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,



Grady Stone  
Regional Administrator  
Northwest Mountain Region

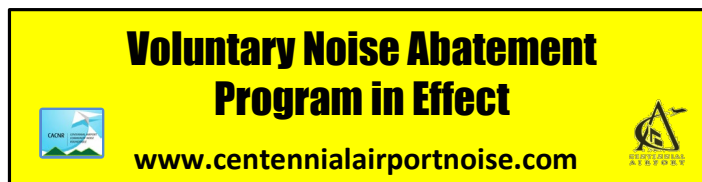
### **Questions Raised by Public at CACNR February 1, 2023 meeting**

- 1) 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?
- 2) How does the FAA factor in the safety of residents on the ground when it makes decisions?
- 3) Did the FAA coordinate with Arapahoe County or other authorities when it expanded the Airport Influence Area extending pattern traffic north of Arapahoe Road?
- 4) What is the capacity for the number of planes that can fly in the area at any given time?
- 5) How does the FAA determine if there are too many planes in the pattern?
- 6) Can the FAA extend the pattern south or in any other direction?
- 7) Can the FAA implement formal noise abatement?
- 8) Is the increase in the flight pattern north of Arapahoe Road related to Metroplex?
- 9) How does the FAA determine the capacity/growth limit for Centennial Airport?
- 10) 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?



## Fly Quiet Committee – April 2023 Monthly Report

- Submitted additional electronic sign noise abatement message ideas to the CACNR executive committee. Discussions and approvals will need to be occur before submittal to ACPAA. Proposals below:



- Looking into offering simulated KAPA traffic pattern flights at Wings Over the Rockies EOF facility in order to give the public a pilot/instructor perspective to the noise issues around the airport. Goal is to provide an understanding as to what the flight schools can and cannot do to reduce ground noise. We can combine the offer with one of the many EOF showcases or individual simulated flights on a day when EOF is closed to the general public. Jordan Ashley supports the idea.



CACNR Report of April 5, 2023 Meeting  
To ACPAA, April 13, 2023  
Presented by Chris Eubanks, Castle Pines, Representing CACNR

#### Public Comment

- CACNR was host to numerous members of the public who were concerned about the continuing level of noise and leaded fuel over their communities, primarily from Greenwood Village. In addition, approximately 30 citizens attended the meeting virtually. Many frustrations were expressed at the lack of progress so far, including representation from the FAA.
- CACNR heard a citizen emphatically suggest the airport should be closed and redeveloped. It was hoped the individual would take that concern directly to ACPAA for discussion.
- Another resident expressed interest in joining the CACNR, and the structure of CACNR was explained.

#### Leaded Fuel

- There continued to be concerns about the use of lead-based fuel here. Mike Fronapfel spelled out what is being done and has been done to address this problem and phase out the use of such fuel at Centennial Airport.
- Airport incentives, UL94 availability were among the updates from Mr. Fronapfel.

#### Federal Aviation Administration

- Disappointment was evident at the FAA's absence from the meeting.
- A communication had been received from the FAA indicating answers to the questions submitted by the CACNR to the FAA would likely be provided to the CACNR by Friday, April 14<sup>th</sup>.

#### 2023-2025 CACNR Work Program

- Work continued on the 2023-2025 CACNR Work Program with the program scheduled to be finalized in May 2023.
- During discussion, it was agreed CACNR would again plan to hold a retreat to allow time for more in-depth consideration of the role and goals of CACNR.

#### CACNR Recommendation letter to ACPAA

- There was agreement to submit a recommendation to ACPAA about flight pattern concerns at Centennial Airport.
- The final version of the recommendation will be prepared by the CACNR Executive Committee with anticipated approval by CACNR members during a special virtual only public meeting to be scheduled prior to the next CACNR regular meeting.

#### Sub-Roundtable Technical Working Group

- The purpose of this sub-group is to explore and recommend solutions to flight school pattern traffic and will be represented by : (2) APA Staff, (3) CACNR representatives, (2) Flight schools
- In addition, Mr. Fronapfel requested that two FAA representatives assist the group : (1) Centennial FAA ATCT & (1) FAA Technical Expert. The FAA has declined this request.

**From:** Michael Fronapfel <[mfronapfel@centennialairport.com](mailto:mfronapfel@centennialairport.com)>  
**Sent:** Wednesday, April 12, 2023 4:05 PM  
**To:** 9-ANM-RA-Office (FAA) <[9-ANM-RA-Office@faa.gov](mailto:9-ANM-RA-Office@faa.gov)>; Brad Pierce <[bmpierce2@comcast.net](mailto:bmpierce2@comcast.net)>; Valencia, Michael (FAA) <[Michael.Valencia@faa.gov](mailto:Michael.Valencia@faa.gov)>  
**Cc:** Biassou, Justin W (FAA) <[Justin.W.Biassou@faa.gov](mailto:Justin.W.Biassou@faa.gov)>; Stone, Grady (FAA) <[grady.stone@faa.gov](mailto:grady.stone@faa.gov)>; Samantha Blymyer <[sblymyer@centennialairport.com](mailto:sblymyer@centennialairport.com)>  
**Subject:** RE: CACNR Sub-Roundtable Technical Working Group

Ms. Lardie et al,

We have a contact who is a noise consultant in the airport industry and they sit on two Sub-Roundtable Technical Working Groups one at LAX and one at SFO. Furthermore, we understand that Joseph Bert is the FAA's Technical Expert that has been assigned to both the LAX and SFO Sub-Roundtable Technical Working Groups.

The Centennial Airport Community Noise Roundtable is attempting to set up a similar group, but in order for it to be effective we are again requesting the FAA assign a technical expert to assist and participate in our Sub-Roundtable Technical Working Group.

Sincerely,

*Mike*

Mike Fronapfel  
Executive Director – CEO  
Centennial Airport/Arapahoe County Public Airport Authority  
7565 South Peoria Street, Unit D9  
Englewood, Colorado 80112  
O 303.790.0598 D 303.218.2903 M 303.522.4650



**From:** 9-ANM-RA-Office (FAA) <[9-ANM-RA-Office@faa.gov](mailto:9-ANM-RA-Office@faa.gov)>  
**Sent:** Wednesday, April 5, 2023 11:04 AM  
**To:** Michael Fronapfel <[mfronapfel@centennialairport.com](mailto:mfronapfel@centennialairport.com)>; Brad Pierce <[bmpierce2@comcast.net](mailto:bmpierce2@comcast.net)>; Valencia, Michael (FAA) <[Michael.Valencia@faa.gov](mailto:Michael.Valencia@faa.gov)>  
**Cc:** Biassou, Justin W (FAA) <[Justin.W.Biassou@faa.gov](mailto:Justin.W.Biassou@faa.gov)>; Stone, Grady (FAA) <[grady.stone@faa.gov](mailto:grady.stone@faa.gov)>; Samantha Blymyer <[sblymyer@centennialairport.com](mailto:sblymyer@centennialairport.com)>  
**Subject:** RE: CACNR Sub-Roundtable Technical Working Group

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Mr. Fronapfel and Mr. Pierce,

In your previous email, you asked for a response regarding an FAA representative at the CACNR Sub-Roundtable Technical Working Group. The FAA does not assign FAA representatives to assist roundtables or their subgroups in conducting analyses. Furthermore, the FAA does not approve or deny changes to the structures of community roundtables.

Your email on March 10, 2023, identified “flight school pattern traffic” as an area of interest for the SRTWG. Please identify the questions the SRTWG has for the FAA regarding these traffic patterns in advance of your meeting(s). Once we receive your questions, we will identify the Subject Matter Expert that will provide a response. Questions may be sent to our [9-ANM-RA-Office@faa.gov](mailto:9-ANM-RA-Office@faa.gov) email box.

Our office is finalizing our response to the multiple joint Airport/CACNR questions and you can expect the letter to be issued later next week.

*Regards,*

*Leslie Lardie*

*Senior Advisor*

*Office of the Regional Administrator*

*Northwest Mountain Region*

*Office (206) 231-2008*

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**From:** Michael Fronapfel <[mfronapfel@centennialairport.com](mailto:mfronapfel@centennialairport.com)>

**Sent:** Wednesday, March 22, 2023 4:28 PM

**To:** Lardie, Leslie (FAA) <[Leslie.Lardie@faa.gov](mailto:Leslie.Lardie@faa.gov)>; Brad Pierce <[bmpierce2@comcast.net](mailto:bmpierce2@comcast.net)>; Valencia, Michael (FAA) <[Michael.Valencia@faa.gov](mailto:Michael.Valencia@faa.gov)>

**Cc:** Biassou, Justin W (FAA) <[Justin.W.Biassou@faa.gov](mailto:Justin.W.Biassou@faa.gov)>; Stone, Grady (FAA) <[grady.stone@faa.gov](mailto:grady.stone@faa.gov)>; Samantha Blymyer <[sblymyer@centennialairport.com](mailto:sblymyer@centennialairport.com)>

**Subject:** RE: CACNR Sub-Roundtable Technical Working Group

Ms. Lardie,

Mr. Pierce and I are confused by your response to our request to set up a Sub-Roundtable Technical Working Group (SRTWG). This group would be similar to technical working groups that have been setup at a couple of airports in California with representation from the FAA, Airport, Noise Roundtable, Flight Schools and Communities.

The Centennial Airport Community Noise Roundtable approved the creation of this SRTWG at the March 1<sup>st</sup> meeting. We respectfully request the FAA assign two representatives to assist the Sub-Roundtable Technical Working Group in exploring solutions to the extended traffic pattern issue here at Centennial Airport. We have identified the following participants/representatives we would like included:

Brad Pierce – Chair of CACNR  
Chris Eubanks – Roundtable Representative from Castle Pines and Pilot  
Mike Fronapfel – Executive Director Centennial Airport  
Samantha Blymyer – Noise & Environmental Specialist – Centennial Airport  
Commissioner Campbell-Swanson – Arapahoe County Community representative  
Justin Mazza – Aspen Flying Club  
Kimber Bauer – Flights Inc.  
Centennial FAA ATCT – TBD  
FAA Technical Experts - TBD

We are very anxious to begin work with this technical working group so ideally we would have the FAA personnel identified before the April 5<sup>th</sup> CACNR meeting so we can schedule our first meeting of the SRTWG in early April.

Please respond to this request no later than COB on March 29<sup>th</sup>.

Sincerely,

*Mike*

Mike Fronapfel  
Executive Director – CEO  
Centennial Airport/Arapahoe County Public Airport Authority  
7565 South Peoria Street, Unit D9  
Englewood, Colorado 80112  
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**From:** Lardie, Leslie (FAA) <[Leslie.Lardie@faa.gov](mailto:Leslie.Lardie@faa.gov)>  
**Sent:** Monday, March 13, 2023 2:30 PM  
**To:** Brad Pierce <[bmpierce2@comcast.net](mailto:bmpierce2@comcast.net)>; Valencia, Michael (FAA) <[Michael.Valencia@faa.gov](mailto:Michael.Valencia@faa.gov)>  
**Cc:** Biassou, Justin W (FAA) <[Justin.W.Biassou@faa.gov](mailto:Justin.W.Biassou@faa.gov)>; Stone, Grady (FAA) <[grady.stone@faa.gov](mailto:grady.stone@faa.gov)>; Michael Fronapfel <[mfronapfel@centennialairport.com](mailto:mfronapfel@centennialairport.com)>; Samantha Blymyer <[sblymyer@centennialairport.com](mailto:sblymyer@centennialairport.com)>  
**Subject:** RE: CACNR Sub-Roundtable Technical Working Group

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Hello Mr. Pierce,

On February 21, 2023, we provided a Community Roundtable Info Sheet to the CACNR. The roundtable should make recommendations, ideally in coordination with the airport, that have some recognition of the impacts reflect through discussion/vetting before raising them to the FAA SME's for consideration. If requested and available, the FAA representatives can participate in roundtable meetings to provide technical information and advice.

We received your follow up questions on February 27, 2023. Our office is addressing these questions and, when we have completed our research, analysis and review, we will forward the entire Q&A response to you and Airport Director Mike Fronapfel.

*Regards,*

*Leslie Lardie*

*Senior Advisor*

*Office of the Regional Administrator*

*Northwest Mountain Region*

*Office (206) 231-2008*

*Restorative | Achiever | Positivity | Learner | Responsibility*

**From:** Brad Pierce <[bmpierce2@comcast.net](mailto:bmpierce2@comcast.net)>

**Sent:** Friday, March 10, 2023 10:02 AM

**To:** Valencia, Michael (FAA) <[Michael.Valencia@faa.gov](mailto:Michael.Valencia@faa.gov)>; Lardie, Leslie (FAA) <[Leslie.Lardie@faa.gov](mailto:Leslie.Lardie@faa.gov)>

**Cc:** Biassou, Justin W (FAA) <[Justin.W.Biassou@faa.gov](mailto:Justin.W.Biassou@faa.gov)>; Stone, Grady (FAA) <[grady.stone@faa.gov](mailto:grady.stone@faa.gov)>;

Mike Fronapfel <[mfronapfel@centennialairport.com](mailto:mfronapfel@centennialairport.com)>; Samantha Blymyer

<[sblymyer@centennialairport.com](mailto:sblymyer@centennialairport.com)>; Brad Pierce (home) <[bmpierce2@comcast.net](mailto:bmpierce2@comcast.net)>

**Subject:** CACNR Sub-Roundtable Technical Working Group

Hello Ms. Lardie and Mr. Valencia,

At the 3/1/23 Centennial Airport Community Noise Roundtable (CACNR) meeting we voted unanimously to approve the creation of the Sub- Roundtable Technical Working Group Committee. The purpose of this sub-group is to explore and recommend solutions to flight school pattern traffic.

Please reply to confirm that the FAA acknowledges the creation of this sub-group. Once we receive your confirmation we will select the members of the sub-group on our end.



Can you also please provide a timeframe for responding in writing to the questions we submitted to you on 12/31/22, 1/16/23 and 2/27/23.

I've copied Mike Fronapfel and Samantha Blymyer.

Thank you and please let us know if you have any questions.

Brad Pierce  
Chair, CACNR



**CENTENNIAL AIRPORT**  
ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY  
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main: 303.790.0598  
fax: 303.790.2129  
[www.centennialairport.com](http://www.centennialairport.com)

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FOR IMMEDIATE RELEASE  
March 21, 2023

## Centennial Airport to Incentivize Move to 94UL Fuel

**ENGLEWOOD, Colo.** - At the request of Centennial Airport executive director **Mike Fronapfel**, the Arapahoe County Public Airport Authority Board of Commissioners voted unanimously to provide incentives to tenants and Fixed Based Operators (FBOs) to accelerate the transition from 100LL aviation gas to FAA-approved alternative unleaded fuel.

The FAA-led Eliminate Aviation Gas Lead Emissions (EAGLE) program has set a goal of 2030 for nationwide transition from 100LL to unleaded fuels. Centennial Airport would like to be a leader in this transition among airfields in Colorado, regionally and nationally.

"We have engaged in numerous discussions with the community regarding the use of leaded aviation fuel and are proud to be among the first general aviation airports in the country to commit to this transition," said Fronapfel. "One of our goals is to be able to provide a framework that other airports around the nation can use to make this transition as well."

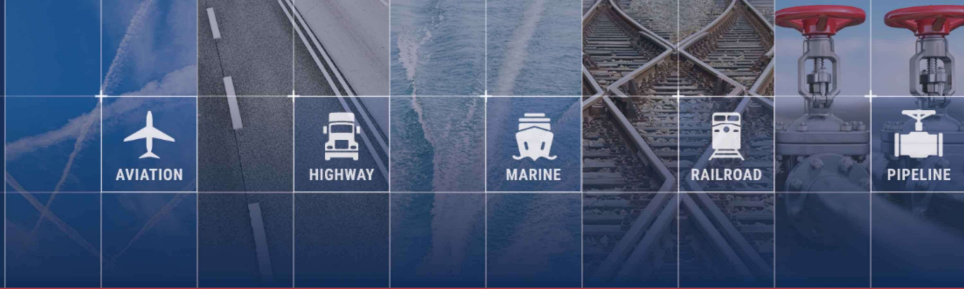
With the affirmative vote, the ACPAA board authorizes airport staff to allocate funds towards working with stakeholders to explore and implement strategies to facilitate a safe transition to FAA-approved alternative unleaded fuel as soon as practical.

Among the strategies discussed to incentive this move is financial assistance towards Supplemental Type Certificates for aircraft based at Centennial Airport and financial subsidies to bring the cost of unleaded aviation fuel closer to the current price of 100LL fuel.

Additional funds became available for this endeavor following the awarding of a \$4 million grant from the FAA to go towards site selection and design of a new air traffic control tower. The tower project already had funds allocated towards it in the 2023 budget, allowing the airport the ability to direct these funds towards the move to unleaded fuel.

While a timetable for the complete transition to unleaded fuel is yet to be set, it is expected that the 94UL will be available by summer of 2023.

**Press Contact:** Chris Thompson ([cthompson@centennialairport.com](mailto:cthompson@centennialairport.com)/303-218-2929)



# Aviation Investigation Final Report

<b>Location:</b>	Englewood, Colorado	<b>Accident Number:</b>	CEN21FA215
<b>Date &amp; Time:</b>	May 12, 2021, 10:23 Local	<b>Registration:</b>	N280KL (A1); N416DJ (A2)
<b>Aircraft:</b>	Swearingen SA226TC (A1); CIRRUS DESIGN CORP SR22 (A2)	<b>Aircraft Damage:</b>	Substantial (A1); Substantial (A2)
<b>Defining Event:</b>	Midair collision	<b>Injuries:</b>	1 None (A1); 2 None (A2)
<b>Flight Conducted Under:</b>	Part 91: General aviation - Positioning (A1); Part 91: General aviation - Personal (A2)		

## Analysis

A Cirrus SR22 and a Swearingen AS226TC were approaching to land on parallel runways and being controlled by different controllers on different control tower frequencies. The pilot of the Swearingen was established on an extended final approach for the left runway, while the pilot of the Cirrus was flying a right traffic pattern for the right runway.

Data from an on-board recording device showed that the Cirrus' airspeed on the base leg of the approach was more than 50 kts above the manufacturer's recommended speed of 90 to 95 kts. As the Cirrus made the right turn from the base leg to the final approach, its flight path carried it through the extended centerline for the assigned runway (right), and into the extended centerline for the left runway where the collision occurred. At the time of the collision, the Cirrus had completed about 1/2 of the 90° turn from base to final and its trajectory would have taken it even further left of the final approach course for the left runway.

The pilot of the Swearingen landed uneventfully; the pilot of the Cirrus deployed the airframe parachute system, and the airplane came to rest upright about 3 nautical miles from the airport. Both airplanes sustained substantial damage to their fuselage.

During the approach sequence the controller working the Swearingen did not issue a traffic advisory to the pilot regarding the location of the Cirrus and the potential conflict. The issuance of traffic information during simultaneous parallel runway operations was required by Federal Aviation Administration Order JO 7110.65Y, which details air traffic control procedures and phraseology for use by persons providing air traffic control services. The controller

working the Cirrus did issue a traffic advisory to the Cirrus pilot regarding the Swearingen on the parallel approach.

Based on the available information, the pilot of the Cirrus utilized a much higher than recommended approach speed which increased the airplane's radius of turn. The pilot then misjudged the airplane's flight path, which resulted in the airplane flying through the assigned final approach course and into the path of the parallel runway. The controller did not issue a traffic advisory to the pilot of Swearingen regarding the location of the Cirrus. The two airplanes were on different tower frequencies and had the controller issued an advisory, the pilot of the Swearingen may have been able to identify the conflict and maneuver his airplane to avoid the collision.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The Cirrus pilot's failure to maintain the final approach course for the assigned runway, which resulted in a collision with the Swearingen which was on final approach to the parallel runway. Contributing to the accident was the failure of the controller to issue a traffic advisory to the Swearingen pilot regarding the location of Cirrus, and the Cirrus pilot's decision to fly higher than recommended approach speed which resulted in a larger turn radius and contributed to his overshoot of the final approach course.

### Findings

<b>Personnel issues (A1)</b>	Forgotten action/omission - ATC personnel
<b>Aircraft (A2)</b>	Airspeed - Not attained/maintained
<b>Personnel issues (A2)</b>	Aircraft control - Pilot

## Factual Information

### History of Flight

<b>Approach-IFR final approach (A1)</b>	Midair collision (Defining event)
<b>Approach-VFR pattern base (A2)</b>	Midair collision

On May 12, 2021, at 1023 mountain daylight time, a Cirrus SR22 airplane, N416DJ, and a Swearingen SA226TC airplane, N280KL, were substantially damaged when they collided in flight while approaching to land at Centennial Airport (APA), Englewood, Colorado. The pilot and passenger onboard the Cirrus were not injured, and the pilot onboard the Swearingen was not injured. The Cirrus was operated as a Title 14 *Code of Federal Regulations* (CFR) Part 91 personal flight, and the Swearingen was operated as a Title 14 CFR Part 91 positioning flight.

At the time of the accident, parallel runways 17R and 17L were being utilized for simultaneous operations at APA. Automatic Dependent Surveillance-Broadcast (ADS-B) data was provided by the Federal Aviation Administration (FAA), and data from the on-board Remote Data Module (RDM) was downloaded from the Cirrus. The data showed that the Cirrus departed APA for a local flight about 0921, and the Swearingen departed the Salida Airport (ANK), Salida, Colorado, about 0956. About 1022:43, the Swearingen was about 5.5 nm from APA and had completed a right turn to align with the final approach course to runway 17L. At this same time, the Cirrus was on the downwind leg of the right-hand traffic pattern for runway 17R just before commencing a right turn to the base leg of the traffic pattern.

The Swearingen continued its approach and remained aligned with runway 17L. The Cirrus continued the right-hand traffic pattern through the base leg, and then began to turn toward the final approach course for the runway. The Cirrus continued through the extended centerline for runway 17R, and then continued to the extended centerline for runway 17L where it collided with the Swearingen. The airplanes collided at 1023:52 when they were about 3.2 nm from APA. The Swearingen was aligned with runway 17L while the Cirrus had not completed the turn from base to final and was heading about 146° when the collision occurred.

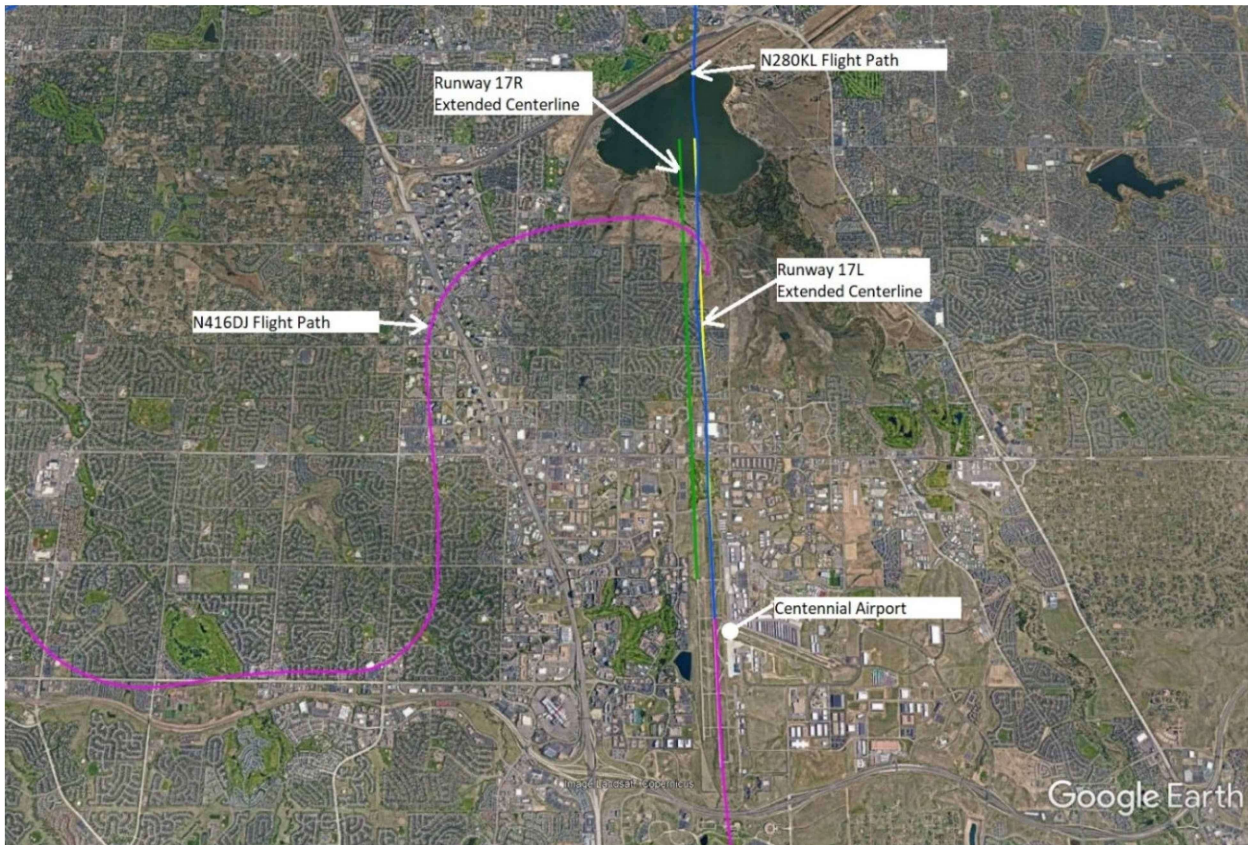


Figure 1 – Plot of ADS-B and RDM flight path information

After the impact, the pilot of the Swearingen declared an emergency, continued to APA, and landed successfully on runway 17L. The pilot of the Cirrus reported that the airplane was not controllable after the impact, and he deployed the Cirrus Airframe Parachute System (CAPS). The Cirrus came to rest about 3 nm north of APA. Both airplanes sustained substantial damage (see figures 2 & 3)



Figure 2 – Photograph of the Swearingen after the accident.



Figure 3 – Photograph of the Cirrus at the accident scene.

Review of the data retrieved from the RDM from the Cirrus revealed that the airplane's autopilot was disengaged at 1018:50 and stayed off for the remainder of the flight, indicating that the pilot was manually flying the airplane during the landing approach. At 1023:16, the avionics system issued a traffic alert which remained on until the collision. RDM data further indicated that during the downwind portion of the airplane's approach, the airspeed was about 125 kts and the flaps were up. Once the airplane was established on the base leg of the traffic pattern the recorded airspeed was about 148 kts and the flaps were still up. As the airplane maneuvered from the base leg to final approach, the airspeed was about 140 kts and the flaps were lowered to 50% about 4 seconds before impact. When the collision occurred, the airplane was about halfway through its turn from base to final at an airspeed of 140 kts, and an altitude of 6,619 ft msl. At 1023:54, the CAPS handle was pulled.

According to the Cirrus "Pilot's Operating Handbook and FAA Approved Airplane Flight Manual" (POH/AFM), the recommended approach speed for the airplane was 90-95 knots indicated airspeed (KIAS) with flaps up, 85-90 KIAS with 50% flaps, and 80-85 KIAS with 100% flaps.



Review of communications between both airplanes and the APA Airport Traffic Control Tower (ATCT) revealed that the local control 1 (LC1) controller had cleared the Swearingen for a straight in landing to runway 17L and the local control 2 (LC2) controller had cleared the Cirrus to land on runway 17R. The two controllers communicated with the respective airplanes on different ATCT frequencies.

FAA Order JO 7110.65Y detailed air traffic control procedures and phraseology for use by personnel providing air traffic control services. Included in the order were instructions for prioritizing the issuance of traffic alerts when potential conflicts with other aircraft exist. The order also specified conditions in which parallel runway operations could be authorized, including visual flight rules meteorological conditions, and that two-way radio communication be maintained with the aircraft involved and that pertinent traffic information be issued.

Further review of the communications at APA revealed that although the LC2 controller had issued pertinent traffic advisories to the pilot of the Cirrus, the LC1 controller did not issue a traffic advisory to the pilot of the Swearingen regarding the location of the Cirrus.

### Pilot Information (A1)

<b>Certificate:</b>	Airline transport	<b>Age:</b>	50, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Glider	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane; Sport pilot	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 With waivers/limitations	<b>Last FAA Medical Exam:</b>	April 7, 2021
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	April 1, 2021
<b>Flight Time:</b>	11184 hours (Total, all aircraft), 2656 hours (Total, this make and model), 10373 hours (Pilot In Command, all aircraft), 112 hours (Last 90 days, all aircraft), 75 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Pilot Information (A2)

<b>Certificate:</b>	Private	<b>Age:</b>	59, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 Unknown	<b>Last FAA Medical Exam:</b>	December 1, 2020
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information (A1)

<b>Aircraft Make:</b>	Swearingen	<b>Registration:</b>	N280KL
<b>Model/Series:</b>	SA226TC	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1978	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	TC-280
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	March 9, 2021 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	12500 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Turbo prop
<b>Airframe Total Time:</b>	29525 Hrs as of last inspection	<b>Engine Manufacturer:</b>	Honeywell
<b>ELT:</b>	C126 installed, not activated	<b>Engine Model/Series:</b>	TPE331-10UA-511G
<b>Registered Owner:</b>		<b>Rated Power:</b>	840 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	Flag carrier (121), Supplemental, On-demand air taxi (135)

## Aircraft and Owner/Operator Information (A2)

<b>Aircraft Make:</b>	CIRRUS DESIGN CORP	<b>Registration:</b>	N416DJ
<b>Model/Series:</b>	SR22	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2016	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	4394
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	3400 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	CONT MOTOR
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	IO-550-N
<b>Registered Owner:</b>		<b>Rated Power:</b>	310 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	APA,5883 ft msl	<b>Distance from Accident Site:</b>	3 Nautical Miles
<b>Observation Time:</b>	10:53 Local	<b>Direction from Accident Site:</b>	3°
<b>Lowest Cloud Condition:</b>	Few / 8000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.27 inches Hg	<b>Temperature/Dew Point:</b>	10°C / -1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Salida, CO (ANK) (A1); Englewood, CO (A2)	<b>Type of Flight Plan Filed:</b>	IFR (A1); None (A2)
<b>Destination:</b>	Englewood, CO (A1); Englewood, CO (A2)	<b>Type of Clearance:</b>	IFR (A1); VFR (A2)
<b>Departure Time:</b>	08:54 Local (A1)	<b>Type of Airspace:</b>	Class D (A1); Class D (A2)

## Airport Information

<b>Airport:</b>	CENTENNIAL APA	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	5884 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	17L	<b>IFR Approach:</b>	Visual
<b>Runway Length/Width:</b>	10000 ft / 100 ft	<b>VFR Approach/Landing:</b>	Straight-in;Traffic pattern

## Wreckage and Impact Information (A1)

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	39.585036,-104.85469

## Wreckage and Impact Information (A2)

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	39.585036,-104.85469

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Brannen, John		
<b>Additional Participating Persons:</b>	Josh Pritchard; FAA; Denver, CO Michael Giovannini; Key Lime Air; Englewood, CO		
<b>Original Publish Date:</b>	March 29, 2023	<b>Investigation Class:</b>	3
<b>Note:</b>			
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=103073">https://data.nts.gov/Docket?ProjectID=103073</a>		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).