

September 5, 2018

AGENDA

6:30 p.m. – 8:30 p.m.

Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO

Chair: Brad Pierce **Vice Chair:** Katy Brown **Treasurer:** Jamie Hartig **Secretary:** Alison Biggs

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

1. CALL TO ORDER AND DETERMINATION OF QUORUM:

Arapahoe County: Kathleen Conti/Thad Bagnato

Jim Dawkins /Vacant

Douglas County: Vacant/Jamie Hartig

Alison Biggs/Mike Acree

Aurora: Brad Pierce/Liia Koiv-Haus

Castle Pines: Melissa Coudeyras/Ben Price

Castle Rock: Brett Ford/Sandy Vossler

Centennial: Candace Moon/Andrea Suhaka

Cherry Hills Village: Katy Brown/Randy Weil

Foxfield: Dave Goddard/Vacant

Greenwood Village: Tom Dougherty/Karen Blilie

Lone Tree: Mike Anderson/Jennifer Drybread

Parker: Amy Holland/Ryan McGee

ACPAA: Robert Olislagers/Michael Fronapfel

AOPA: Robert Doubek/John Hirshman

CABA: Don Kuskie/Mike Straka

CDOT Aeronautics Div: Todd Green/Vacant

FAA APA Control Tower: Diana Hanley/Ron Curry

FAA District Office: Linda Bruce/Kandace Krull

FAA TRACON: Steve Martin/Bill Dunn

2. APPROVAL OF AGENDA:

3. PUBLIC COMMENT: (non-Agenda items – 3 minutes per person time limit; correspondence from the public)

4. CONSENT AGENDA:

A. DRAFT MINUTES, August 1, 2018 – Alison Biggs, Secretary

B. TREASURER'S REPORT – Jamie Hartig, Treasurer

5. ITEMS REMOVED FROM CONSENT AGENDA

6. COMMITTEE REPORTS:

A. COMMUNITY OUTREACH – Melissa Coudeyras

B. FLY QUIET – Don Kuskie Chair

C. NOISE MONITORS – Bette Todd

1. Noise Report – Dylan Heberlein

D. WORK PLAN – Alison Biggs, Chair

E. STUDY GROUP – Brad Pierce, Chair

7. FAA REPORTS:

A. DISTRICT OFFICE – Linda Bruce

B. CENTENNIAL AIRPORT AIR TRAFFIC CONTROL TOWER – Diana Hanley

C. TRACON – Steve Martin

8. OTHER REGULAR REPORTS:

A. ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY – Robert Doubek & Brad Pierce

B. AIRPORT DIRECTOR'S REPORT – Robert Olislagers

1. Airport Activity

2. Legislative

3. Other

C. METROPLEX - (Resource - <http://www.faa.gov/nextgen/communityengagement>.)

D. NEXTGEN ADVISORY COMMITTEE (NAC) – Brad Pierce

E. N.O.I.S.E. – Brad Pierce

FAA Reauthorization Updates – August 29, 2018 & August 31, 2018

9. OLD BUSINESS:

A. CACNR MEETING SCHEDULE AND REPRESENTATION TO 2018 ACPAA MEETINGS

1. Need September 13; October 11; November 8

B. CONGRESSIONAL QUIET SKIES CAUCUS

10. NEW BUSINESS:

A. RECONSIDER NOVEMBER CACNR MEETING DATE

B. INFORMATION SHARING

1. *Washington Post* article on DC residents

2. *Aviation Week* – Noise & Emissions Central Issues for Resurgent Supersonics

3. *Denver Post*– New spaceport license for Adams County means new name for Front Range Airport

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

12. NEXT MEETINGS:

- A. **CACNR** – Oct 03, 2018 6:30 p.m., Wright Brothers Room, Centennial Airport, 7800 S. Peoria Street, Englewood, CO
Nov 07, 2018 6:30 p.m. Wright Brothers Room, Centennial Airport, 7800 S. Peoria Street, Englewood, CO
Dec 05, 2018 6:30 p.m. ?? location
- B. **ACPAA** – Sep 13, 2018 3:00 p.m., Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
(?? representing CACNR)
Oct 11, 2018 3:00 p.m., Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
(?? representing CACNR)
Nov 08, 2018 3:00 p.m., Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
(?? representing CACNR)
Dec 13, 2018 3:00 p.m., Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
(Katy Brown representing CACNR)

13. ADJOURN

MINUTES
August 1, 2018

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:** Katy Brown **Treasurer:** Jamie Hartig **Secretary:** Alison Biggs

1. **CALL TO ORDER, ROLL CALL, and QUORUM:** The meeting was called to order at 6:35 p.m. by Chair Brad Pierce.

The following were in attendance:

Douglas County:	Jamie Hartig	Greenwood Village:	Karen Blilie
Douglas County:	Alison Biggs	Lone Tree:	Mike Anderson
Aurora:	Brad Pierce	Parker:	Amy Holland
Castle Pines:	Melissa Coudeyras	ACPAA:	Robert Olislagers
Castle Rock:	Sandy Vossler	AOPA:	Robert Doubek
Centennial:	Candace Moon/Andrea Suhaka	CABA:	Don Kuskie
Cherry Hills Village:	Katy Brown		

Also, in attendance were past Aurora Alternate Porter Ingram, Fly Quiet Committee Member Bill Wasmund, and ACPAA Staff Dylan Heberlein.

Those absent were:

Arapahoe County:	Kathleen Conti/Thad Bagnato	APA Control Tower:	Diana Hanley/Ron Curry
Arapahoe County:	Jim Dawkins/vacant	FAA District Office:	Linda Bruce/Kandace Krull
Foxfield:	Dave Goddard/Vacant	FAA TRACON:	Steve Martin/Bill Dunn
CDOT Aeronautics Division:	Todd Green/Vacant		

2. **APPROVAL OF THE AGENDA:** On the motion of Katy Brown, duly seconded, the agenda was approved.

CONFERENCE CALL WITH EMILY TRANTER, NATIONAL COORDINATOR NATIONAL ORGANIZATION TO INSURE A SOUND-CONTROLLED ENVIRONMENT (N.O.I.S.E.): There were three main topics covered, including the FAA Reauthorization legislation, the NextGen Advisory Committee, and future events at which N.O.I.S.E. will be represented.

FAA Reauthorization – Congress had reportedly reached an agreement to move the legislation forward. The issue of privatization, introduced by Congressman Bill Shuster (R – PA) and supported by Donald Trump, did not find enough support, so that idea had been dropped. The amount of time the reauthorization would be in effect differed between the Senate and House versions, so that issue remained to be reconciled. The House version contains several noise-related amendments which could be meaningful in addressing community noise issues. The Senate was looking at amendments quietly, but apparently there is little being considered in relation to noise. The time-table for consideration of the reauthorization was unclear. Tranter asked anyone aware of other communities around the country who are noise impacted to be sure to get that information to her. It was noted many in Congress give indication of wanting amendments related to noise, but those had not been introduced or included yet.

NAC – Since 1976, the FAA had partnered with RTCA, which is a private, not-for-profit corporation. It was utilized as a Federal advisory committee by the FAA from 1976 to May 2018 to provide management and guidance for policy and technical standards committees. NAC had adopted a new charter following the split with RTCA, as reported at the last CACNR meeting. At its June meeting, NAC and the FAA had seemed more committed to community engagement, and for the next NAC meeting, N.O.I.S.E. will be encouraging more focus on noise issues.

Future Focus – Tranter noted N.O.I.S.E. wishes to engage with anyone who has an interest in a sound controlled environment. She asked CACNR Representatives to look at the N.O.I.S.E. website and let her know if anything was felt missing (ejtranter@locklaw.com). She noted she would be attending the National League of Cities meeting in Los Angeles, and N.O.I.S.E. will have a policy summit and community involvement workshop during that week. Brad Pierce will attend as President of N.O.I.S.E., and Melissa Coudeyras is attending for CACNR. Tranter will be at the UC Davis symposium in 2019 and N.O.I.S.E. will hold a legislative summit in Washington, DC., also in 2019. Question was asked if CACNR should consider sending someone to the legislative summit in future years. Funding for this could be considered when the MOU is in place.

Thanks – Tranter was thanked for taking the time to join CACNR.

3. **PUBLIC COMMENT:** None

4. **CONSENT AGENDA:** The Consent Agenda included the July 11, 2018 Draft Minutes, and a Treasurer's Report as of July 31, 2018 which showed a balance of \$6,251.38. Dylan Heberlein indicated he had a question related to the July minutes, so that item was moved to Agenda Item 5. On the motion of Katy Brown, duly seconded, the remainder of the Consent Agenda was approved.

5. **ITEM(S) REMOVED FROM CONSENT AGENDA:** Dylan Heberlein asked for clarification about the statement in 6.C. of the July minutes, relating to correlations between noise events at the monitors and noise complaints from the related jurisdictions not being available. This had first been brought up in November 2015 and had been carried in the minutes since that time. Following discussion, it was agreed to expand upon the statement in the minutes and to indicate there was still interest in obtaining that kind of information.

In the report quoted under 8.A., it was noted the dates involved in the recent audit of ACPAA had been 2016 and 2017, and that Andrea Suhaka had actually presented the CACNR update. Those items would be noted in the minutes.

On the motion of Katy Brown, duly seconded, the July 11, 2018 minutes were approved as amended.

6. **COMMITTEE REPORTS:**

A. **COMMUNITY OUTREACH** – Melissa Coudeyras had communicated with the committee via email, with no responses. She would keep trying. She had provided an email update to the Work Plan Committee, which had not been received. Alison Biggs indicated she would go looking for it, and Coudeyras would resend it if needed.

B. **FLY QUIET** – Don Kuskie reported the committee had met, with five members present. It had requested continuation of the current name of the committee, rather than switching to Industry Engagement as suggested from the May retreat. Action items also identified during the retreat had been reviewed, and those needing most attention at this time had been identified. The committee plans to begin work, and its action items will be included when the Work Plan Committee began to put the next Work Program together.

There was some discussion of the action items identified by the committee. Suggestion was made to remember the voluntary nature of what can be done to achieve flying quiet around Centennial Airport. It was noted some airports give positive feedback to those who do follow the voluntary guidelines, but that can be difficult at a general aviation airport such as Centennial which has no commercial airlines, many private pilots, many flight schools, and many transient pilots.

Dylan Heberlein reported the posters were finished and asked if anyone wanted to help with their distribution. Alison Biggs reported it had been a positive experience when she had done it previously. Bob Doubek, Karen Blilie, Brad Pierce, Bill Wasmund, Don Kuskie, and Katy Brown volunteered. Heberlein would contact them for scheduling.

C. **NOISE MONITORS** – This committee had not met. Candace Moon indicated committee members were still trying to find a satisfactory meeting date. Request was made for the committee to explore available technology/ tools and the kinds of information and correlations which could be obtained from them, utilizing the data available from the noise monitors; it would be helpful to know what is available which could enhance CACNR's work, and if procurement of such tools would be feasible.

Dylan Heberlein presented the Noise Report from June 2018. In that month, there had been 31,917 operations, up from 30,339 operations in May and 25,453 operations in April.

There had been a total of 25,544 noise events during June 2018. Noise events at each monitor were:

8,839 events at the Golf Course monitor on airport property	1,255 events at the Parker monitor
4,827 events at the Meridian monitor	972 events at the Greenwood Village monitor
2,534 events at the State Park monitor	857 events at the Castle Rock monitor
2,375 events at the Airport East monitor on airport property	611 events at the Hunters Hill monitor
1,522 events at the Grandview Estates	244 events at the Castle Pines monitor
1,330 events at the Lone Tree monitor	175 events at the Sagebrush Park monitor

In June 2018, there had been 499 complaints from 58 households. Year to date, there had been 4,365 complaints from 237 households.

In June 2018, 153 complaints had come from Unincorporated Arapahoe County (31%); 104 from Aurora (21%); 79 from Centennial (16%); 70 from Unincorporated Douglas County (14%); 42 from Lone Tree (8%); 27 from Greenwood Village (5%); 13 from Cherry Hills Village (3%); 4 from Other (1%); 2 each from Denver and Parker (0.4%); and 1 each from Castle Pines, Castle Rock and Highlands Ranch (0.2%); for a total of 499 complaints.

Households those complaints had come from were: 15 from Unincorporated Arapahoe County; 14 from Unincorporated Douglas County; 7 from Greenwood Village; 5 each from Centennial and Lone Tree; 3 from Aurora; 2 each from Cherry Hills Village and Parker; and 1 each from Castle Pines, Castle Rock, Denver, Highlands Ranch, and Other, for a total of 58 households complaining. Of those, there had been responses requested from 6 email complaints and 8 telephone complaints. It was noted the individual in Highlands Ranch who had been the source of large numbers of complaints for many months was no longer registering complaints.

Of the 499 complaints lodged in June 2018, 438 (87.8%) were daytime complaints, and 61 (12.2%) were nighttime complaints. YTD at the end of June, of the 4,365 complaints lodged, there had been 3,880 (89%) daytime complaints and 485 (11%) nighttime complaints.

In June 2018, jets accounted for 67% of the complaints; props accounted for 32% of the complaints; and helicopters were 1%. Departures accounted for 56% of the complaints; arrivals were 38%; and training was 4%. One complaining household was outside of the map area provided, from north of Chatfield Reservoir in Unincorporated Jefferson County.

A June 2018 Radar Track Density Map was provided. Heberlein noted the map would be updated biannually from now on. Request was made for the map to be “zoomed in” a little, to show more of the side-to-side view, for the next meeting only.

D. **WORK PLAN** – The committee would be working with information received from the other committees to begin preparing the next Work Program.

E. **STUDY GROUP** – Brad Pierce reported the MOU and Funding Structure documents, as they would be transmitted to all CACNR Members for signature, would be sent to all Members’ Representatives first for a final review. In the interest of time, the Study Group suggested the documents would be considered approved by CACNR one week after that emailing to the Representatives, if no comments to the contrary were received. By consensus, that action was agreed upon.

The documents are the result of a careful review of suggestions made by the various CACNR jurisdictions, some of which were accepted and some which were not. Upon approval as outlined above, the Study Group members will provide each jurisdiction (and its CACNR Representative) which offered suggestions with more specific detail. The Group will also be available to make a presentation about the two documents, should that be desired.

7. FAA REPORTS:

- A. **DISTRICT OFFICE** – None
- B. **APA AIR TRAFFIC CONTROL TOWER** – None
- C. **TRACON** – None

8. OTHER REGULAR MONTHLY REPORTS:

A. **ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY** – Robert Doubek, ACPAA Chair, reported there had been no meeting of the group in July.

B. **AIRPORT DIRECTOR’S REPORT** – Robert Olislagers reported on the success of the grand opening celebration for the Wings Over the Rockies Boeing Blue Sky Aviation Gallery on July 21 & 22, 2018. The next facility to be built will be a middle school.

There would be a Navy Seal event at the Next Jet facility at Centennial on August 26, 2018. The annual Morgan Adams Foundation fundraiser for childhood cancer will be held at Centennial Airport on September 8, 2018. On September 27th, the annual Challenge Air event for disabled children will occur again, giving disabled youth from 7 – 21 an opportunity to help pilot a single-engine plane. Local pilots volunteer their time and aircraft to conduct this popular and appreciated event.

Legislatively, he noted the information provided earlier by Emily Tranter from N.O.I.S.E., and indicated there was also possibility of something addressing drones, which would be controversial.

The addition of 33 more gates as discussed in June was again noted. DIA has previously been OK’d for eventually having 12 runways – there are six now. Growth at DIA will likely have an impact on aircraft noise throughout the area.

C. **METROPLEX** – Robert Olislagers reported there was really nothing new officially regarding Metroplex. He had shared his frustration about the lack of communication with Amy McCarthy of the FAA, with a seeming response of no communication at all. Phoenix has been totally dropped from implementation of Metroplex; other lawsuits are apparently still pending.

D. **NEXTGEN ADVISORY COMMITTEE (NAC)** – Brad Pierce reported the next NAC meeting will be in October.

E. **N.O.I.S.E.** – The next N.O.I.S.E. meeting to which CACNR sends a representative is November 7, 2018 in Los Angeles, held in conjunction with the National League of Cities meeting which Melissa Coudeyras will be attending. Brad Pierce will be attending as the President of N.O.I.S.E.

9. OLD BUSINESS:

A. **CACNR 2018 MEETING SCHEDULE AND REPRESENTATION TO ACPAA MEETINGS** – Brad Pierce indicated he would check to see if he could attend in August. Representation would still be needed for September 13, October 11, November 8, and December 13. Katy Brown volunteered to represent CACNR in December.

B. **CONGRESSIONAL QUIET SKIES CAUCUS** – Nothing new on follow-up to the invitation letter to Congressman Ken Buck. Brad Pierce will continue attempting to accomplish this.

10. NEW BUSINESS: Information Sharing – None

11. PUBLIC COMMENT: None

12. NEXT MEETINGS:

A. **CACNR** – Sep 05, 2018 6:30 p.m. Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
Oct 03, 2018 6:30 p.m. ? Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
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(?? representing CACNR)
Dec 13, 2018, 3:00 p.m. Wright Brothers Room, Centennial Airport, 7800 S Peoria Street, Englewood, CO
(Katy Brown representing CACNR)

13. ADJOURNMENT: The meeting adjourned at 8:40 p.m.

Alison Biggs, Secretary

**Centennial Airport Community Noise Roundtable
Treasurer's Report as of August 31st, 2018**

2018 CACNR Budget	\$10,000.00	
GoDaddy Domain Backorder		\$24.98
B.P. UC Davis Expenses		\$1,535.77
M.C. UC Davis Expenses		\$1,087.87
N.O.I.S.E 2018 Membership		\$1,000.00
A.B. 2018 Retreat Expenses		\$20.00
B.P. 2018 Retreat Expenses		\$80.00
Retreat, Misc. Consulting		\$2,800.00
		\$6,548.62
Remainder		<u>\$3,451.38</u>



MONTHLY | **July 2018**

Noise Report



Centennial Airport
Arapahoe County Public Airport Authority

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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.

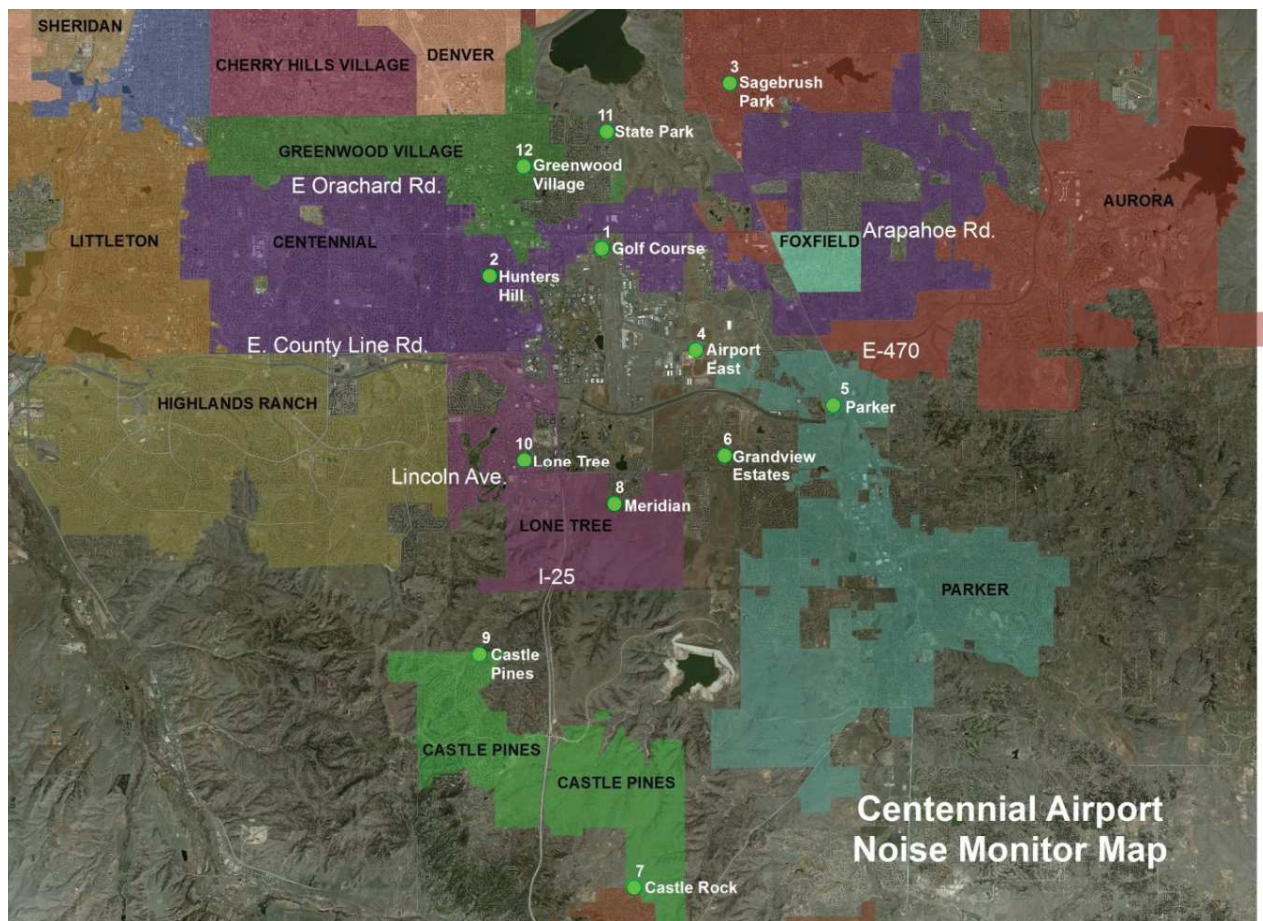
Visual Flight Rules (VFR) – A set of regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. A flight plan is not required when the pilot is operating under Visual Flight Rules.

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

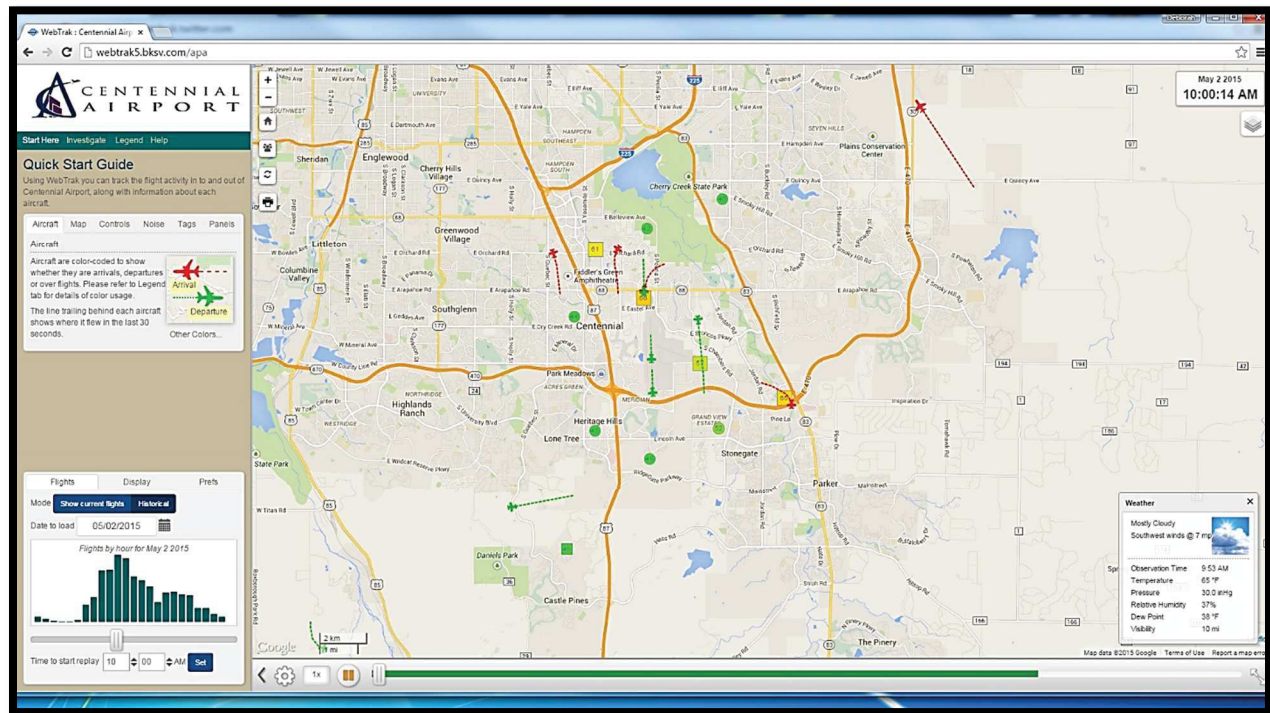
3 ABOUT APA'S NOISE MONITORING PROGRAM

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: <http://webtrak.bksv.com/apa>

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	2,019	3,495	116	5,630	377	7,912	98	8,387	13,616	77	13,693
February	1,944	3,142	70	5,156	298	5,231	95	5,624	9,274	62	9,336
March	2,216	3,596	201	6,013	331	6,906	186	7,423	12,219	89	12,308
April	1,967	3,266	140	5,373	366	6,537	186	7,089	11,721	164	11,885
May	2,039	3,446	121	5,606	483	7,989	126	8,598	15,561	93	15,654
June	2,346	3,754	281	6,381	576	8,803	196	9,575	15,267	152	15,419
July	2,162	3,899	223	6,284	729	9,647	163	10,539	16,678	193	16,871
August				0				0			0
September				0				0			0
October				0				0			0
November				0				0			0
December				0				0			0
Y-T-D Totals	14,693	24,598	1,152	40,443	3,160	53,025	1,050	57,235	94,336	830	95,166

	IFR OVERFLIGHTS				VFR OVERFLIGHTS						TOTAL OPERATIONS
	AIR TAXI	G.A.	MILITARY	TOTAL INTINERANT	AIR TAXI	G.A.	MILITARY	TOTAL			
January	1	0	6	7	124	257	23	404	January		28,121
February	6	3	7	16	83	177	1	261	February		20,393
March	1	3	7	11	129	195	15	339	March		26,094
April	2	7	2	11	136	414	27	577	April		24,935
May	3	8	4	15	112	340	14	466	May		30,339
June	2	2	4	8	126	389	19	534	June		31,917
July	3	7	9	19	65	396	21	482	July		34,195
August				0				0	August		
September				0				0	September		
October				0				0	October		
November				0				0	November		
December				0				0	December		
Y-T-D Totals	18	30	39	87	775	2,168	120	3,063	Y-T-D Totals		195,994

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:

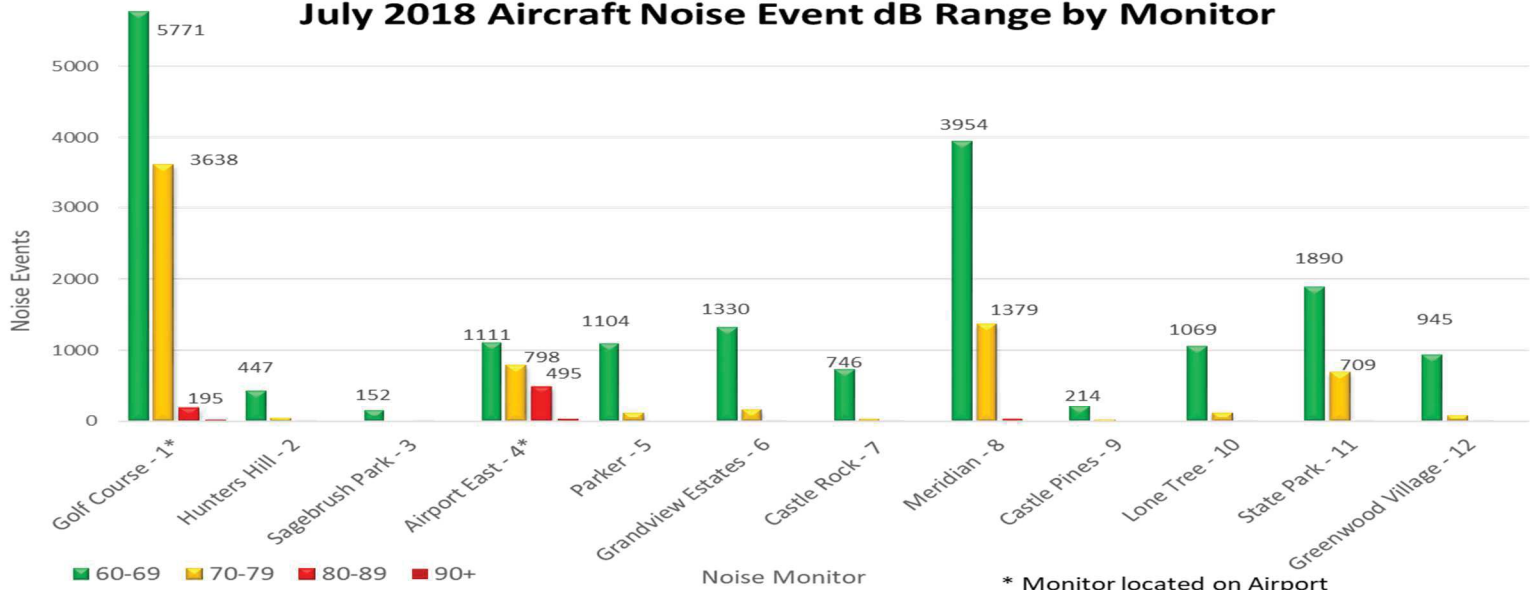
First, the noise event must exceed the ambient noise level. This number varies at every monitor, but is generally greater than 50-55db. Secondly, the noise event must last longer than 5 seconds. Lastly, using radar data, the system must correlate an aircraft with the noise event. This ensures that the 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.

July 2018 Aircraft Noise Event Decibel Range By Monitor					
Monitor	60-69	70-79	80-89	90+	Totals
Golf Course - 1*	5771	3638	195	20	9624
Hunters Hill - 2	447	48	2	2	499
Sagebrush Park - 3	152	12	1	0	165
Airport East - 4*	1111	798	495	30	2434
Parker - 5	1104	117	0	1	1222
Grandview Estates - 6	1330	165	5	1	1501
Castle Rock - 7	746	34	1	0	781
Meridian - 8	3954	1379	37	11	5381
Castle Pines - 9	214	16	0	1	231
Lone Tree - 10	1069	114	4	0	1187
State Park - 11	1890	709	12	3	2614
Greenwood Village - 12	945	79	7	1	1032
Totals	18733	7109	759	70	26671

*Monitor located on Airport

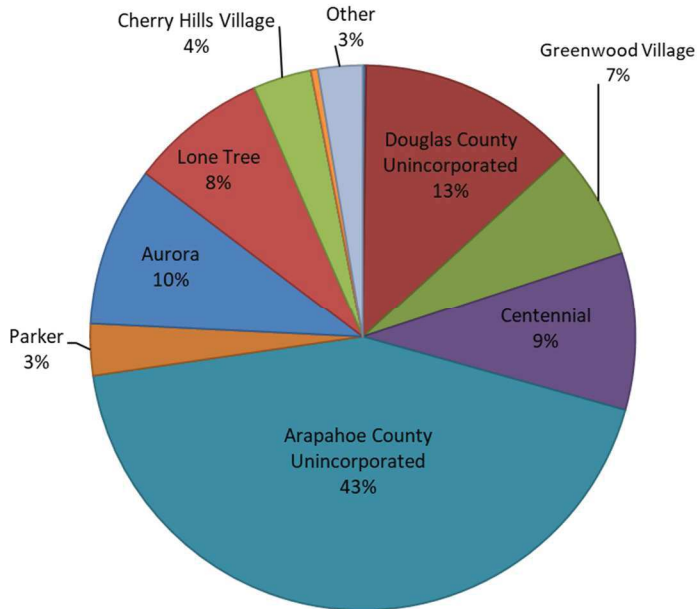
July 2018 Aircraft Noise Event dB Range by Monitor



7 JULY 2018 NOISE COMPLAINTS

For the month of July, Centennial Airport received 491 complaints from 69 households.

July 2018 Complaints per Municipality



Noise Complaints Response Requested

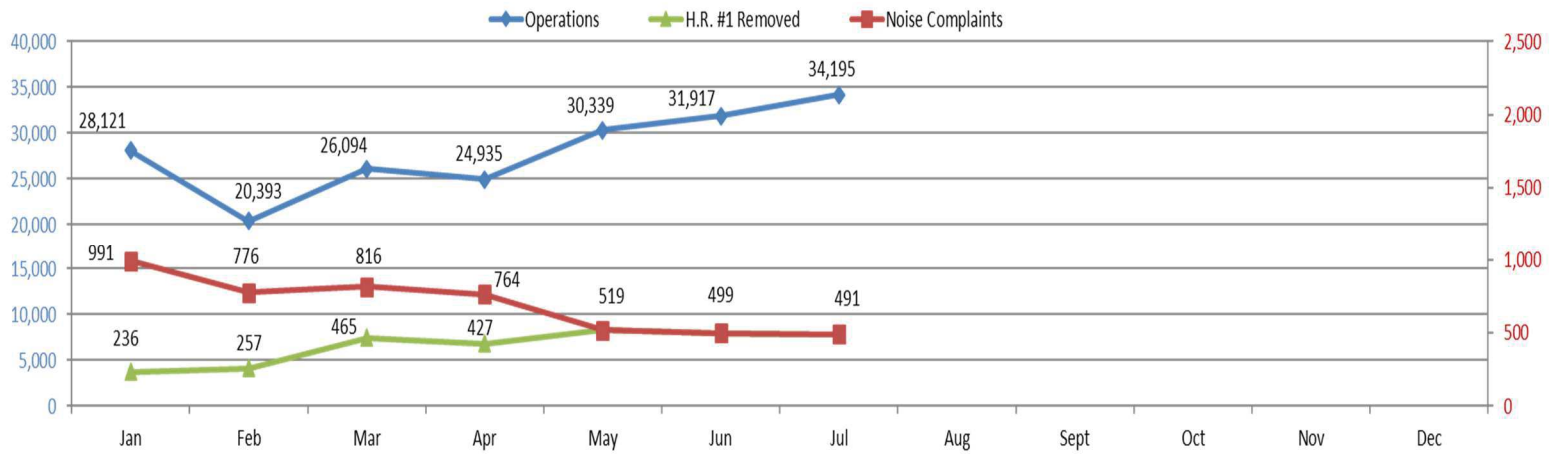
Email	12
Phone	19
Total	31

July 2018 Noise Complaints			YTD	
Municipality	Complaints	Households	Complaints	Households
Arapahoe County Unincorporated	213	21	955	107
Aurora	47	3	472	9
Castle Pines	0	0	1	1
Castle Rock	0	0	32	3
Centennial	46	9	376	24
Cherry Hills Village	17	2	50	5
Denver	2	2	28	9
Douglas County Unincorporated	64	9	358	26
Greenwood Village	33	10	308	44
Highlands Ranch	1	1	1969	6
Lone Tree	40	5	164	15
Parker	15	2	23	6
Other	13	5	120	10
Total	491	69	4856	265

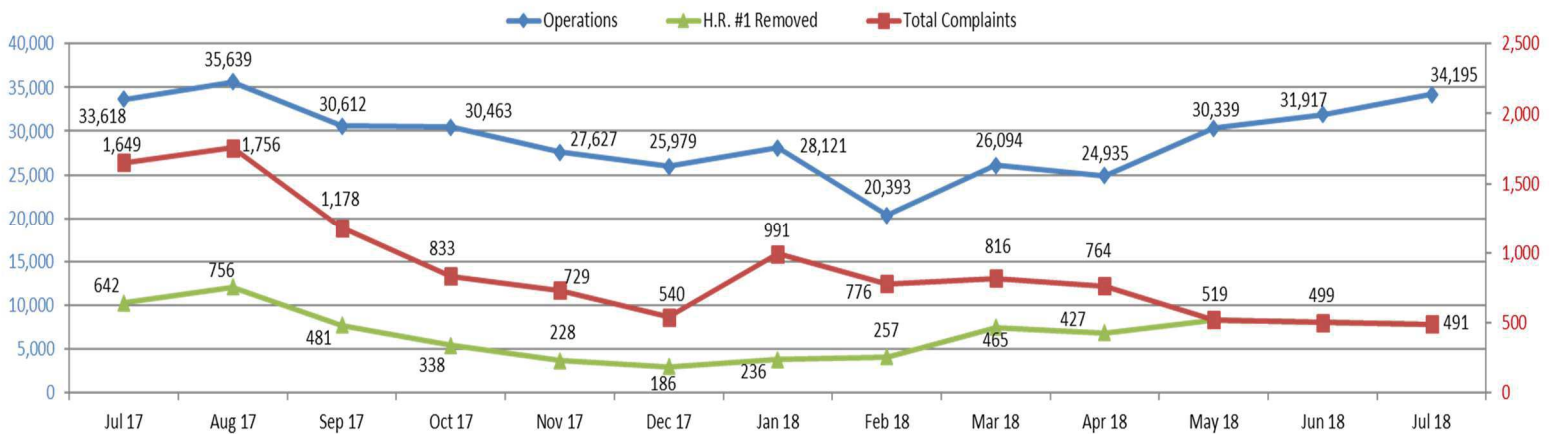
Month Comparison: 2018 Noise Calls - Daytime vs. Nighttime

Time Complaint Received	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	2018 YTD
Day Hours (7:00 am - 9:59pm)	900	683	734	705	420	438	421						4301
Night Hours (10:00 pm - 6:59 am)	91	93	82	59	99	61	70						555
TOTAL	991	776	816	764	519	499	491						4856

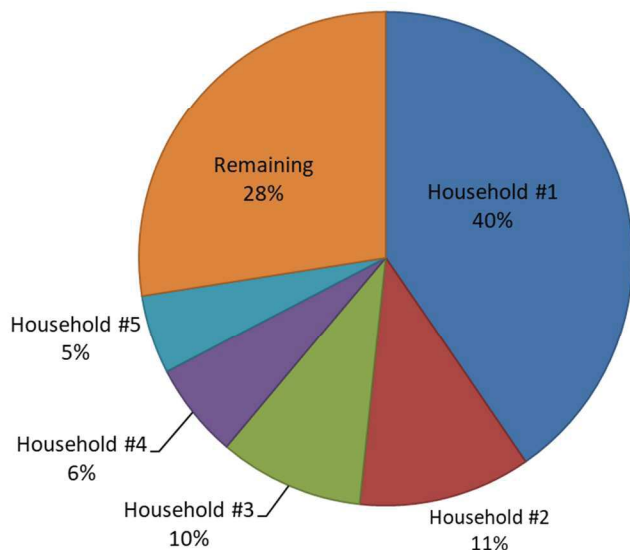
Current 12 Month Trend



Previous Year 13 Month Trend



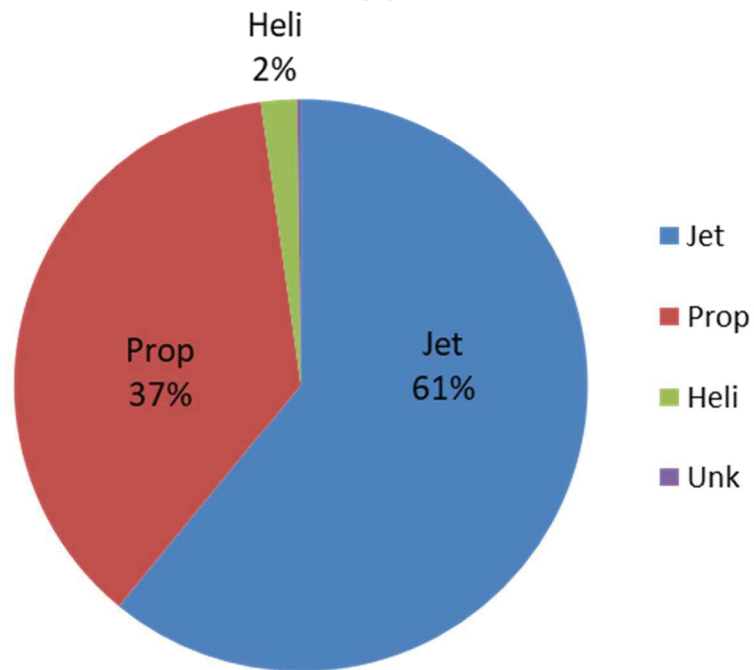
2018 YTD Top 5 Household Complaints



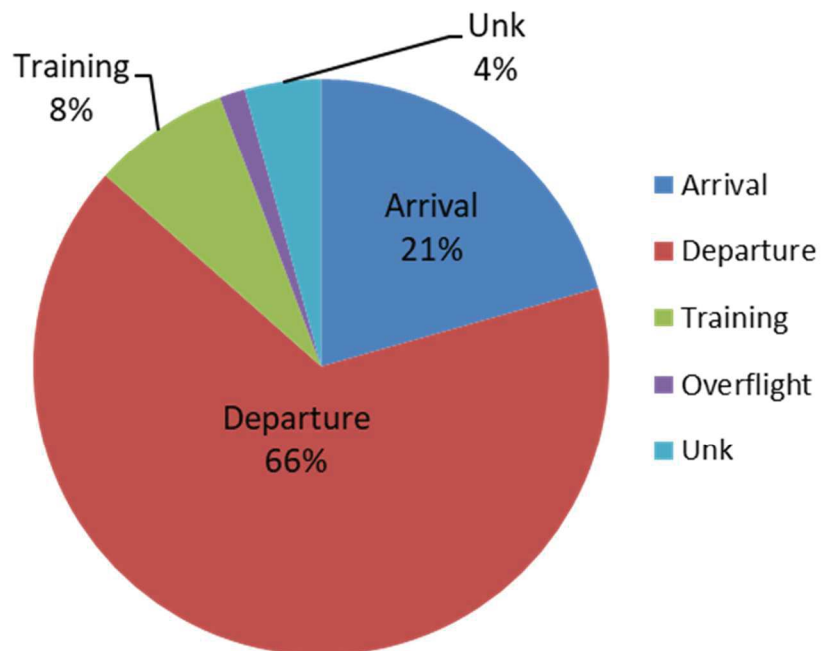
YTD Top 5 Household Complaints

Household	Complaints	Municipality
Household #1	1,962	Highlands Ranch
Household #2	548	Arapahoe County Unincorporated
Household #3	460	Aurora
Household #4	301	Centennial
Household #5	251	Douglas County Unincorporated
Remaining	1,334	
Total	4,365	

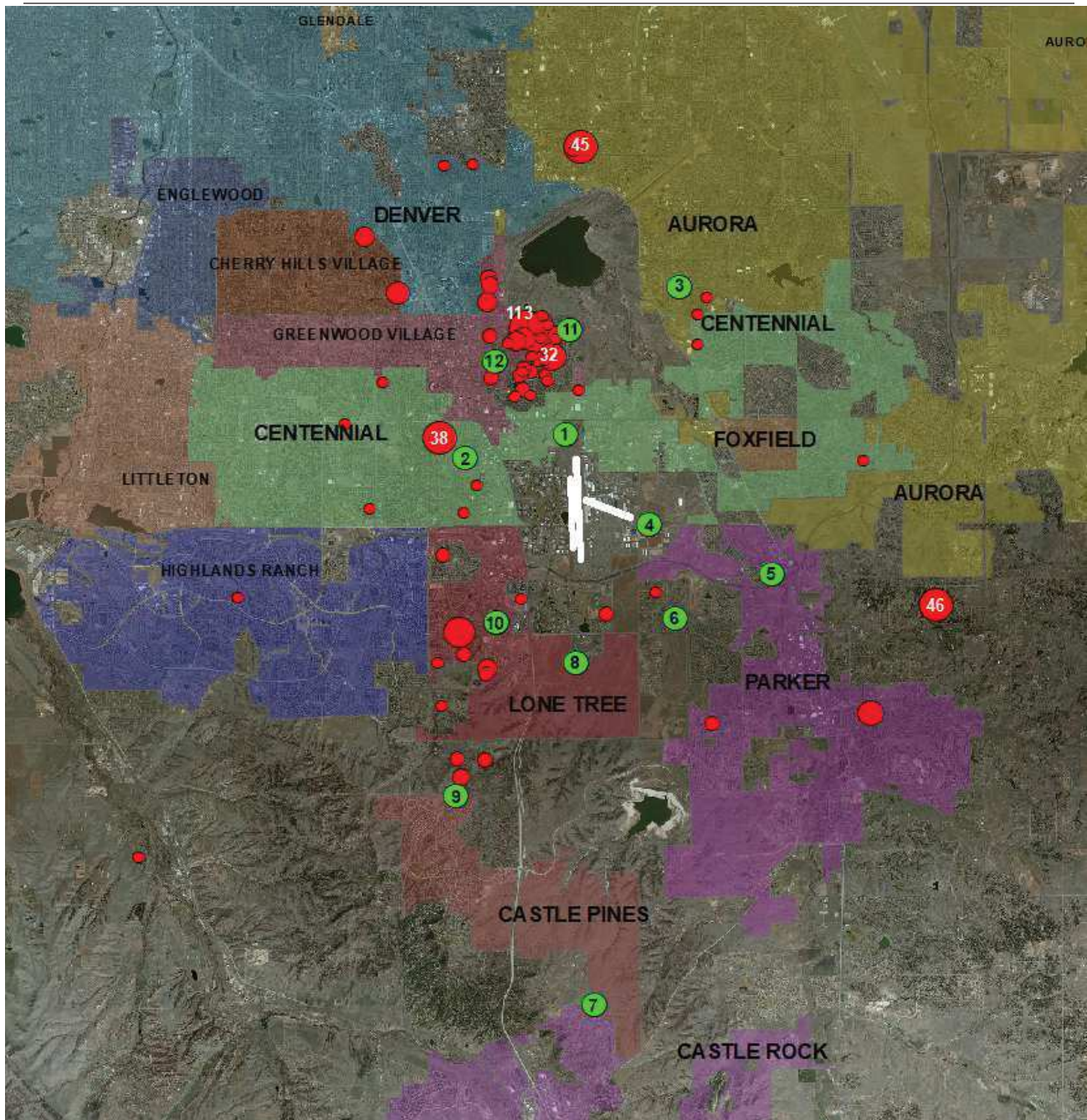
July Complaints by Aircraft Type



July Complaints by Operation Type



8 COMPLAINT MAP



July 2018 Complaints

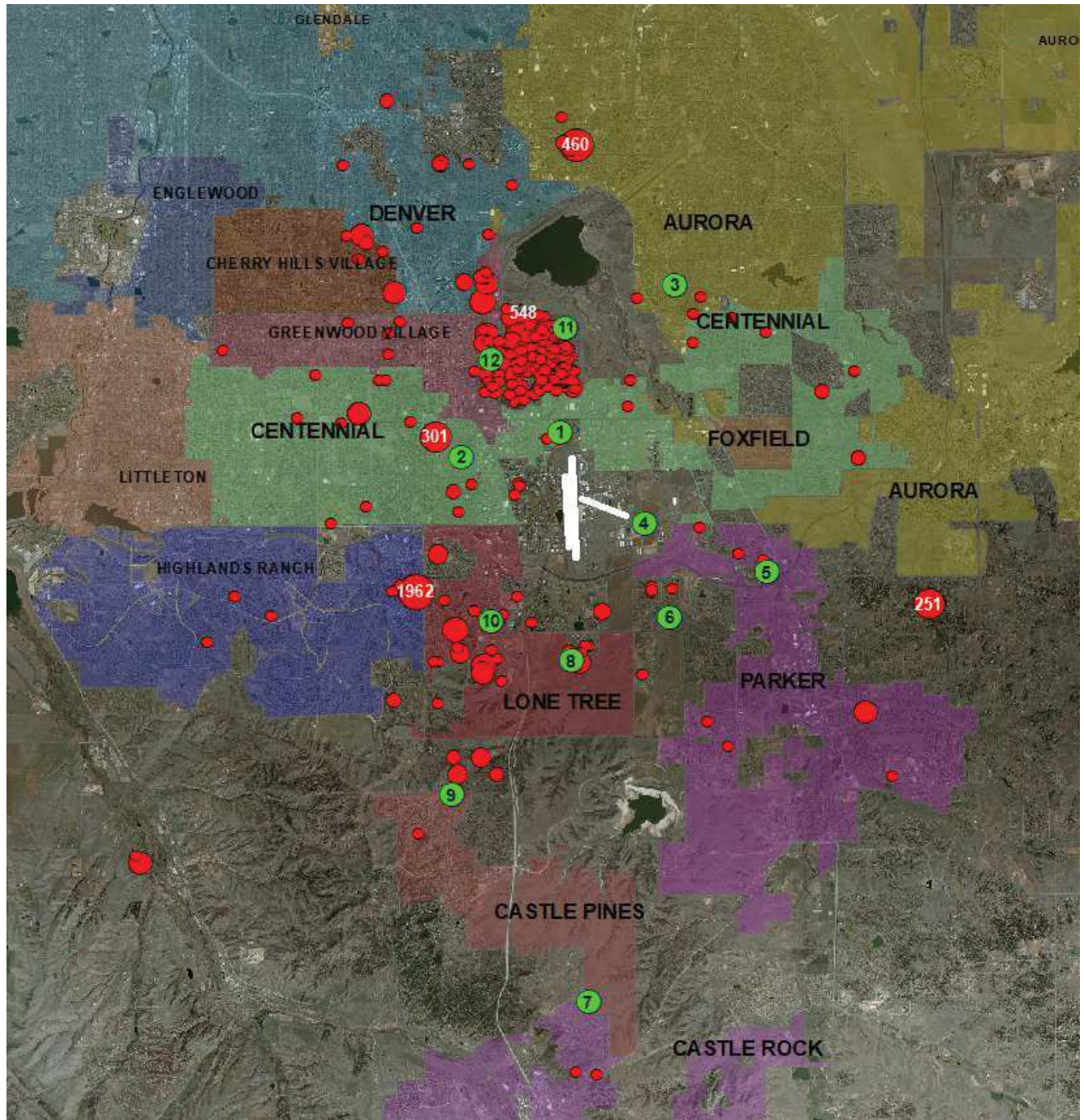
MAP LEGEND:

*4 households are located outside the map area

Green = Noise Monitor Locations

Red = Household Complaint Locations.

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



YTD 2018 Complaints

MAP LEGEND:

*11 households are located outside the map area

Green = Noise Monitor Locations

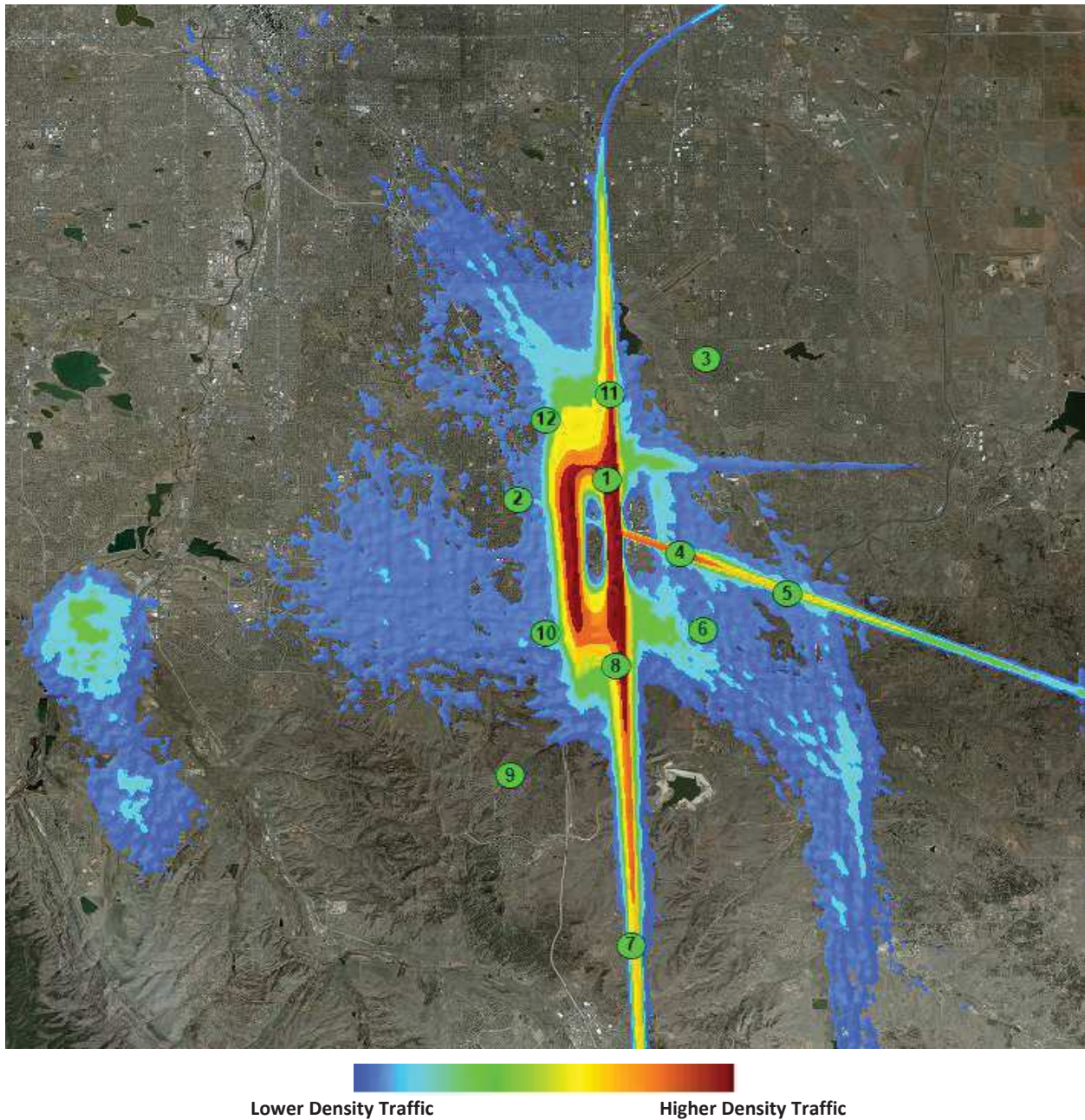
Red = Household Complaint Locations.

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

9 RADAR TRACK DENSITY MAP

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

June 2018 Flight Tracks into Centennial Airport



10 NOTES AND DISCLAIMER

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

Centennial Airport Community Noise Roundtable Activities

To: ACPAA Board

From: Brad Pierce

Date: 8/9/2018

Re: Update on Centennial Airport Community Noise Roundtable Activities

To the Arapahoe County Public Airport Authority Board:

I pleased to provide an update on the activities of the Centennial Airport Community Noise Roundtable.

Summary of July 11, 2018 CACNR meeting

- We discussed and approved the Report from our May 17, 2018 Retreat prepared by our facilitator, Jason Schwartz. We are happy to provide a copy of the Report. One of the outcomes going into our retreat was to prioritize and simplify the Work Plan. The Report has several priority tasks for each committee to start working on. We are also happy to provide a copy of the priority tasks.
- I also provided a summary of the June 27, 2018 NextGen Advisory Committee (NAC) that I attended. I want to highlight 2 items. 1) There were speakers from 2 different communities who provided comments about problems with PBN procedures at Reagan and Baltimore airports. 2) NAC Chair Dave Bronczek, President and COO of FedEx, has tasked the NAC to work on the Northeast Corridor. The core objectives for the NAC remains increasing throughput, improving efficiency and 4 reducing delays at the NEC (JFK, LaGuardia, Boston, Baltimore, Newark, Philadelphia, Reagan & Dulles) airports, in particular, the New York airports.

Summary of August 1, 2018 meeting

- Emily Tranter, National Coordinator of National Organization to Insure a Sound Controlled Environment (N.O.I.S.E.), was on the phone to provide an update on several topics: 1. The FAA Reauthorization bill in Congress. The House and Senate have

different versions. Being an election year, the sense is that members of Congress would not want to pass any legislation that could be controversial. 2. NextGen Advisory Committee of which I am a member. Emily emphasized the importance of the NAC focusing of community engagement. 3. The upcoming N.O.I.S.E. meetings on November 7, 2018 in Los Angeles in conjunction with the National League of Cities conference and in March 2019 in Washington DC.

- The Fly Quiet committee has met and started to look at their priority tasks of our Work Plan. The Community Outreach & Noise Monitor committees are going to schedule meetings to start the process to work in their priority tasks of the Work Plan
- The Study Group has met and discussed the comments we received from the jurisdictions on the MOU & Funding Structure documents. Because we have a lot of new members, we've sent the MOU & Funding Structure to the roundtable.

Sincerely,

/s/ Brad Pierce

Brad Pierce
Aurora Representative, and Chair of the Centennial Airport Community
Noise Roundtable



National Organization to Insure A Sound Controlled Environment

ALERT -- FAA Reauthorization

Dear N.O.I.S.E. Members:

We wanted to provide you with a status update on the Federal Aviation Administration (FAA) reauthorization bill as it progresses through in the Senate.

Meetings between Republican and Democratic staff from both the House and Senate began on Monday, August 27 to negotiate a compromise aviation bill that could potentially lay the groundwork for a bill to ride along with an appropriations agreement into law according to Senator John Thune (R-SD), Chairman of the Senate Committee on Commerce, Science and Transportation.

Senator Thune's aviation bill has stalled in the Senate over a trucking hours-of-service issue, but the Chairman indicated he's hopeful it will pass the floor of the Senate before September 30. Chairman Thune indicated that he is pursuing a range of options to get a compromise, long-term FAA reauthorization passed. He is currently preparing for all contingencies with the goal of getting the bill signed into law by the deadline. That approach could mean that the bill is attached to a continuing resolution to temporarily fund the government, which would have to pass by September 30, also the deadline for the FAA reauthorization.

A continuing resolution of the current FAA authorization bill would also be a potential path for a possible short-term FAA extension, but the Chairman indicated that's not his goal. Absent a long-term bill's passage, Chairman Thune did say he would seek a short-term extension through the end of the year. If that occurs, it is not clear whether the extension would be to the end of the year or into the next Congress.

The FAA bills (H.R. 2997, S. 1405) extend aviation programs, aim to protect airline passengers, and address drone access to airspace, among other items. The current

authorization, a six-month extension was passed in the omnibus spending bill earlier this year.

We will continue to remain engaged with Congress as the FAA Reauthorization Bill is further considered in Congress and as NextGen implementation moves forward.

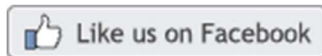
If you have any question please do not hesitate to contact us if you have any questions or need additional information.

Emily Tranter

National Coordinator

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

[Visit the N.O.I.S.E Website](#)



CACNR 2018 MEETING SCHEDULE

With

CACNR REPRESENTATIVES TO 2018 MEETINGS OF THE ARAPAHOE COUNTY PUBLIC AIRPORT AUTHORITY

3:00 p.m., Wright Brothers Room, Centennial Airport, 7800 S. Peoria Street, Englewood, CO

CACNR Meeting	REPORT DUE DATE (to Dylan)	ACPAA MEETING	CACNR REPRESENTATIVE
No Meeting	Not Needed	No Meeting	No Need
February 07	Not time	February 08	Kathleen Conti
March 07	Not time	March 08	No One
April 04	April 06	April 12	Melissa Coudeyras
May 02	May 04	May 10	Andrea Suhaka
June 06	June 15	June 21	Candace Moon
July 11	Combine with August	No Meeting	No Need
August 01	August 03	August 09	Brad Pierce
September 05	September 07	September 13	
October 03	October 05	October 11	
November 07	Not time	November 08	
December 05	December 07	December 13	Katy Brown

D.C. residents suffer major setback in fight over plane noise from National Airport

By [Lori Aratani](#) August 9 at 5:15 PM | Washington Post

A group of Washington residents is considering whether they will take their fight over airplane noise to the U.S. Supreme Court, after a federal appeals court rejected their request for a rehearing.

In March, a three-judge panel of the U.S. Court of Appeals for the District of Columbia Circuit [found in favor](#) of the Federal Aviation Administration in the long-standing battle over noise from flights at Reagan National Airport, ruling that the neighborhood groups missed the deadline for filing their complaint. The groups sought a rehearing before the full court, but their request was denied last month.

The panel's ruling was significant because a different three-judge panel last year [ruled in favor of Arizona residents](#) in a dispute over flight paths in Phoenix. That case involved a similar issue of timing, but a majority of that panel of judges said the FAA's handling of the transition was so egregious that it overcame their concerns about when the petition was filed.

Richard Hinds, an attorney who represents the coalition of residents in Northwest D.C. neighborhoods including Georgetown, the Palisades and Hillandale, said the next step would be to go to the Supreme Court. But he acknowledged that would be a high hurdle for the groups.

Battles over airplane noise have escalated in communities across the country as the FAA has moved to redesign old flight paths. The changes are part of a larger effort to modernize the air traffic control system by shifting it to satellite-based navigation. The multibillion-dollar effort, known as NextGen, allows pilots to fly more planes over concentrated routes, but in some cases has resulted in noise over neighborhoods that had not previously been under flight paths. There has been a significant uptick in noise complaints as a result.

The issue has been particularly contentious in the Washington region, which is home to three major airports: National, Dulles International and Baltimore-Washington International.

In June, Maryland Attorney General Brian Frosh challenged changes to flight paths at BWI, [filing a petition](#) with the same appeals court. He also filed a petition with the FAA seeking additional environmental review of the flight paths. As a result of Frosh's actions, FAA officials [have declined to](#) continue with community discussions design to address residents' concerns about noise.

No hearing has been set in the Maryland case.

###

Vince Spinner | Federal Relations
LOCKRIDGE GRINDAL NAUEN P.L.L.P.
415 2nd St NE | Suite 210 | Washington, DC 20002
W: 202-544-9840 | C: 507-459-7813 | www.locklaw.com



Noise And Emissions Are Central Issues For Resurgent Supersonics

[Aviation Week & Space Technology](#)

[Guy Norris](#) [Graham Warwick](#)

Fri, 2018-07-27 04:00

Engines, noise and emissions are at the center of a growing debate over the reintroduction of supersonic travel. U.S. startup Boom Technology is pressing lawmakers and regulators to set less-stringent environmental standards for supersonic transports (SST) to reflect engine technology, but this is being resisted by European aviation authorities and rival aircraft developers.

Supersonic travel ended in 2003, when Concorde was retired. Now Boom, along with hopefuls Aerion and Spike Aerospace, are convinced advances in technology can enable supersonic aircraft that are more fuel efficient and have less environmental impact than the Anglo-French airliner.

Aerion working with [CFM56](#) derivative for Mach 1.4 AS2

Boom has identified candidate engines for Mach 2.2 SST

But a limited market means these startups targeting near-term opportunities for supersonic business jets and small airliners will be forced to use derivatives of existing engines because of the high cost of developing clean-sheet powerplants meeting their needs.

Aerion is working with [General Electric](#) on an engine based on the CFM56 commercial turbofan to power its trijet AS2 business jet. The choice was driven by the need to meet the latest Stage 5 noise standards for new aircraft, but the cost is a reduction in cruise speed to Mach 1.4 from Mach 1.6.

Boom has yet to select an engine for its 55-seat, Mach 2.2 trijet airliner, but CEO Blake Scholl says the candidate powerplants have been narrowed to derivatives of existing high-bypass-ratio turbofans. "There are multiple good options that don't involve a clean-sheet engine," he says.

But an analysis by an environmental research group suggests the costs of using available engines—in fuel burn, emissions and noise—could be high. Using a derivative of an existing turbofan, a near-term commercial SST could exceed international limits on carbon dioxide (CO₂) by 70% and nitrogen oxides (NO_x) by 40%, while burning 5-7 times as much fuel per passenger as a comparable subsonic aircraft, concludes the nonprofit International Council on Clean Transportation (ICCT).

With an adaptive-cycle, staged-lean-burn turbofan designed for supersonic operation, an SST would comply with NO_x limits but exceed International Civil Aviation Organization (ICAO) standards for CO₂ while still burning three times as much fuel relative to subsonic business-class jets, ICCT says.

"There are reasons to be worried about the environmental impact of reintroducing supersonic aircraft," says Daniel Rutherford, study co-author and ICCT aviation program director. "A modest first step is for manufacturers to commit to meeting existing standards for new aircraft."

The [FAA](#) has begun rulemaking activity on noise certification for supersonic aircraft, with establishment of a proposed landing-and-takeoff rule anticipated in 2019. As with existing noise limits, the standard is expected to be

set through ICAO, but Reuters reports documents presented to the organization's Committee on Aviation Environmental Protection reveal disagreement between U.S. and European regulators.

While Europe proposes current subsonic noise limits should be used as guidelines, the U.S. is calling for standards that reflect the fundamental differences between supersonic and subsonic aircraft, Reuters reports. This is similar to the approach taken with the latest Stage 5 noise standard, which sets different limits for smaller and larger aircraft to reflect levels of engine technology available.

"Our analysis shows that travel on Boom's supersonic airliner is at parity with subsonic business class on fuel-burn per seat-mile," says Eli Dourado, the startup's head of global policy. Also, under ICAO's Corsia carbon-offsetting framework, "if supersonic emissions increase total aviation emissions after 2020, they will be fully offset. Therefore, supersonic operations categorically will not increase net emissions at all."

Of all the hurdles facing supersonic aircraft developers, the scarcity of viable engines remains the "big one," says Dave Richardson, director of air vehicle designs and technologies at the [Lockheed Martin](#) Skunk Works, which is working with Aerion on the AS2 and [NASA](#) on the X-59A QueSTT supersonic low-boom flight demonstrator.

Creating an all-new low-bypass turbofan with the right characteristics is unlikely, he says. "The development costs of these engines are staggering: If you are going to develop a business jet, then it is going to cost you X millions to develop what is essentially a fighter-like airplane. But then you now also have to develop the engine, which in itself is a huge investment," Richardson told the American Institute of Aeronautics and Astronautics Aviation 2018 forum in Atlanta in late June.



Aerion says it scoured the industry to find a supersonic engine and ended up adapting an existing core. The company was originally targeting Stage 4 noise standards, but the introduction of Stage 5 limits—a reduction of 7

EPNdB—at the end of 2017 forced it to an engine with a higher bypass ratio. This means a larger fan diameter and higher wave drag, which reduces supersonic cruise speed and range.

“You need a big core for power, but a relatively small fan for wave drag, and so we are trying to find that sweet spot,” says Mike Hinderberger, Aerion’s AS2 program manager. “We’d love to go Mach 2 or 2.5, but the other thing that’s important for business jets . . . is range, so you get to the point where Mach 1.4 is where we are today.”

Boom also has been searching for a suitable engine. “The key thing is finding something that’s sufficiently low-pressure in the core so you can move compression out of the core and into the intake,” says Scholl. “There are some low-pressure cores that have been overlooked in the public dialog. Some are new and some are a little bit older, but they can be made to work.”

Although he declines to identify the candidate engines, Scholl describes them as turbofans in the 3-4:1 low-bypass range. “That’s the sweet spot where it is not too noisy for takeoff and low enough bypass so you don’t have too much wave drag. You also get the right fuel efficiency; that’s the tension in the design,” he says.

Its engine selected, Aerion says it is on track to launch the AS2. “We are finalizing the trades on the aircraft so we can launch this year,” says Hinderberger. The plan is for a preliminary design review [PDR] in two years and first flight in 2023. Aerion is targeting a New York-London flight in October 2023 to mark the 20th anniversary of the Concorde retirement.

Boom still is targeting commercial service in 2023, but first flight of its XB-1 “Baby Boom” third-scale demonstrator has slipped to 2019 from late 2017 due to aerodynamic challenges and an engine change. Boom has switched to three 4,300-lb.-thrust GE J85-15s from 3,500-lb. -21s, requiring variable-geometry inlets and nozzles. “First flight is probably later next year,” says Scholl. “It turns out this is hard.”

Aerion is working toward launch of the AS2 with Lockheed under an exploratory joint development agreement announced in December 2017. “We are working with the Skunk Works on aircraft design and development and program execution, and they are instrumental to the things we are doing to finalize the configuration and get the program launched,” says Hinderberger. Discussions on collaboration on industrialization “are continuing,” he says.

Following PDR in mid-2020, the program will enter detailed design, leading to a critical design review in early 2022 and first flight around 18 months later. Certification is targeted for late 2025, with service entry in early 2026. Deliveries are planned to ramp up from 12 aircraft in 2026 and 23 in 2027 to full-rate production of 36 a year from 2028.

Describing the search for the right engine as a “huge challenge” for the program, Hinderberger says: “We are finalizing the specifications now. The engine has been very, very difficult.” The engine will produce 18,000 lb. of thrust, with GE adding a smaller fan and new booster and low-pressure turbine to the baseline eight-stage high-pressure compressor and single-stage turbine of the CFM56 core.

“We need a relatively big core, and before selecting GE, we worked with all the major engine makers, and there are only so many cores out there you can use,” he says. “With regulations for landing and takeoff noise on top of that, and trying to drive to Stage 5 requirements, it is very difficult.”

Sonic boom is another area of contention between the U.S. and Europe. The Aerion AS2 and Boom SST are not low-boom, and supersonic flight over land is prohibited, so both are intended to fly supersonically only over water. But an amendment to FAA reauthorization legislation now in Congress would require the agency to set a “reasonable” boom limit for overland flight within three years—ahead of the 2025 date set by ICAO for an international standard. There are concerns a U.S.-only standard could be higher than [NASA’s](#) 75 PNLdB target, which compares to Concorde’s 110 PNLdB, and could jeopardize public acceptance of supersonic travel.

Editor’s note: This article has been updated to clarify the type of engines Boom Technology is considering for its Mach 2.2 trijet airliner.

Source URL: <http://aviationweek.com/commercial-aviation/noise-and-emissions-are-central-issues-resurgent-supersonics>