



Centennial Airport Monthly Noise Report



**December 2024 and Year-To-Date
Statistics**

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2. DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

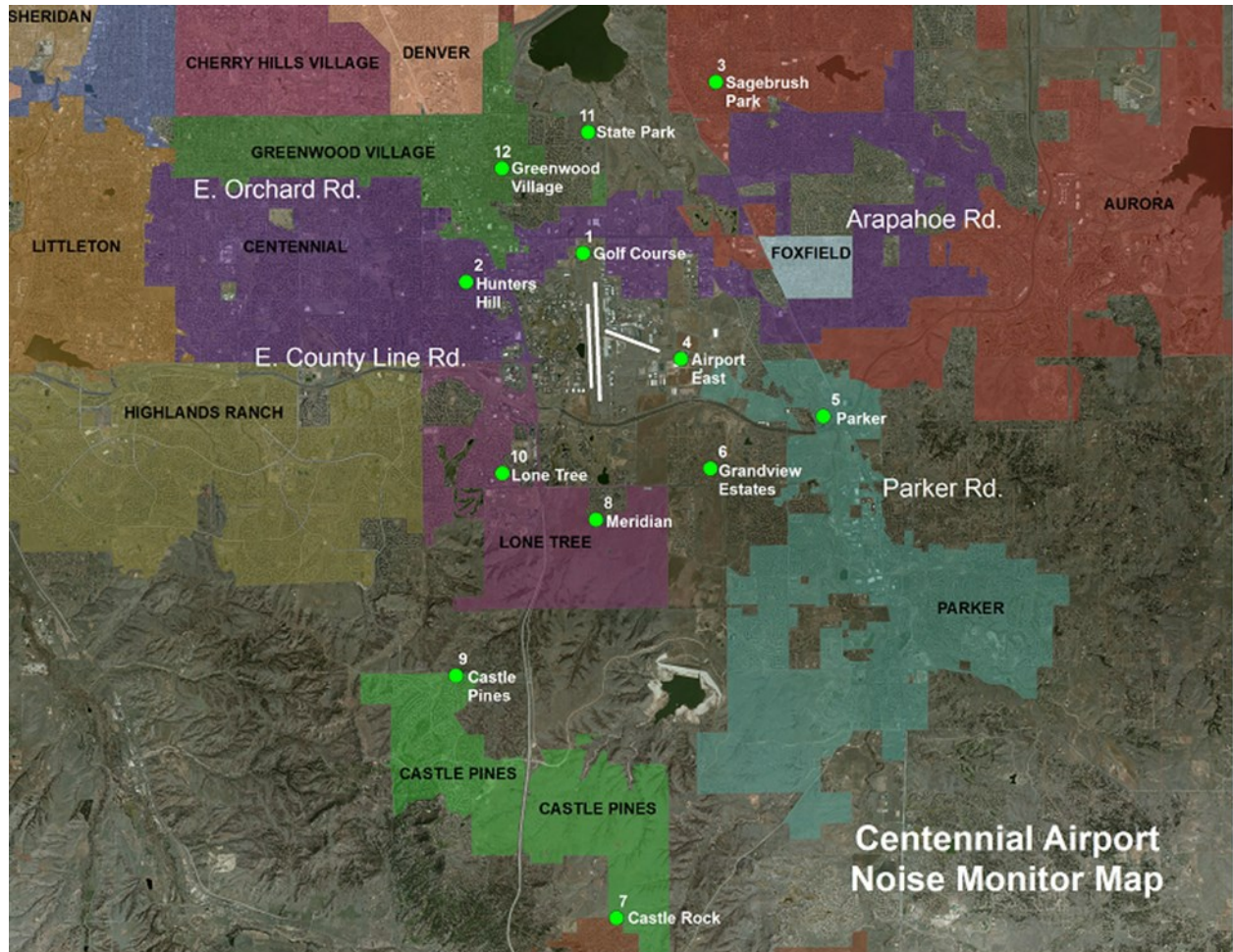
Overflight – Aircraft flight originating and terminating outside the area that transits the airspace without landing.

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

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

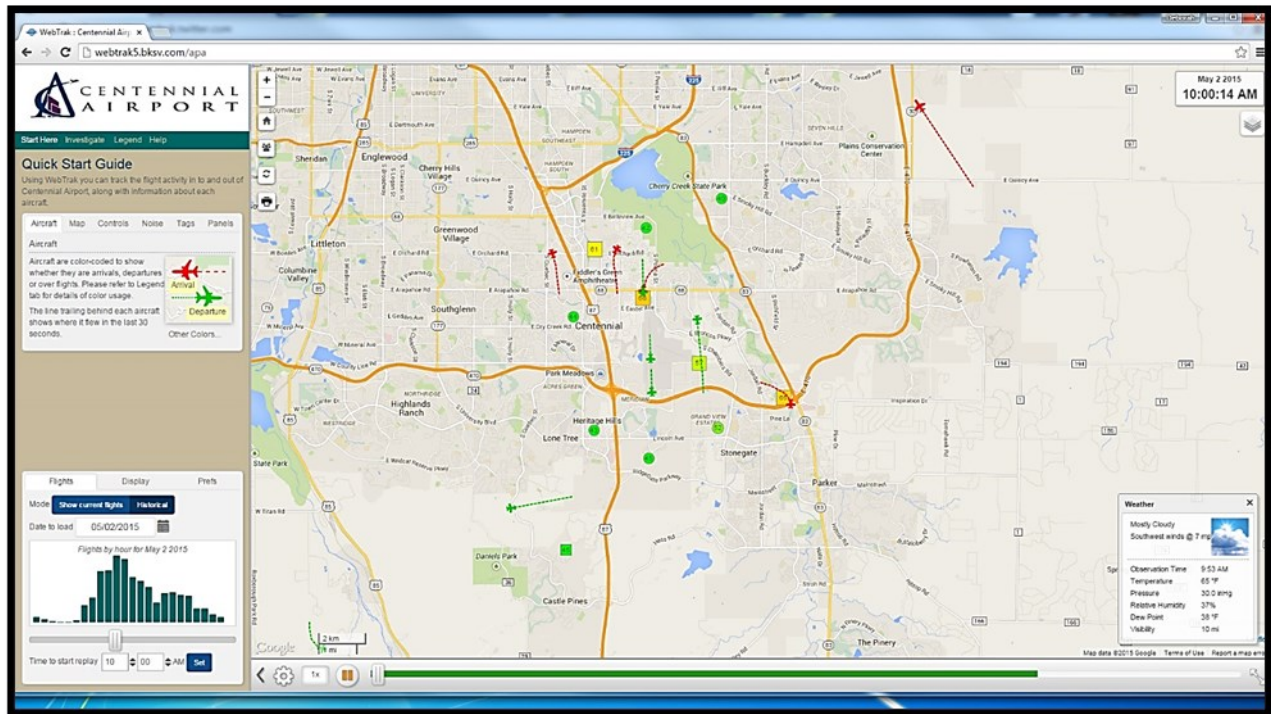
3. ABOUT APA’S NOISE MONITORING PROGRAM

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



4. ABOUT WEBTRAK™

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



How to participate

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

APA WebTrak:

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

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

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

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

APA Noise Hotline:

303-790-4709

5. OPERATIONS STATISTICS

	IFR ITINERANT				VFR ITINERANT				LOCAL		
	AIR TAXI	G.A.	MILITARY	TOTAL ITINERANT	AIR TAXI	G.A.	MILITARY	TOTAL	G.A.	MILITARY	TOTAL LOCAL
January	2,483	2,640	172	5,295	1,607	5,408	132	7,147	13,881	2	13,883
February	2,374	2,702	161	5,237	1,709	5,384	83	7,176	13,797	2	13,799
March	2,527	2,771	133	5,431	1,947	6,487	89	8,523	16,676	13	16,689
April	2,247	2,606	140	4,993	1,592	5,580	105	7,277	15,502	29	15,531
May	2,659	2,833	164	5,656	1,933	6,068	112	8,113	15,677	24	15,701
June	2,743	2,961	190	5,894	2,145	6,599	97	8,841	14,805	5	14,810
July	2,618	3,056	230	5,904	2,301	7,138	140	9,579	17,631	10	17,641
August	2,983	3,413	191	6,587	2,011	6,522	101	8,634	13,537	23	13,560
September	2,866	2,966	250	6,082	2,043	7,510	96	9,649	14,742	6	14,748
October	3,023	2,948	159	6,130	1,945	6,612	133	8,690	13,853	18	13,871
November	2,499	2,299	98	4,896	1,510	5,542	59	7,111	11,375	3	11,378
December	2,908	2,902	95	5,905	1,685	6,255	88	8,028	11,963	2	11,965
Y-T-D Totals	31,930	34,097	1,983	68,010	22,428	75,105	1,235	98,768	173,439	137	173,576

	IFR OVERFLIGHTS				VFR OVERFLIGHTS					TOTAL OPERATIONS
	AIR TAXI	G.A.	MILITARY	TOTAL INTINERANT	AIR TAXI	G.A.	MILITARY	TOTAL		
January	3	4	4	11	35	61	12	108	January	26,444
February	4	8	1	13	21	36	5	62	February	26,287
March	0	10	1	11	31	31	6	68	March	30,722
April	3	5	3	11	39	47	4	90	April	27,902
May	8	7	0	15	16	60	6	82	May	29,567
June	4	5	1	10	21	61	7	89	June	29,644
July	4	12	5	21	14	91	4	109	July	33,254
August	7	19	1	27	31	37	5	73	August	28,881
September	6	8	1	15	27	62	4	93	September	30,587
October	4	5	1	10	16	53	11	80	October	28,781
November	2	2	2	6	22	45	2	69	November	23,460
December	2	4	0	6	50	59	6	115	December	26,019
Y-T-D Totals	47	89	20	156	323	643	72	1,038	Y-T-D Totals	341,548

Definitions

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

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

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

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

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

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

6. NOISE MONITOR REPORTS

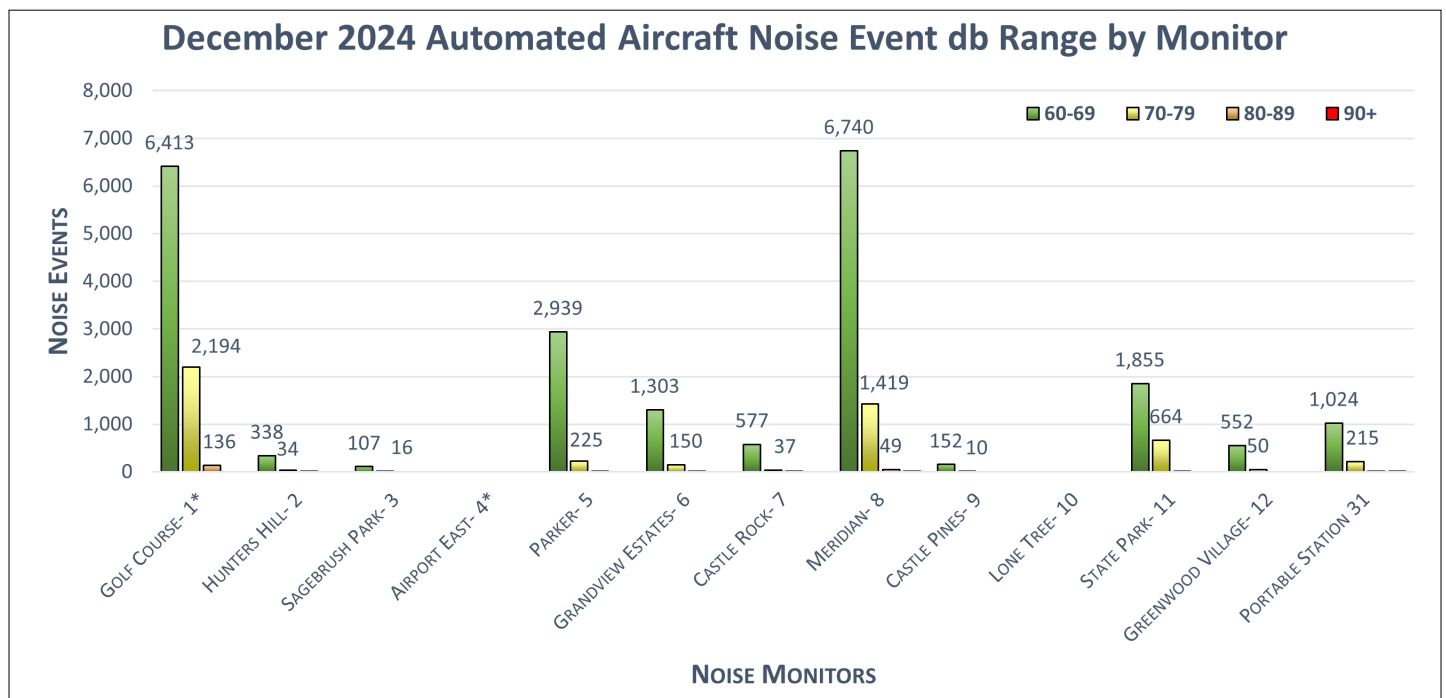
The following data displays the amount and associated decibel level of aircraft noise events at a given monitor. An aircraft noise event must contain the following characteristics:

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

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

Automated Aircraft Noise Event Decibel Range By Monitor					
Monitor	60-69	70-79	80-89	90+	Totals
Golf Course- 1*	6,413	2,194	136	0	8,743
Hunters Hill- 2	338	34	2	0	374
Sagebrush Park- 3	107	16	0	0	123
Airport East- 4*	0	0	0	0	0
Parker- 5	2,939	225	2	0	3,166
Grandview Estates- 6	1,303	150	3	0	1,456
Castle Rock- 7	577	37	1	0	615
Meridian- 8	6,740	1,419	49	1	8,209
Castle Pines- 9	152	10	0	0	162
Lone Tree- 10	0	0	0	0	0
State Park- 11	1,855	664	4	0	2,523
Greenwood Village- 12	552	50	0	0	602
Portable Station 31	1,024	215	12	2	1,253
Totals	22,000	5,014	209	3	27,226

*Monitor located on Airport



*NMTs 4 and 10 received no noise data due to equipment malfunctions. EnviroSuite is aware and working to fix the issue.

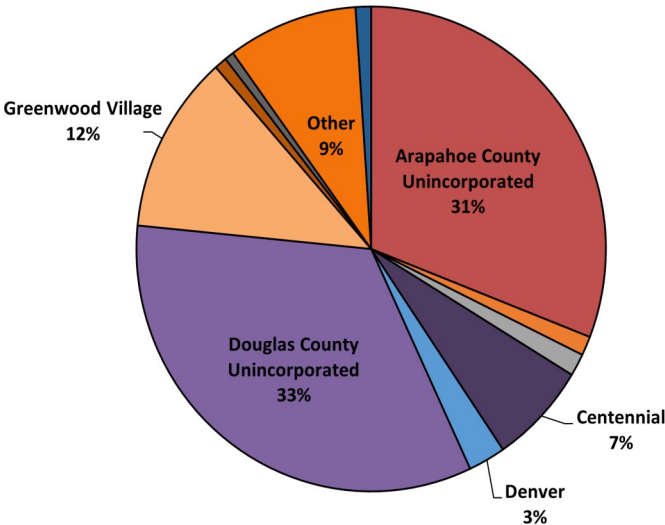
7. DECEMBER 2024 NOISE COMPLAINT STATISTICS

In December, Centennial Airport received 469 complaints from 44 households

December Noise Complaints			YTD		Population	% of Population that Submitted a Complaint in 2024
Municipality	Complaints	Households	Complaints	Households		=YTD Households / Population
Arapahoe County Unincorporated	145	11	5,610	102	98,066	0.10%
Aurora	6	1	46	7	399,913	0.00%
Castle Pines	0	0	177	4	14,000	0.03%
Castle Rock	7	2	83	5	86,000	0.01%
Centennial	32	4	1,021	14	108,422	0.01%
Cherry Hills Village	0	0	0	0	6,442	0.00%
Denver	12	1	299	5	715,522	0.00%
Douglas County Unincorporated	157	7	683	28	276,493*	0.01%
Greenwood Village	56	6	2,597	65	15,691	0.41%
Highlands Ranch	4	2	56	9	103,444	0.01%
Lone Tree	3	1	37	19	14,253	0.13%
Parker	5	2	40	10	68,000	0.01%
Other	42	7	1,265	37	UNK	UNK
Total	469	44	11,914	305	1,906,246	0.02%

*Douglas County Unincorporated Population with Highlands Ranch Removed

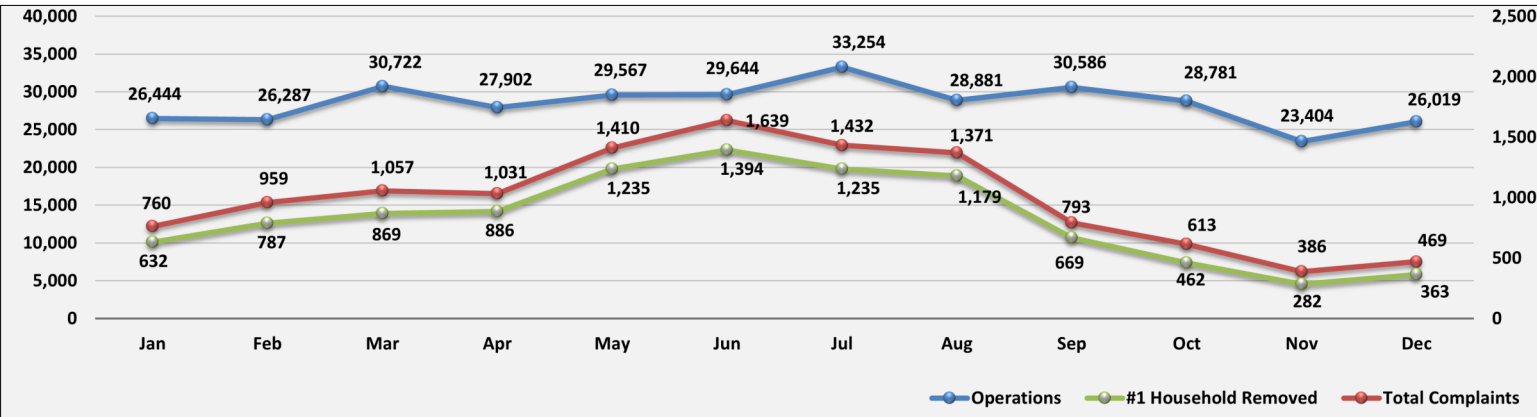
Complaints per Municipality



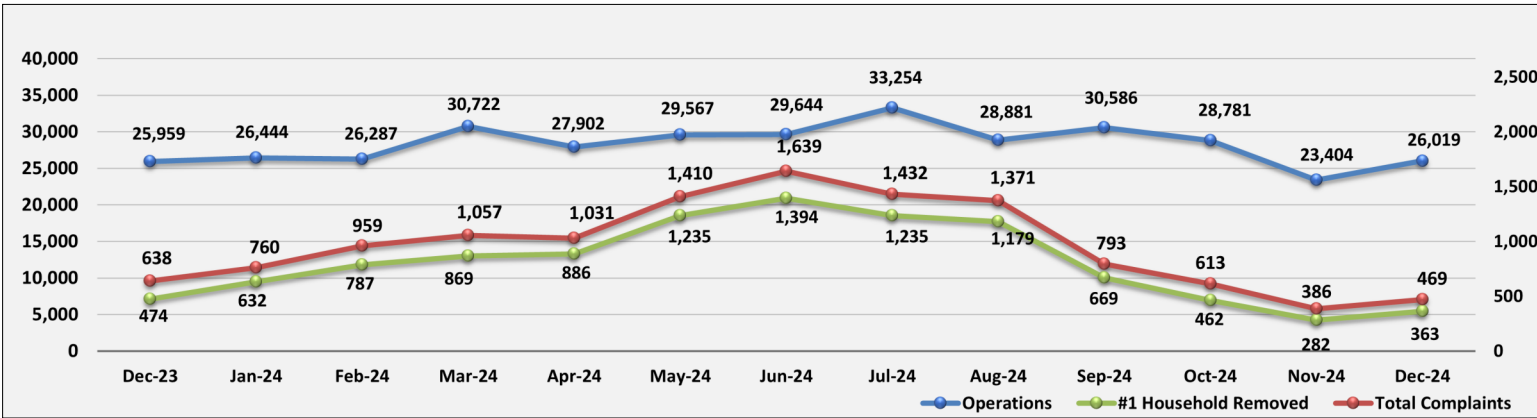
December 2024 Noise Complaint Responses Completed	
Email	67
Phone	6
Total	73

Time Complaint Received	Dec
Day Hours (7:00 am - 9:59pm)	293
Night Hours (10:00 pm - 6:59 am)	176
TOTAL	469

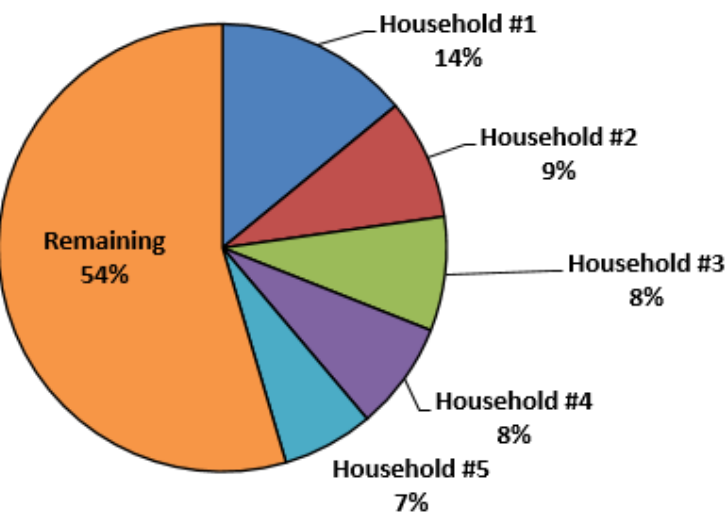
Current 12 Month Trend



Previous Year 13 Month Trend

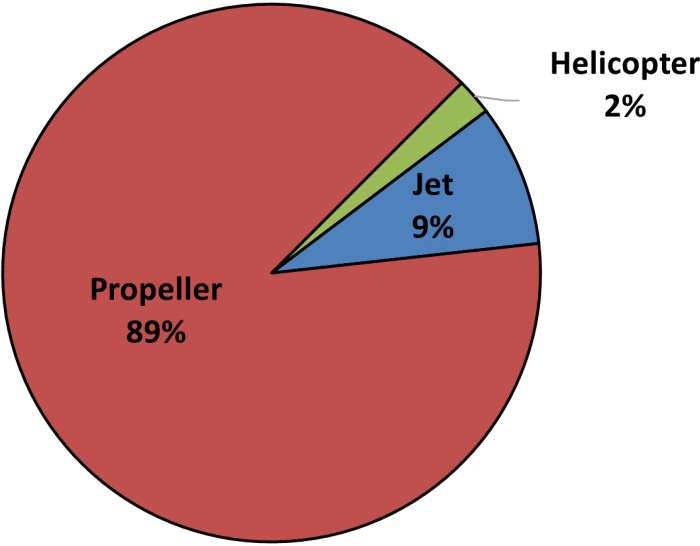


Top 5 Household Complaints YTD

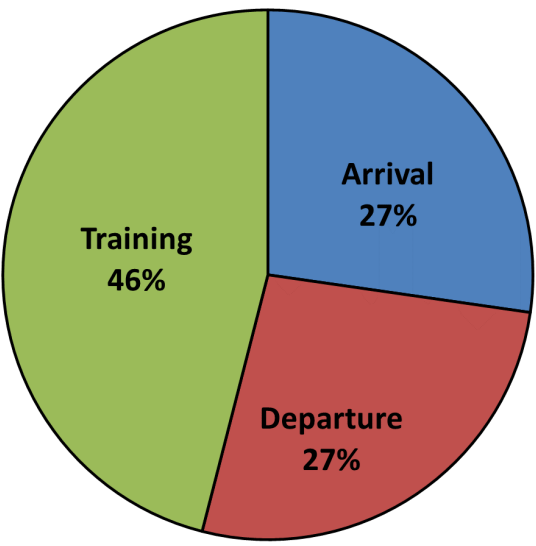


Top 5 Household Complaints YTD		
Household	Complaints	Resides In
Household #1	1,675	Arapahoe County Unincorporated
Household #2	1,036	Other (Elizabeth)
Household #3	984	Centennial
Household #4	921	Greenwood Village
Household #5	785	Arapahoe County Unincorporated
Remaining	6,502	
Total	11,914	

Complaints by Aircraft Type

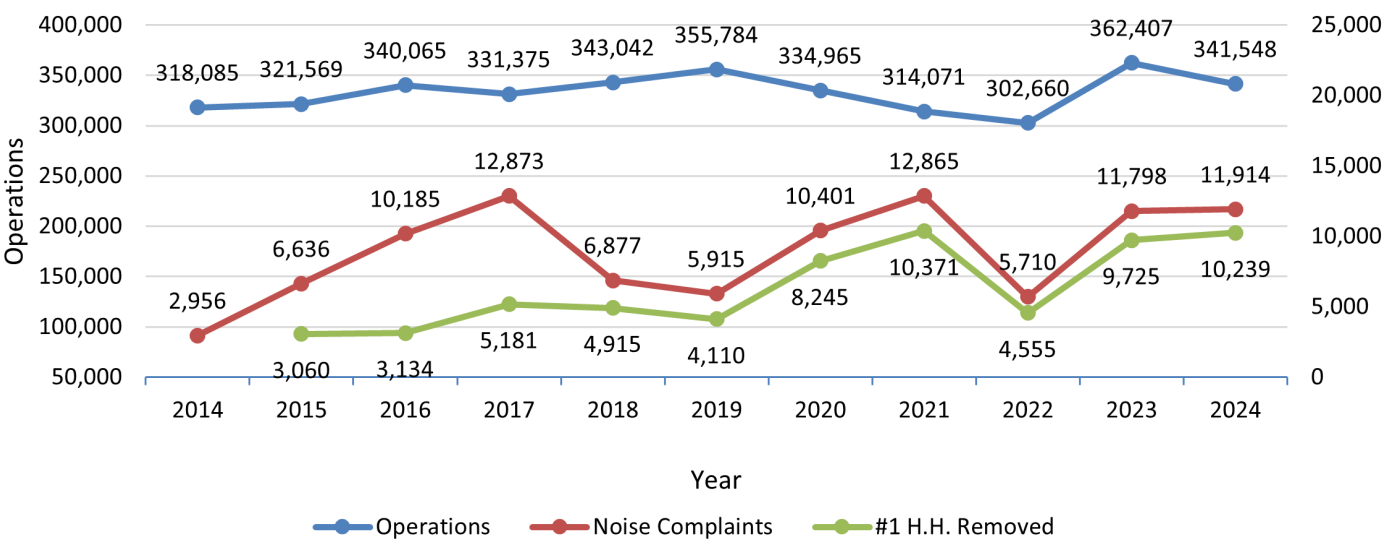


Complaints by Operation Type

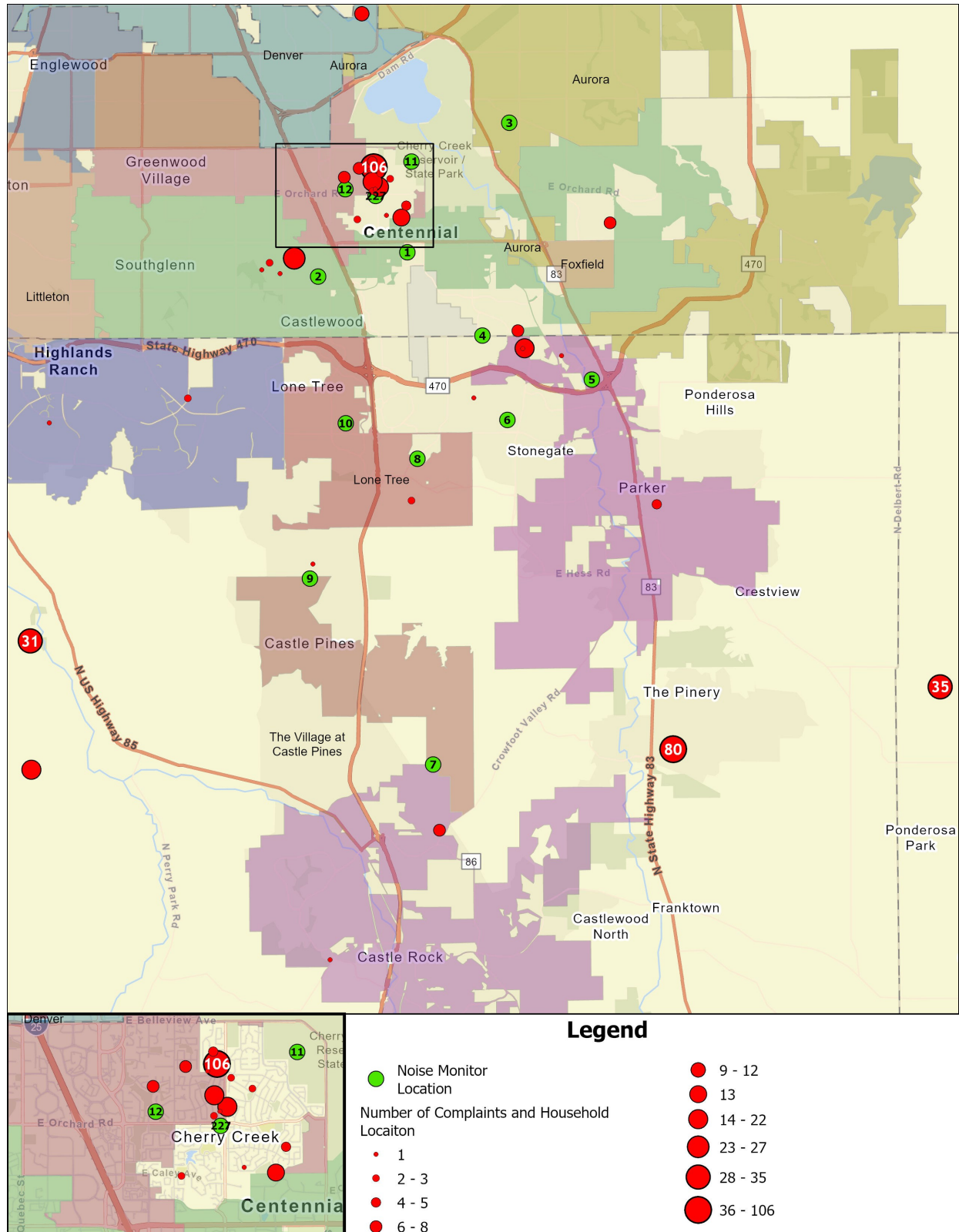


*#1 Household removed from the charts above.

10 Year Operations vs. Complaints 2014-2024



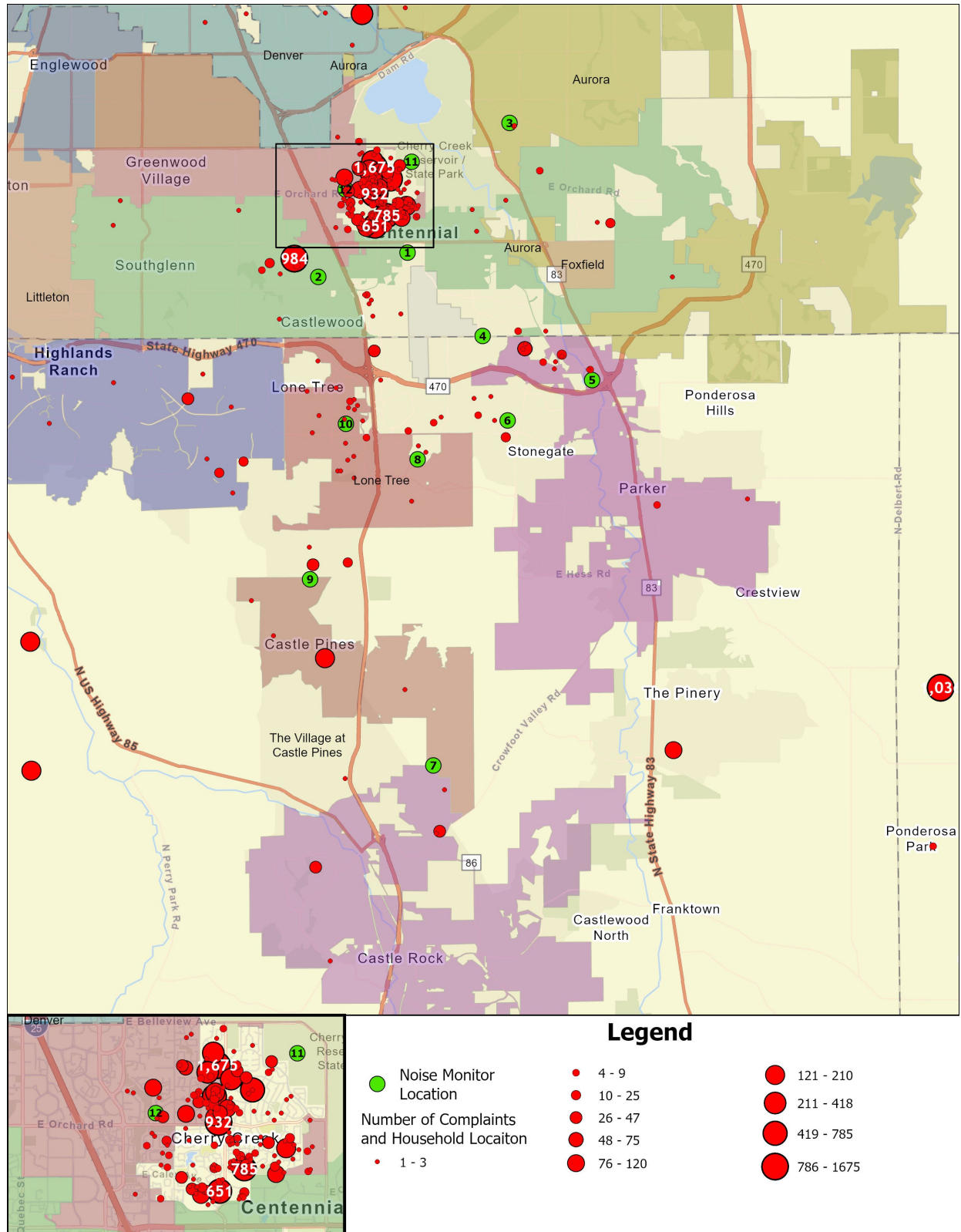
8. CENTENNIAL AIRPORT COMPLAINT MAP—DECEMBER 2024



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

**7 households not visible in map view.

CENTENNIAL AIRPORT COMPLAINT MAP—YEAR TO DATE



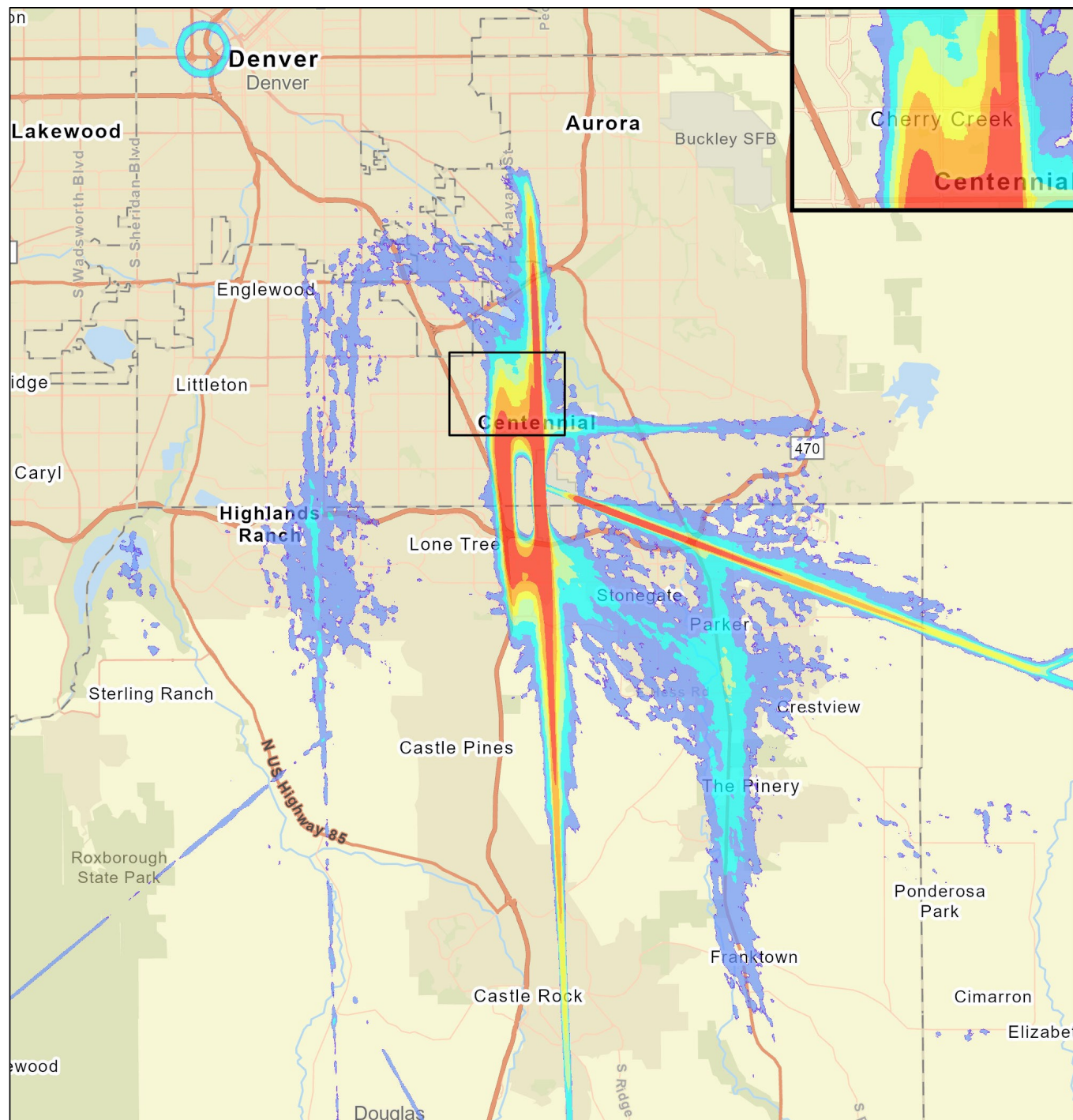
**Larger dots equate to more complaints for that household.

**44 households not visible in map view.

9. CENTENNIAL AIRPORT RADAR TRACK DENSITY MAP

This 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.

December 2024 Flight Tracks associated with Centennial Airport



Lower Density Traffic Higher Density Traffic

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