

**Centennial Airport Community Noise Roundtable  
Study Group Committee**

**Update Report**

October 4, 2023

**Introduction:** This is the first progress report of the Centennial Airport Community Noise Roundtable Study Group Committee (Study Group). This report focuses on the establishment of the group and the mitigation strategies the Study Group has identified as viable and can be implemented immediately or in the short term before the summer of 2024. Strategies whose viability has not been determined are not included in this progress report. As additional short-term strategies are identified and viability is determined, such strategies and conclusions will be folded into subsequent reports.

## **GLOSSARY of TERMS**

**ACPAA** - Arapahoe County Public Airport Authority

**ADO** - FAA Airports District Office

**ANCA** - Airport Noise and Capacity Act

**ATC** - FAA Air Traffic Control

**ATO** - Air Traffic Organization

**CACNR** - Centennial Airport Community Noise Roundtable

**CDOT** - Colorado Department of Transportation

**Centennial Airport Voluntary Noise Abatement Procedures** - The creation of the voluntary noise abatement procedures was one of the recommendations from the previous Part 150 Study that concluded in 2008. Several stakeholders were involved in the creation of these procedures including the FAA, CACNR, ACPAA and based pilots and flight schools.

**FAA** - Federal Aviation Administration

**Full Stop Taxi Backs** - aircraft lands on runway, comes to a full stop, taxis off runway and takes taxiway back to runway threshold before taking off and entering into the pattern traffic.

**Itinerant** - aircraft that are based at other airports

**NATCA** - National Air Traffic Controllers Association

**N.O.I.S.E.** - National Organization to Insure a Sound-Controlled Environment

**Preferred Traffic Pattern Area** - Traffic pattern that is south of Arapahoe Road, North of Lincoln Avenue and East of Interstate 25.

**Stop & Go's** - aircraft lands on runway, comes to a full stop, then takes off again from the same runway and enters into the pattern traffic.

**Study Group** - Centennial Airport Community Noise Roundtable Study Group Committee

**Touch & Go's** - aircraft lands on the runway then takes off again and enters into the pattern traffic.

**Traffic pattern** - the typically race track shaped pattern aircraft fly in preparation for landing. The traffic patterns typically consist of a upwind, crosswind, downwind, base and final.

## **Background:**

### **Problem**

In the fall of 2022, residents began reporting an increase in flights due to an extended pattern of traffic over the communities to the north and west of the airport, resulting in them reporting a degradation in their quality of life. As of the spring of 2023, despite efforts to identify and implement solutions, overflights continued.

### **Formation of Study Group**

Community, CACNR, Airport Authority Board, and staff generated several potential solutions. Upon examination and realization that those solutions would not be easy to implement, and acknowledging a need for both flight schools and the FAA at the table, the need for a working group became apparent to work through the legal and technical challenges and constraints.

The formation of this Study Group came after a significant amount of feedback and support from the Community, CACNR, elected officials including Senators Bennet and Hickenlooper, Congressman Crow, Governor Polis, State Representative Dickson, the Arapahoe County Commissioners, Greenwood Village Mayor and City Council, Cherry Creek School District, The Normandy Group and ACPAA Board and staff.

Creation of this Study Group was officially approved by CACNR on March 1, 2023 (see minutes of March 1, 2023 CACNR Meeting). In a preliminary meeting on July 6, 2023 with the FAA Regional Office, the FAA agreed to provide technical support to the Study Group provided confidentiality could be provided for the FAA representatives. In the initial meetings with the FAA Regional Office, it was acknowledged that the group would need to get started as quickly as possible and that there would be no specific end date to the groups work. Some mitigations would hopefully be able to be implemented quickly while others could take much longer to research, test and implement.

### **Function of Study Group**

The Study Group was formed to work collaboratively to address the noise exposure created by the extended traffic pattern. This group was solely tasked with addressing noise exposure to the community and not other environmental concerns such as lead emissions from aircraft. The mitigations the Study Group hopes to implement could also reduce lead emissions however this is not a focus of this Study Group.

The group is designed to propose, test and/or implement, and measure the effectiveness of noise mitigation strategies to reduce - to the greatest practical extent - exposure to aircraft noise for the communities north and west of the airport without moving the noise to another community.

Working on an "as quickly as possible" basis, the group meets weekly or biweekly to generate ideas of potential strategies. These strategies are assigned to members of the study group to

explore their viability with technical and/or legal experts and results/conclusions are brought back for the next meeting. Viable strategies are then recommended for implementation by responsible parties and implemented where possible. For strategies whose viability is still being determined, next steps are identified and pursued.

### **About the Study Group**

Based on the collaborative, working nature of the study group, the complexities of the issue, the speed of work, and the frequency of meetings, a small but representative group was identified and approved by CACNR. The study group participants were selected to represent a broad range of stakeholders that would bring varying degrees of technical expertise and experience to the group. This included participants with a direct link to the affected community and CACNR, experience with national and local noise issues, legal, pilot and air traffic background and technical expertise, and pilots and airport tenants that would or could be directly affected by any mitigations proposed or recommended by the Study Group. The Study Group also plans to include or meet with additional experts as needed to provide additional legal and technical input on the proposed mitigation strategies.

The CACNR Study Group Committee consists of:

Brad Pierce – Chair of CACNR, President of N.O.I.S.E., member of the FAA NextGen Advisory Committee and former Aurora City Council Member

Chris Eubanks – Member of CACNR, Pilot, and Castle Pines City Council Member

Jessica Campbell-Swanson – Arapahoe County Commissioner Dist. 2 *representing the affected community*, Attorney, and ACPAA Board Member

Mike Fronapfel – ACPAA Executive Director, ex-officio member of CACNR

Flight School Representatives - ongoing participation from engaged flight schools that are based at Centennial Airport

FAA Representatives - ongoing participation from members of FAA management, ATC and NATCA with participation from other technical and legal experts from appropriate divisions of the FAA as needed.

### **History of Work**

The first meeting was held on July 21<sup>st</sup> 2023. There have now been a total of eight Study Group meetings, the most recent meeting was held on September 28<sup>th</sup> 2023. The first through third meetings covered the rules and guidelines of the Study Group including the confidentiality of the FAA and Flight School participants, procedure for updates and communication to the public and elected officials, identifying and defining the problem and the drivers that are the cause of the problem. The fourth through eighth meetings focused on identifying mitigation strategies, data

and information needed, and feedback from members and technical experts on the viability of potential strategies.

### **Challenges/Limitations**

There are several challenges with finding viable mitigations to the problem. Those challenges include, but are not limited to the following: maintaining safety, physical constraints, airspace limitations, variation in the mix of aircraft type, aircraft performance limitations, legal limitations (Interstate commerce law, Airport Noise and Capacity Act (ANCA), grant assurances, unreasonable access restrictions, unjust discrimination, contractual limitations) controller and pilot workload, the ability of the FAA and Airport to reasonably manage and implement mitigations.

### **Drivers/Variables**

The Study Group identified several drivers for the extended pattern including the May 2021 midair accident that occurred north of the airport, the resulting changes in how the FAA managed the aircraft in the pattern, increases in aircraft traffic/operations, itinerant traffic, variation of aircraft type, inconsistency among flight schools, specific training operations like stop and goes and taxi backs.

Variables the Study Group identified include aircraft arrivals, aircraft type (speed), operation type, weather, pilot comfort/ability and non-scheduled operations.

### **Mitigation Strategies:**

Next the Study Group began to suggest and review possible mitigation strategies to the occurrence of pattern traffic north and west of the Airport. The study of these mitigation strategies is ongoing. This report focuses on the mitigation strategies the Study Group has identified as VIABLE and can be implemented immediately/ in the short term/ before the summer of 2024. Strategies whose viability has not been determined are not included in this progress report.

The Study Group has taken a “throwing spaghetti at the wall” approach and is looking at any and all solutions big and small. The Study Group is looking at several categories of possible mitigation strategies. This includes looking into what each of the stakeholders can legally do to improve on the current situation. The categories where the Study Group is seeking to achieve improvement include frequency of overflights, overall volume of traffic, amount of noise exposure, hours of operations, improving communication between the stakeholders, and looking for ways to quantify if mitigations are improving the situation or not. Two mitigations are being implemented by the FAA on October 5<sup>th</sup> with the intended purpose of reducing the extended traffic pattern.

Mitigation strategies explored by the Study Group include our preliminary conclusions, review status and expected implementation. These mitigation strategies are listed under the following categories FAA - ATC strategies, Pilot Education/Awareness strategies, and ACPAA

Data/Tracking strategies. All the proposed mitigation strategies in this update report should be able to be implemented by summer 2024.

FAA - ATC Strategies are mitigations the FAA can implement to reduce overall air traffic over the community and raise controller awareness of overflights.

<b>FAA ATC Strategies</b>					
<b><i>Proposed mitigations strategies/solutions</i></b>	<b><i>Problem addressing</i></b>	<b><i>How will it lead to reduction in overflights/noise exposure</i></b>	<b><i>Authority to approve</i></b>	<b><i>Responsible for implementation</i></b>	<b><i>Implementation</i></b>
During the late evening and early morning hours when FAA - ATC determines it's possible, utilize Main Runway (17L/35R) so that pattern work is conducted east of the Airport over commercial areas.	Pattern traffic over the community during late evening and early morning hours.	Reduce the amount of late evening and early morning pattern traffic over the community.	FAA - ATO	FAA - ATO	Oct 5, 2023
Noise sensitive areas added to radar display in the tower.	ATC awareness of noise sensitive areas in relation to aircraft in the traffic pattern.	By assisting ATC in identifying noise sensitive areas more easily, ATC be more aware of when overflights of the community are occurring.	FAA - ATO	FAA - ATO	Oct 5, 2023

Pilot Education/Awareness Strategies are mitigations that are intended to raise education and awareness with the pilot community both on and off the airport. Increasing these efforts the Study Group would result in more consistent compliance with the voluntary noise abatement procedures and the preferred traffic pattern area.

<b>Pilot Education/Awareness Strategies</b>					
<b><i>Proposed mitigations strategies/solutions</i></b>	<b><i>Problem addressing</i></b>	<b><i>How will lead to reduction in overflights/noise exposure</i></b>	<b><i>Authority to approve</i></b>	<b><i>Responsible for implementation</i></b>	<b><i>Implementation</i></b>
Noise Abatement Information on Chart Supplement	Centennial Airport receives flights from all over the US. Transient pilots are thus not always aware of the noise sensitive areas or preferred traffic pattern.	A Chart Supplement is information provided about a local airport environment. Pilots are expected to review a chart and its supplements before taking flight. Enhanced awareness will drive a reduction in overflights of noise sensitive areas when pilots have discretion.	ACPAA & FAA	ACPAA, FAA, & CDOT	2023*
Develop and implement proactive outreach and education program to flight schools to increase pilot awareness of voluntary fly quiet procedures and preferred pattern area	Due to rapid turnover, flight school instructors and students are often unaware of noise issues, voluntary noise abatement procedures, or preferred traffic pattern area.	By developing & implementing a proactive outreach and education program, will keep flight instructors up to date on noise abatement efforts.	ACPAA, FAA-ATO	ACPAA, FAA - ATO	2023

\*Study group to put together language to be added to chart supplement - highlighting noise sensitive areas to the north and west of the airport. Language sent to CDOT then FAA for approval and publishing in the next chart update cycle.

ACPAA Data/Tracking Strategies are mitigations that can verify the use of the Centennial Airport Voluntary Noise Abatement Procedures and the preferred traffic pattern area. These strategies will also be valuable in determining if the proposed mitigations are reducing the community overflights and/or noise exposure.

<b>ACPAA Data/Tracking Strategies</b>					
<b><i>Proposed mitigations strategies/solutions</i></b>	<b><i>Problem addressing</i></b>	<b><i>How will lead to reduction in overflights/noise exposure</i></b>	<b><i>Authority to approve</i></b>	<b><i>Responsible for implementation</i></b>	<b><i>Implementation</i></b>
Daily monitoring of extended pattern traffic during nighttime hours (10 pm - 7 am).	The occurrence of extended pattern traffic during nighttime hours (10 pm - 7 am).	By having Airport staff monitor outlier nighttime extended pattern traffic on a daily basis, the airport can quickly respond to outliers, and when able determine causes, and work to prevent the instances from occurring in a more proactive manner.	ACPAA	ACPAA	Oct 2023
Airport to add FTE	Improve airport staff's ability to provide investigation, analysis and reporting of data from Airport Noise and Operations Monitoring System (ANOMS)	Uniform data on overflights is needed to measure the extent of overflights, noise exposure and the results of mitigation strategies.	ACPAA	ACPAA	2024

This interim update report is intended to provide information on the proposed mitigations that are planned to be implemented over the next several months. Not all of the mitigations the Study Group is considering have been included in this update report. Several mitigations require more analysis to determine their viability and if and when they could be implemented. Future reports will include mitigations considered and discussed by the Study Group including a list of mitigations that were not viable and the reasons they couldn't be implemented at Centennial Airport. The Study Group will continue to explore additional viable options and will provide another update in the spring of 2024.