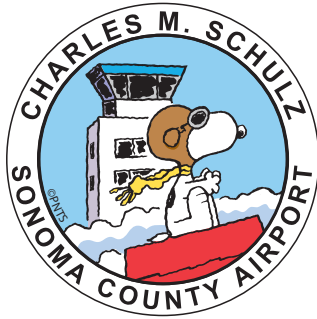




Charles M. Schulz - Sonoma County Airport

2019 Complaint Summary



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2019 Complaint Summary

The Airport received 327 complaints in 2019, an increase of 102% over 2018. Of the 327 complaints received, 90% (294) were Airport-related. The remaining 10% were not Airport-related, usually complaints made by individuals located farther than 5 miles from the Airport that were not specific or not correlated to an aircraft arriving to or departing from STS. 75% of this increase can be attributed to seven (7) individuals who complained more than 10 times each, with one individual filing 35 complaints. The number of total complainants dropped from 121 in 2018 to 116 in 2019, a decrease of 4%.

Complaints are generated from throughout Sonoma County, most commonly from Santa Rosa and Windsor residents and from residents less than 5 miles from the Airport. Complaints largely involve airlines, corporate jets, and less frequently general aviation aircraft. Concerns regarding excess noise and low-flying aircraft accounted for the majority of complaints (81%). Other concerns expressed include frequency and flight paths and some involve overflights (i.e., flights not arriving to or departing from STS). Complaints spiked in June and September with the highest percent of complaints to flight operations at 0.72% and 0.82% respectively.

2019 At a Glance

327 Complaints

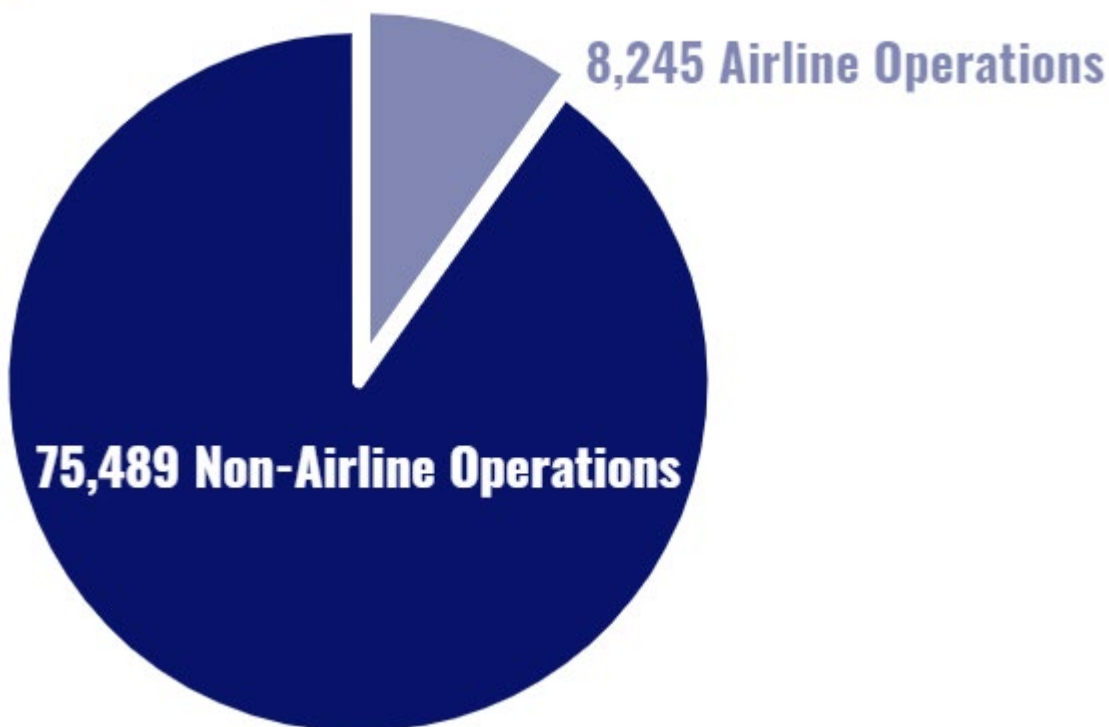


294 Airport-Related



116 Complainants

83,734 Total Operations in 2019

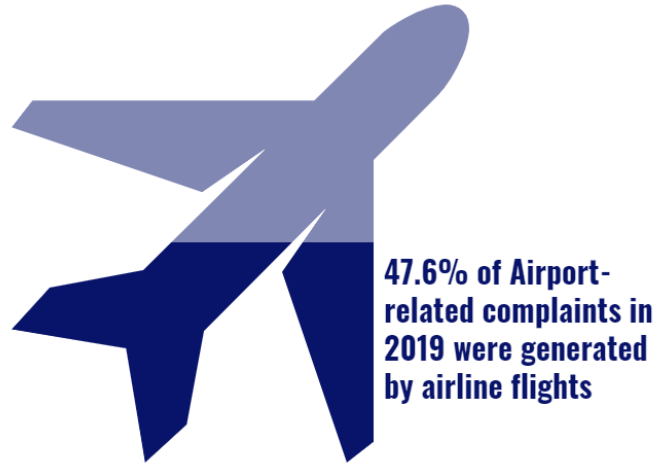


A complaint is considered "Airport-related" if the operation to which the complaint is correlated:

- Is directly related to takeoff or landing at STS.
- Takes place within a five-mile radius of the Airport.
- Is a direct result of an Airport-related event.

Source of Complaints

In the spring of 2019, as awareness of and sensitivity to airline operations' aircraft noise increased, the number of complaints received regarding airline operations also increased. Alaska Airlines began using the E175 jet for all their operations in April of 2019 (previously they used the Q400 turboprop). The difference in the type of sound generated by the E175 aircraft contributed to the increase in complaints. While airline operations represented only 10% of 2019 operations, airline operations generated 47.6% of Airport-related complaints.



Increase in Activity from Frequent Callers

The majority (75%) of the increase in complaints in 2019 over 2018 came from the most frequent callers (more than ten complaints in 2019). Seven complainants in 2019 reported 123 more complaints than in 2018 (from eight complaints in 2018 to 131 complaints in 2019). The seven most-frequent callers were located in different areas of Sonoma County; two were located in Windsor, two in Santa Rosa in the 95401 zip code, one in Sebastopol, one in Forestville, and one in Penngrove.

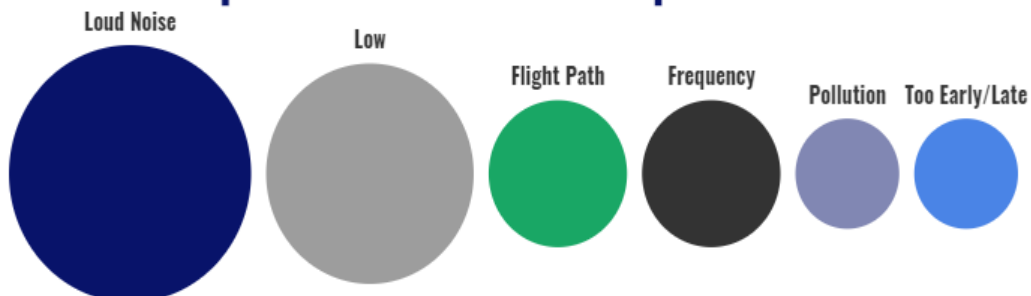
The complainants from Windsor (both located approximately two miles north of the Airport and roughly in line with Runway 14/32) voiced concern over arriving and departing aircraft. Windsor complainants' primary concern was a perceived failure of aircraft to approach Runway 14 using a flight path further west of the town.

The complainants from Santa Rosa (both located approximately four miles south of the Airport and roughly in line with Runway 14/32) complained mostly about the frequency of flights and expressed the opinion that airline traffic had increased. The majority of complaints from these Santa Rosa residents were regarding departures, especially departures before 7:00 AM or after 10:00 PM.

Complainants in Forestville and Sebastopol (located approximately five miles southwest of the Airport) expressed similar concerns over the frequency of air traffic and also indicated a perceived change in standard air traffic to be more concentrated over West County. Complaints coming from West County were concentrated during the summer months, and some or most complaints may be attributable to the annual Bohemian Grove event.

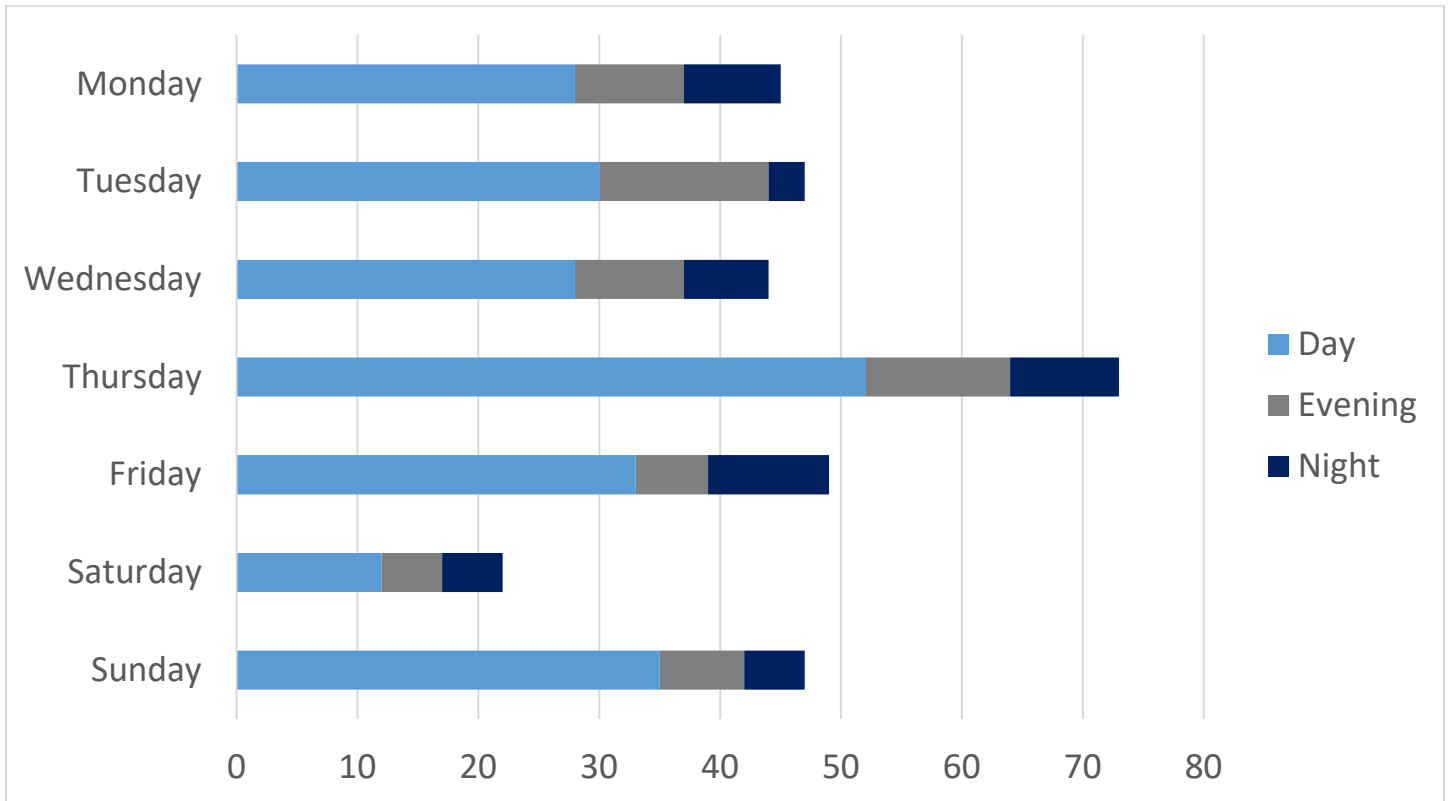
The complainant in Penngrove (located approximately fourteen miles from the Airport) asked that flights avoid the area altogether and indicated that aircraft should fly over 101 to avoid disrupting rural areas. This complainant lives less than five miles from the Petaluma Municipal Airport and often sent complaints to both STS and Petaluma.

Top Concerns of Most Frequent Callers

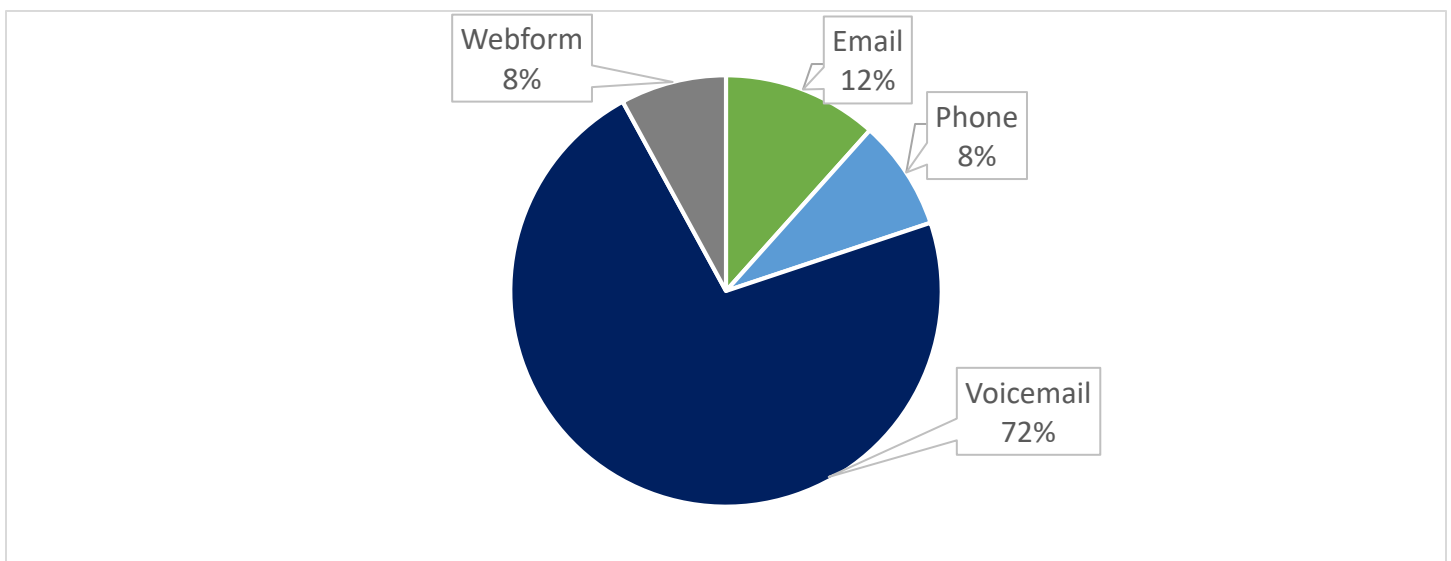


Most Complaints Were Generated During the Day

The majority Airport operations occur between 7:00 AM and 5:59 PM, which correlates with the majority of complaints received. The Airport received more complaints on Thursdays than on any other day. Complaints did not increase significantly during weekends when residents are more likely to spend time at home. In fact, the lowest number of complaints were made on Saturdays. Of complaints made on Thursdays in June, 60% were airline related, slightly higher than their percent of total (52.4%).

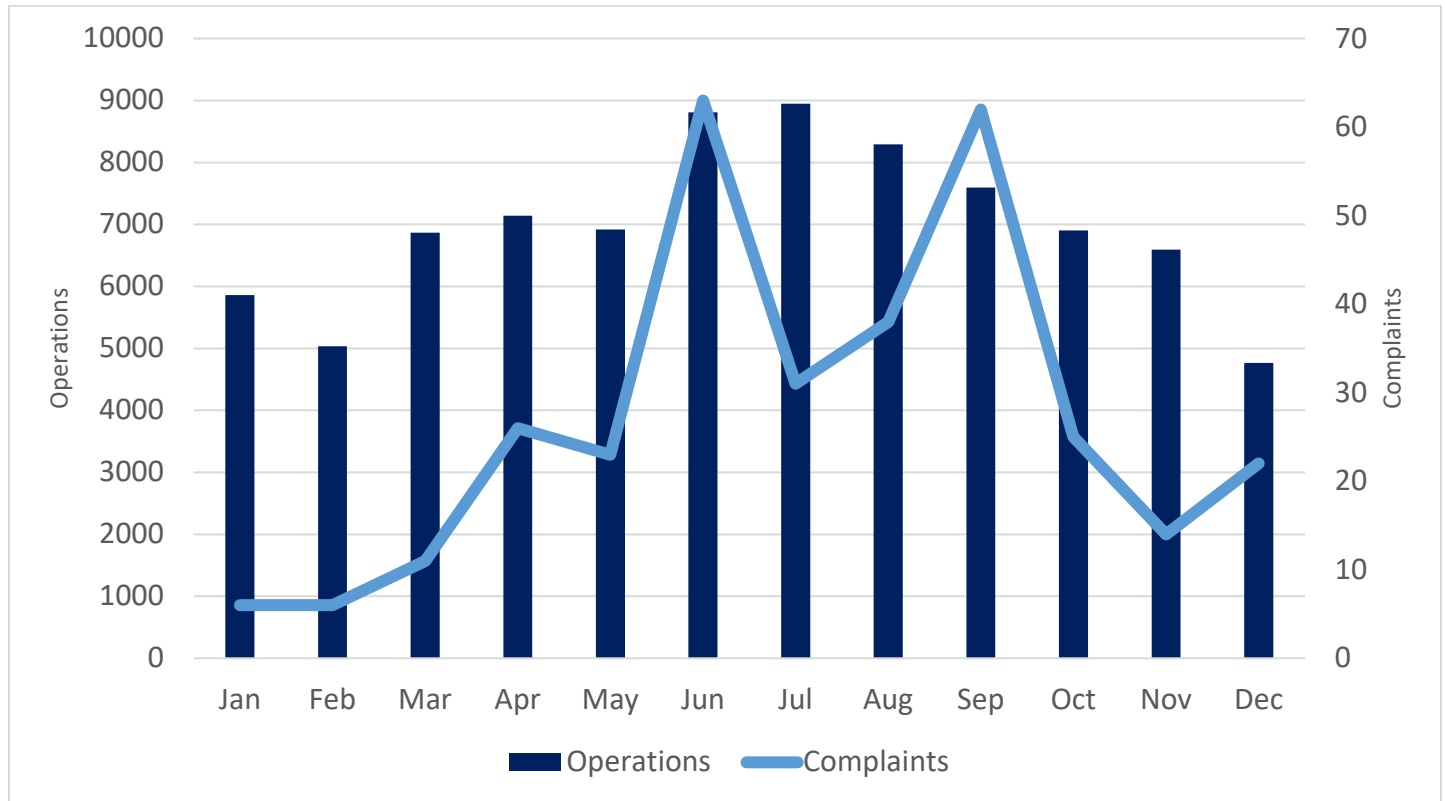


Most Complaints Were Received by Voicemail

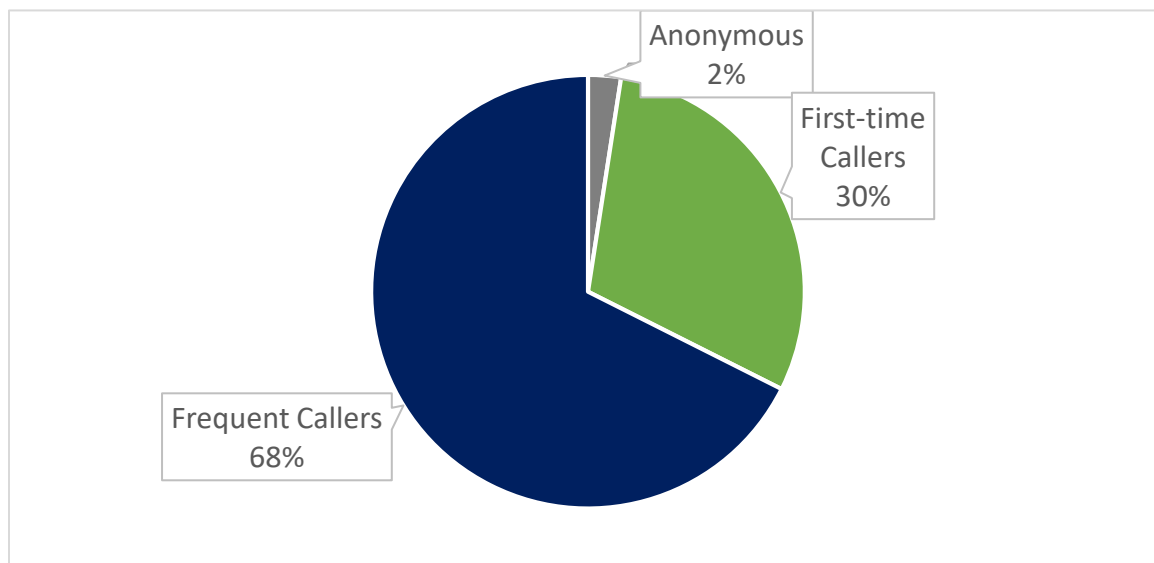


Complaints Increased During Summer Months

The majority of complaints were received between June and September, which is also when operations increase seasonally. The spikes in complaints occurred during months when temperatures are mild enough for residents to spend much of their time outdoors gardening or indoors with open windows. Dips in July and August might be explained by hotter days keeping residents indoors with windows closed or when they may be out of the area during the peak vacation months.



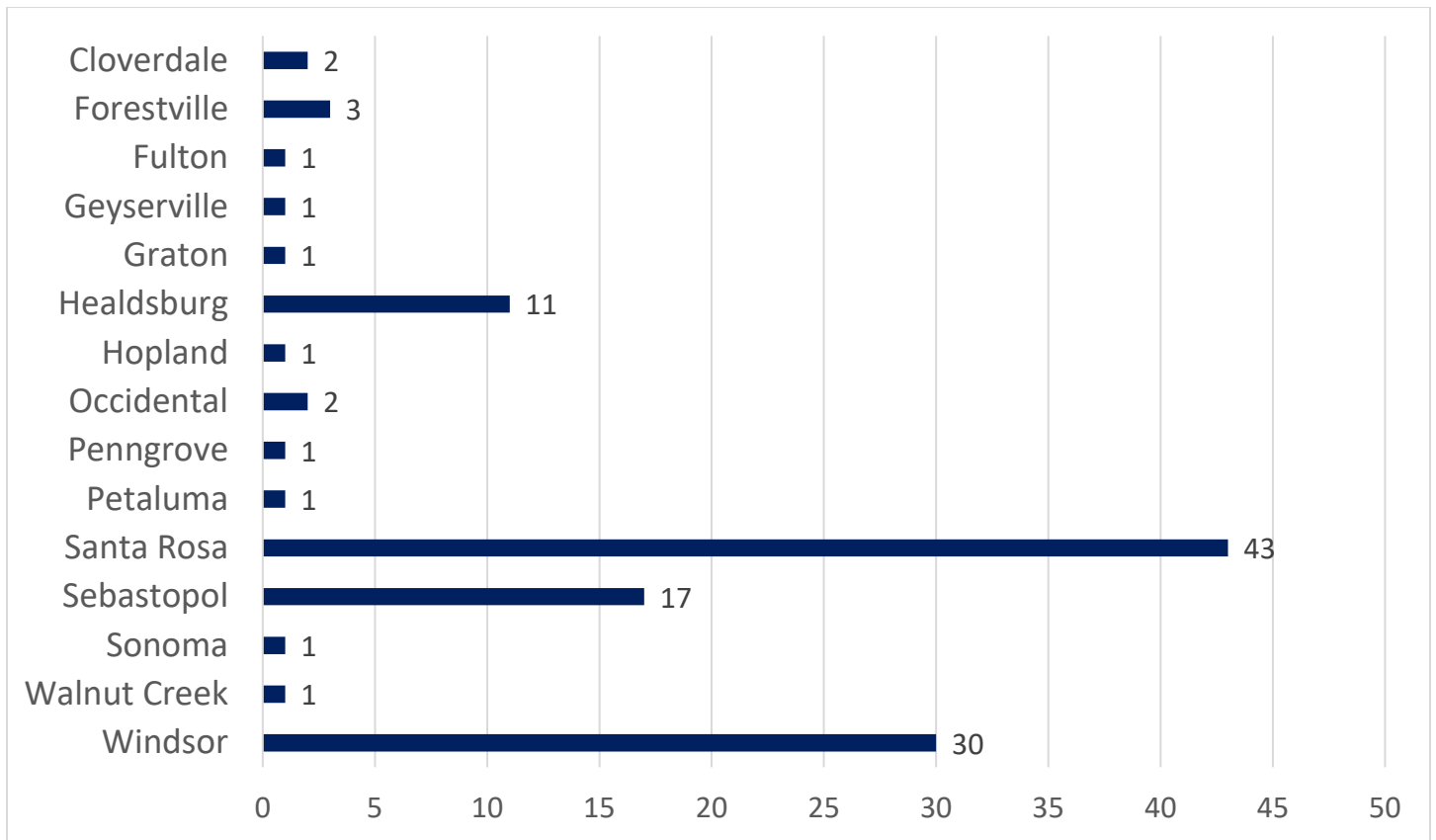
Most Complaints Were Made By Frequent Callers



Callers who made three (3) or more complaints were designated as frequent.

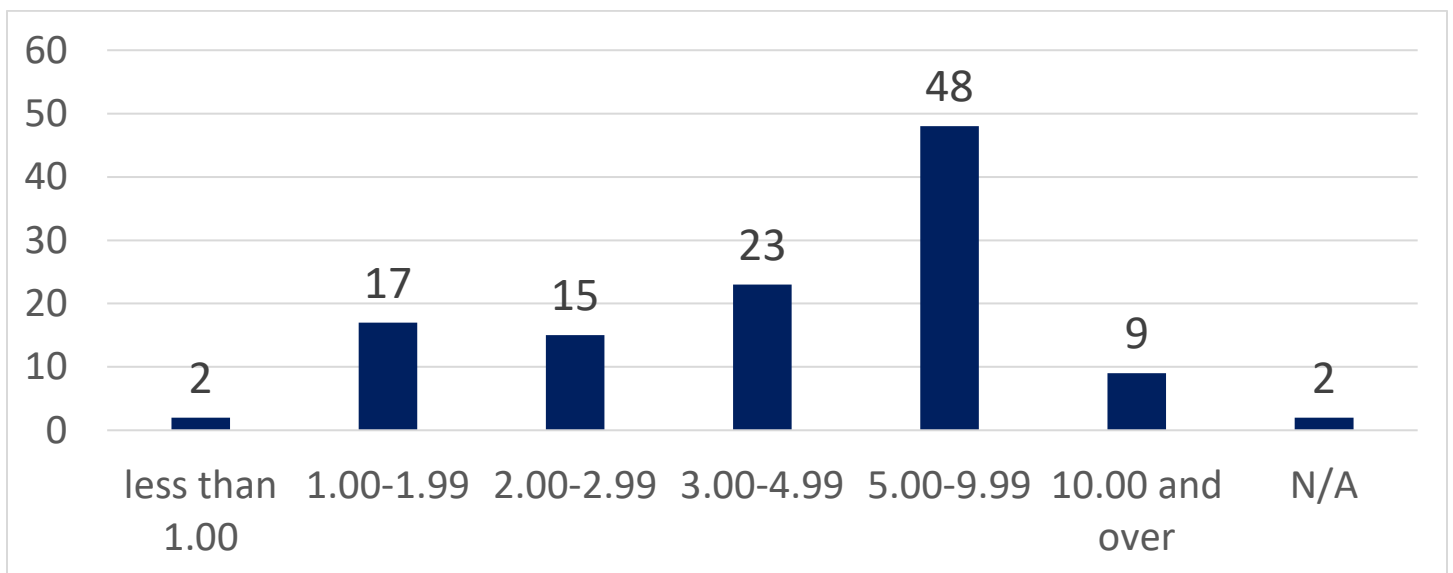
Most Complainants live in Santa Rosa or Windsor

Many complainants are also located in Healdsburg and Sebastopol.



This graph reflects the locations of unique complainants.

Most (57) complainants are <5 NM from the Airport



Distance (in nautical miles (NM)) between the Airport and the addresses of 2019 complainants.

2019 Complaint Data

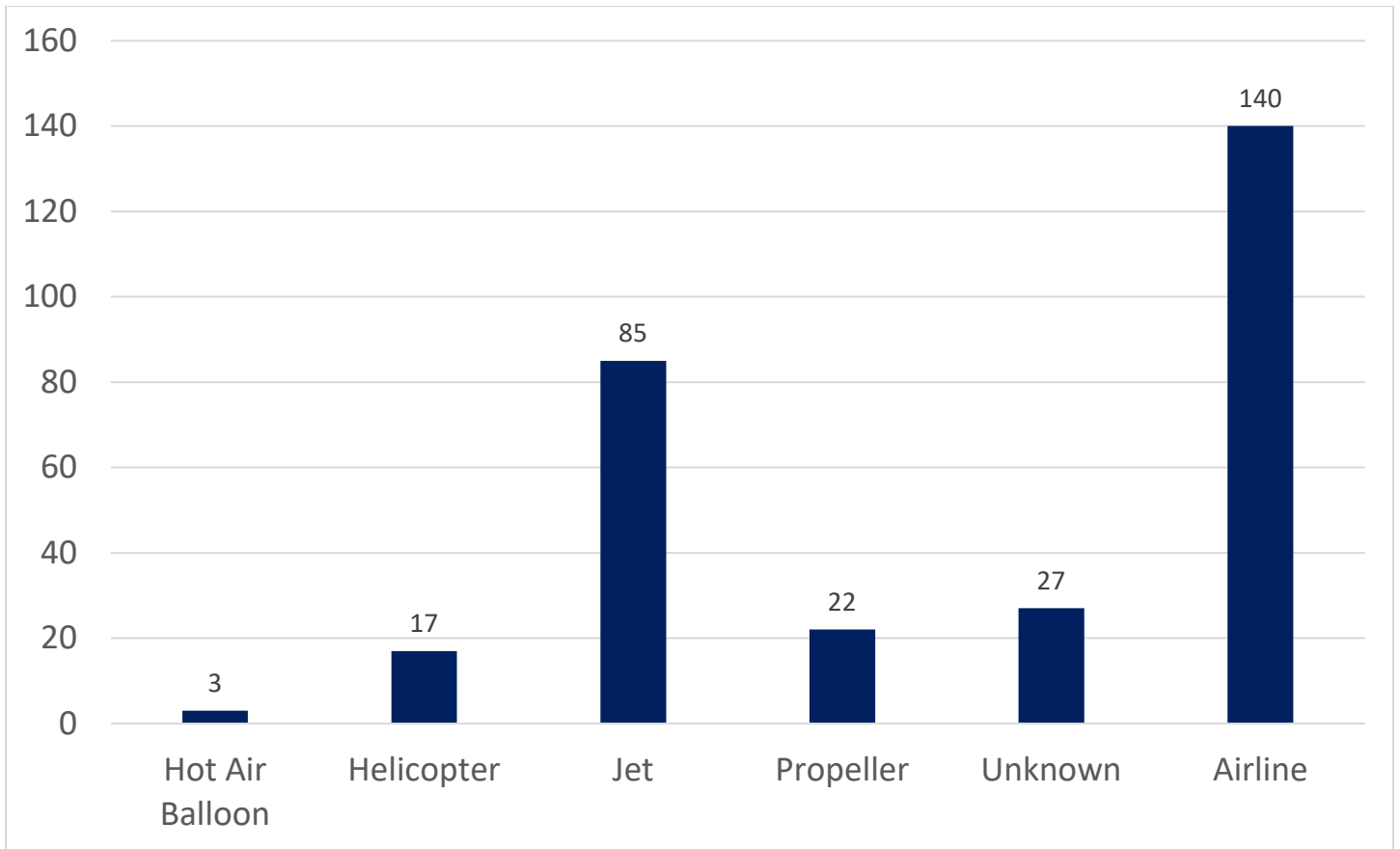
Summary of Operations		Complaints by Type All Complaints		
			Complaints	Percent
Number of Operations	83,734	Noise Related	244	74.6%
Total Complaints	327	Low Flight Related	22	6.7%
Airport Related Complaints	294	Maneuver Related	0	0.0%
Airport Related Complaints (% of total)	90%	Other (overflights, track, etc.)	28	8.6%
		Not Airport-related	33	10.1%

Complainant Frequency			Complaints by Type Airport-Related Only		
	Complaints	Percent		Complaints	Percent
Frequent Complainants 3+/year	221	67.6%	Noise Related	244	83.0%
Infrequent Complainants <3 calls/year	98	30.0%	Low Flight Related	22	7.5%
Anonymous	8	2.4%	Maneuver Related	0	0.0%
			Other (overflights, track, etc.)	28	9.5%

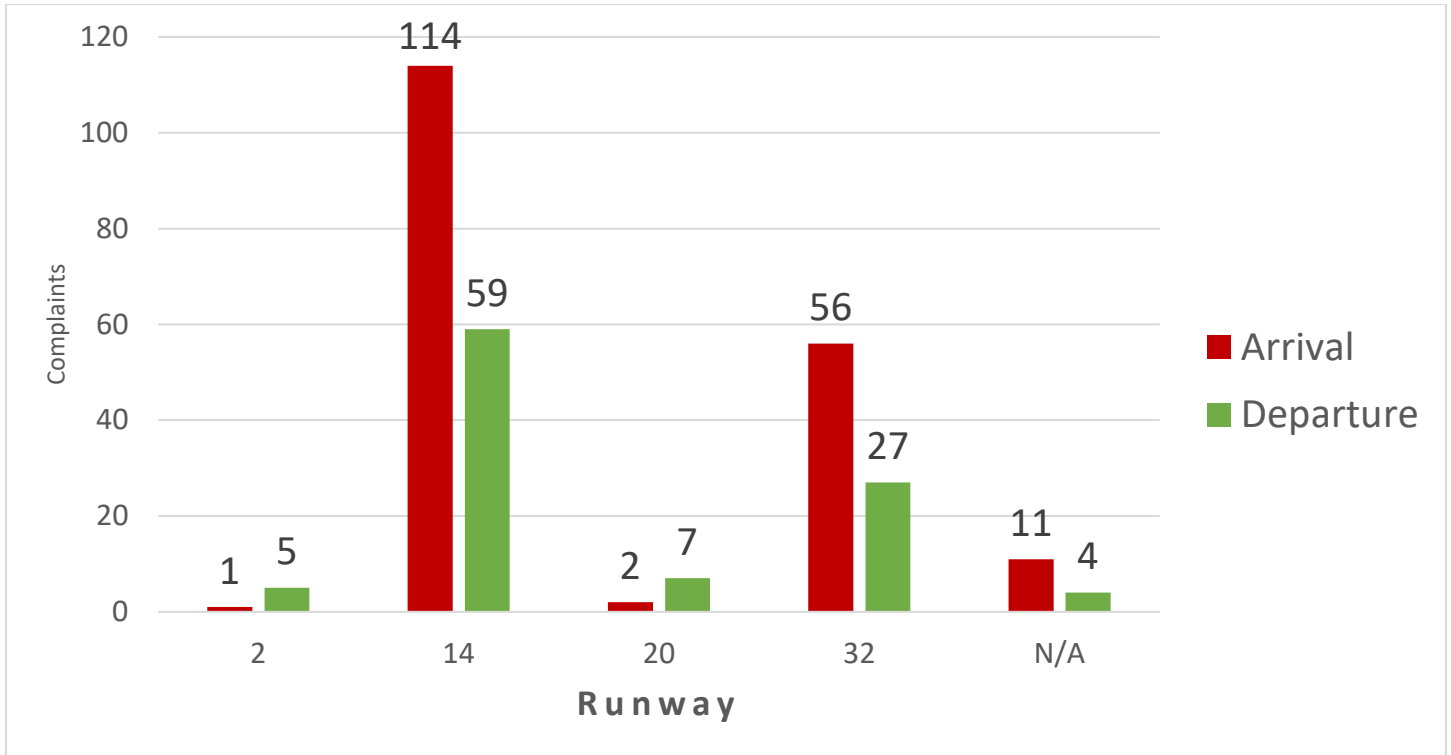
Airport-Related Complaints by Source			Correlated Complaints by Airline			
	Complaints	Percent	Airline	Complaints	Percent of Airline Complaints	% of all Airport- Related
Airline	140	47.60%	Alaska	119	78.3%	40.5%
Private Jet	85	28.90%	American	19	12.5%	6.5%
Unknown/Other	27	9.20%	Sun Country	7	4.6%	2.4%
Propeller	22	7.50%	United	7	4.6%	2.4%
Helicopter	17	5.80%				
Hot Air Balloon	3	1.00%				
Firebomber or Military	0	0.00%				

Correlated Complaints in Relation to Airline Operations			
	Complaints	Operations	Percent of Operations Correlated with Complaint
Alaska Airlines	119	5,360	2.2%
American Airlines	19	1,522	1.2%
Sun Country	7	120	5.8%
United Airlines	7	1,243	0.6%

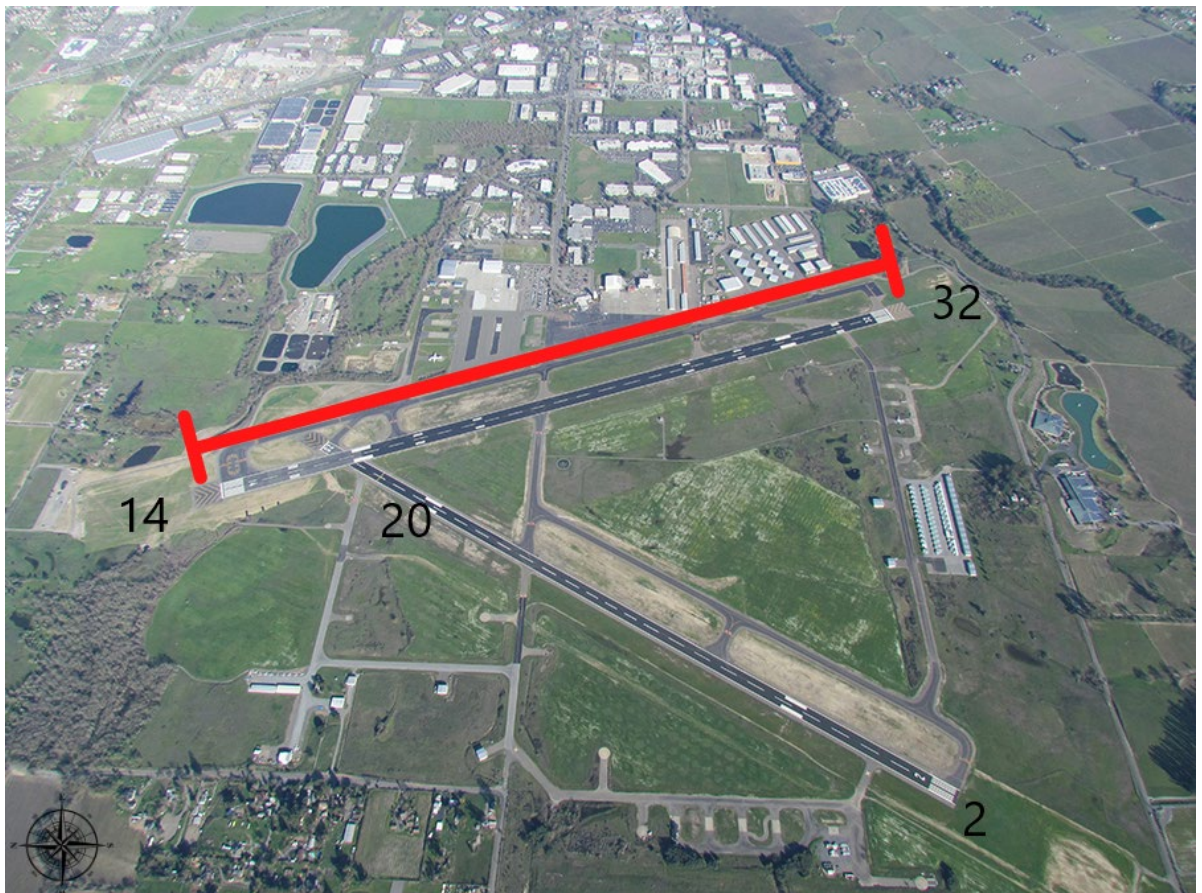
Airline Operations Generated Most Complaints



Arrivals to 14/32 Generated Most Complaints



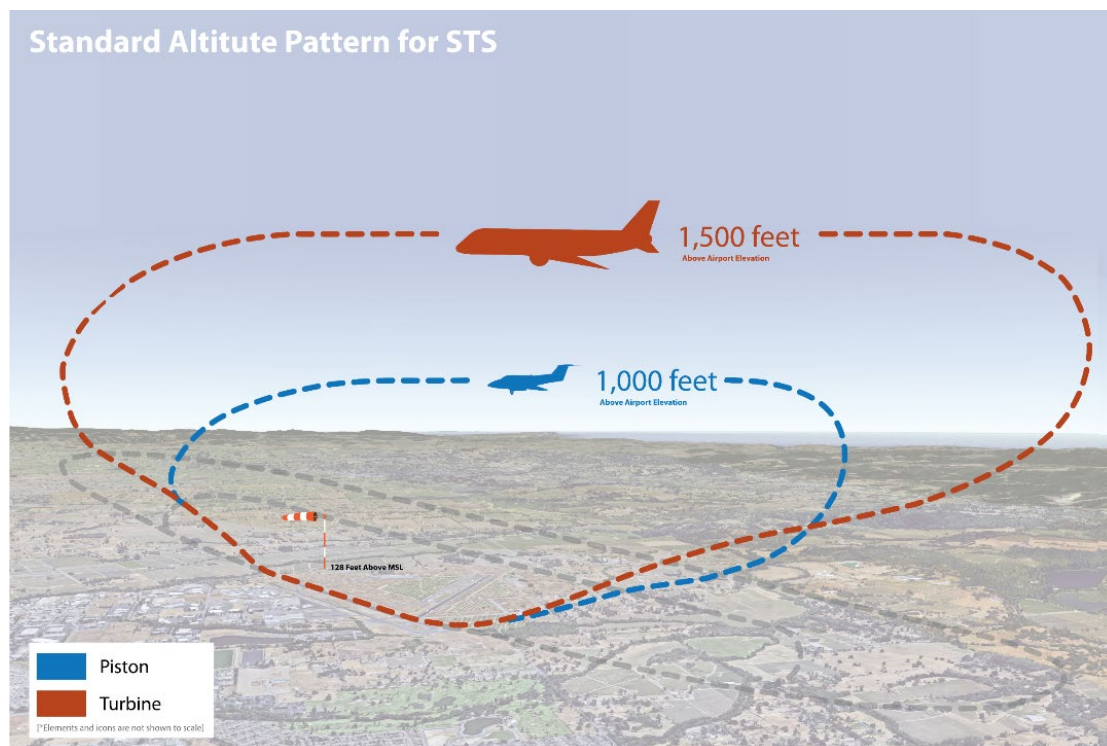
Runway 14/32 is longer and wider than Runway 2/20 and can handle heavier aircraft (up to 184,000 pounds maximum gross certified takeoff weight or MGTOW). Runway 14/32 is also better suited to prevailing winds at the Airport. Runway 2/20 is only used for aircraft weighing less than 154,000 pounds MGTOW and allowed to safely operate on its shorter length.



Most Identified Aircraft Were Flying Over 1,500 Feet

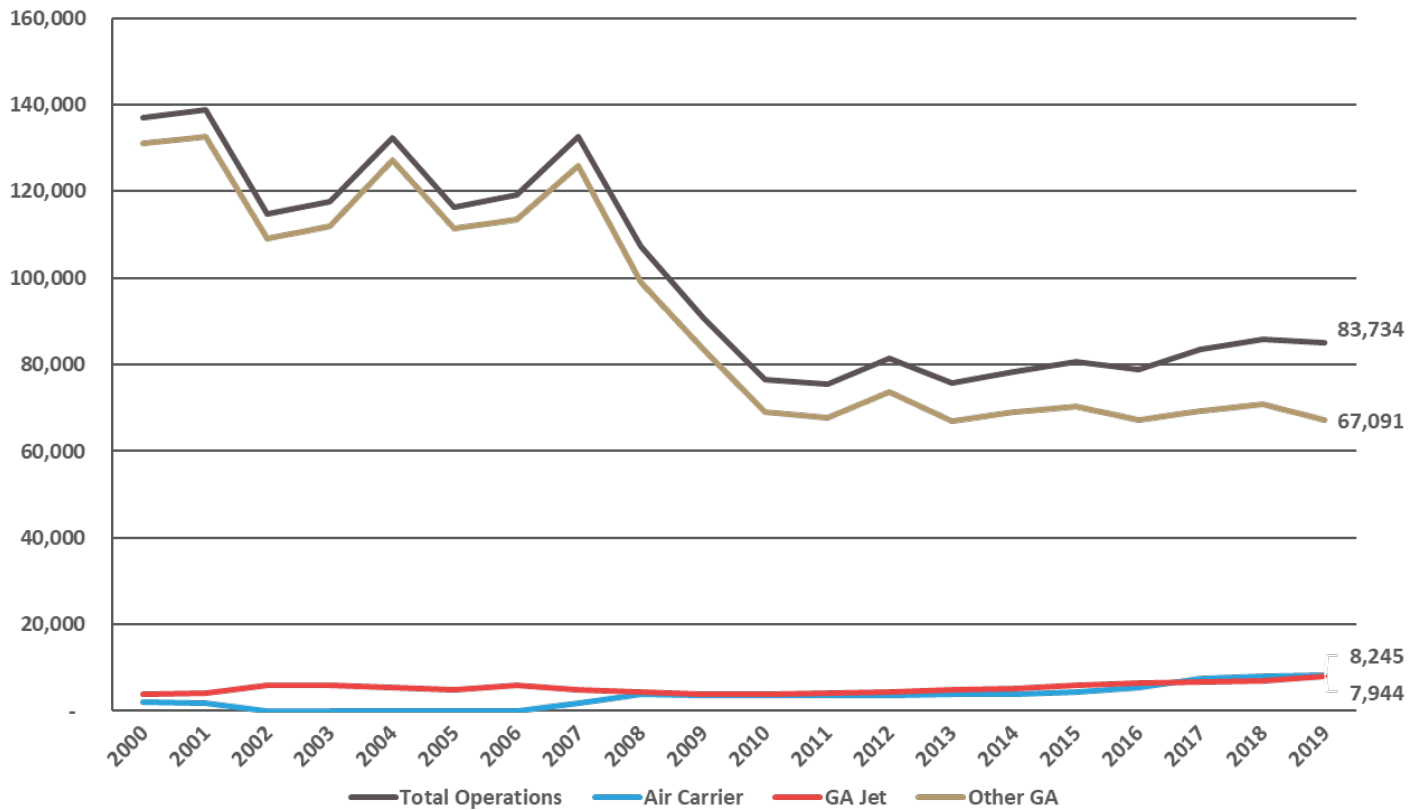
There were 287 aircraft with tracked altitudes identified through complaints made in 2019. At the point of closest approach (PCA) to the complainant's address, altitude was recorded (in feet).

Recorded Altitude Range	Recorded Altitudes in feet
Under 1,000 feet (31 aircraft) 11%	560, 575, 580, 615, 630, 695, 740, 755, 780, 785, 800, 810, 820, 825, 825, 825, 830, 830, 835, 860, 860, 865, 870, 870, 895, 910, 910, 930, 975, 975
1,000 to 1,499 feet (74 aircraft) 26%	1,000, 1,005, 1,015, 1,015, 1,020, 1,025, 1,025, 1,025, 1,035, 1,050, 1,050, 1,055, 1,060, 1,065, 1,070, 1,075, 1,080, 1,080, 1,085, 1,100, 1,120, 1,125, 1,135, 1,175, 1,180, 1,195, 1,200, 1,215, 1,220, 1,225, 1,235, 1,235, 1,245, 1,245, 1,255, 1,265, 1,295, 1,305, 1,315, 1,330, 1,330, 1,335, 1,340, 1,342, 1,350, 1,365, 1,375, 1,400, 1,405, 1,410, 1,410, 1,415, 1,425, 1,430, 1,430, 1,435, 1,440, 1,440, 1,440, 1,445, 1,450, 1,450, 1,450, 1,450, 1,455, 1,460, 1,460, 1,460, 1,460, 1,460, 1,465, 1,470, 1,485, 1,490
1,500 to 1,999 feet (60 aircraft) 21%	1,510, 1,515, 1,530, 1,530, 1,535, 1,535, 1,535, 1,545, 1,550, 1,550, 1,550, 1,550, 1,555, 1,560, 1,575, 1,580, 1,585, 1,600, 1,605, 1,610, 1,620, 1,625, 1,625, 1,640, 1,645, 1,645, 1,665, 1,675, 1,675, 1,705, 1,705, 1,725, 1,745, 1,745, 1,750, 1,755, 1,765, 1,770, 1,775, 1,777, 1,795, 1,805, 1,810, 1,845, 1,855, 1,895, 1,905, 1,925, 1,925, 1,925, 1,935, 1,945, 1,950, 1,950, 1,965, 1,965, 1,985, 1,985
Over 2,000 feet (122 aircraft) 43%	2,025, 2,050, 2,060, 2,080, 2,100, 2,100, 2,125, 2,145, 2,145, 2,150, 2,165, 2,185, 2,195, 2,200, 2,200, 2,200, 2,220, 2,225, 2,250, 2,250, 2,265, 2,280, 2,305, 2,325, 2,325, 2,340, 2,345, 2,355, 2,355, 2,380, 2,390, 2,405, 2,425, 2,445, 2,450, 2,450, 2,505, 2,510, 2,515, 2,550, 2,550, 2,565, 2,585, 2,610, 2,610, 2,610, 2,720, 2,740, 2,775, 2,800, 2,805, 2,845, 2,895, 2,895, 2,900, 2,910, 2,925, 2,950, 2,950, 2,980, 3,025, 3,060, 3,090, 3,105, 3,115, 3,120, 3,160, 3,165, 3,175, 3,235, 3,240, 3,250, 3,285, 3,310, 3,310, 3,310, 3,325, 3,330, 3,375, 3,380, 3,420, 3,490, 3,515, 3,545, 3,545, 3,545, 3,570, 3,570, 3,580, 3,605, 3,625, 3,635, 3,660, 3,670, 3,760, 3,920, 3,940, 4,005, 4,030, 4,035, 4,040, 4,050, 4,055, 4,075, 4,180, 4,200, 4,200, 4,350, 4,360, 4,415, 4,475, 4,525, 4,550, 4,950, 4,960, 4,970, 5,100, 5,465, 5,550, 7,210



The Airport's standard altitude pattern is the highest allowed by the FAA. Under FAA regulations, altitude restrictions are not applicable during landing and takeoff. The FAA has exclusive sovereignty of airspace in the United States (49 U.S.C. Section 40103(a)).

STS Historical Operations



GA=General Aviation (not airline)

Complaints by Year

Year	Total Complaints	Airport-Related Complaints		First-time Callers		Airline Operations	Total Operations	Operations per Airport-Related Complaint
2015	229	200	87%	152	66%	4,331	83,463	417
2016	304	273	90%	176	58%	5,311	79,231	290
2017	531	475	89%	105	20%	7,417	77,534	163
2018	162	150	93%	121	75%	7,984	85,060	567
2019	327	294	90%	98	30%	8,245	83,734	285
Average	311	278	90%	130	42%	6,658	81,804	294

Total Complaints by Category

	2015	2016	2017	2018	2019	Five Year Average	2019 vs. 5 yr. Average
Noise Related	79	188	402	76	244	198	123%
Not Airport Related	29	31	55	12	33	32	103%
Other (flight path, frequency, etc.)	48	41	27	7	28	30	93%
Low Flight Related	73	42	44	65	22	49	45%
Maneuver Related	0	2	3	2	0	1	0%
Total Complaints	229	304	531	162	327	311	105%

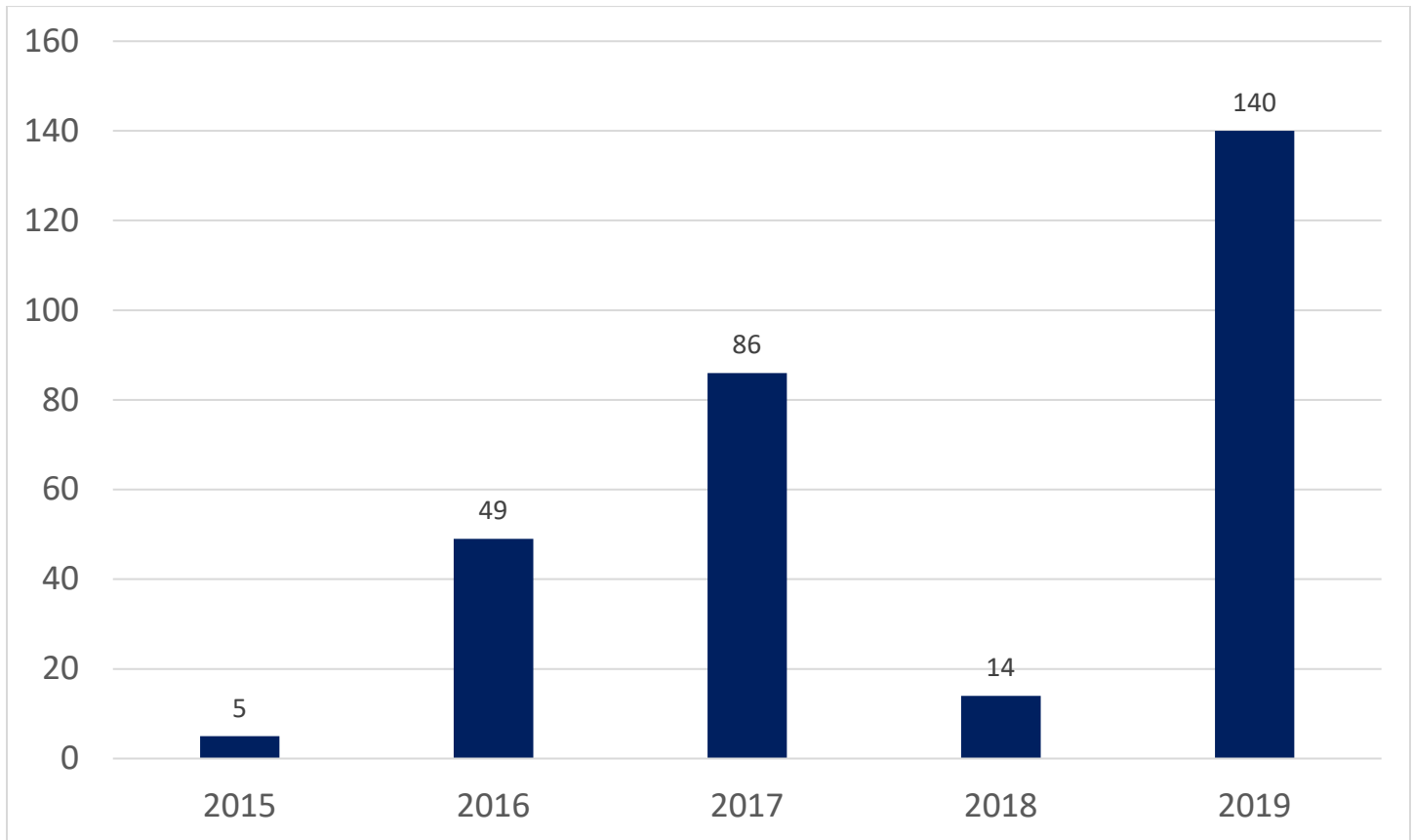
Airport-Related Complaints By Day Received

	2015	2016	2017	2018	2019	Five Year Average	2019 vs. 5 yr. Average
Monday	19	27	61	26	41	35	117%
Tuesday	25	25	40	16	46	30	153%
Wednesday	36	18	44	34	38	34	112%
Thursday	25	73	68	20	64	50	128%
Friday	31	51	97	19	43	48	90%
Saturday	26	23	53	13	20	27	74%
Sunday	38	56	113	22	42	54	78%

Airport-Related Complaints By Source

	2015	2016	2017	2018	2019	Five Year Average	2019 vs. 5 yr. Average
Airline	5	49	86	14	140	58.8	237%
Jet	61	108	77	33	85	72.8	116%
Unknown	77	34	260	66	27	92.8	29%
Propeller	27	21	32	3	22	21	105%
Helicopter	18	27	15	28	17	21	81%
Hot Air Balloon	2	1	5	0	3	2.2	150%
Military	10	33	0	6	0	9.8	0%
Firebomber	0	0	0	0	0	0	0%

Airline Operations Complaints Increased Over Time



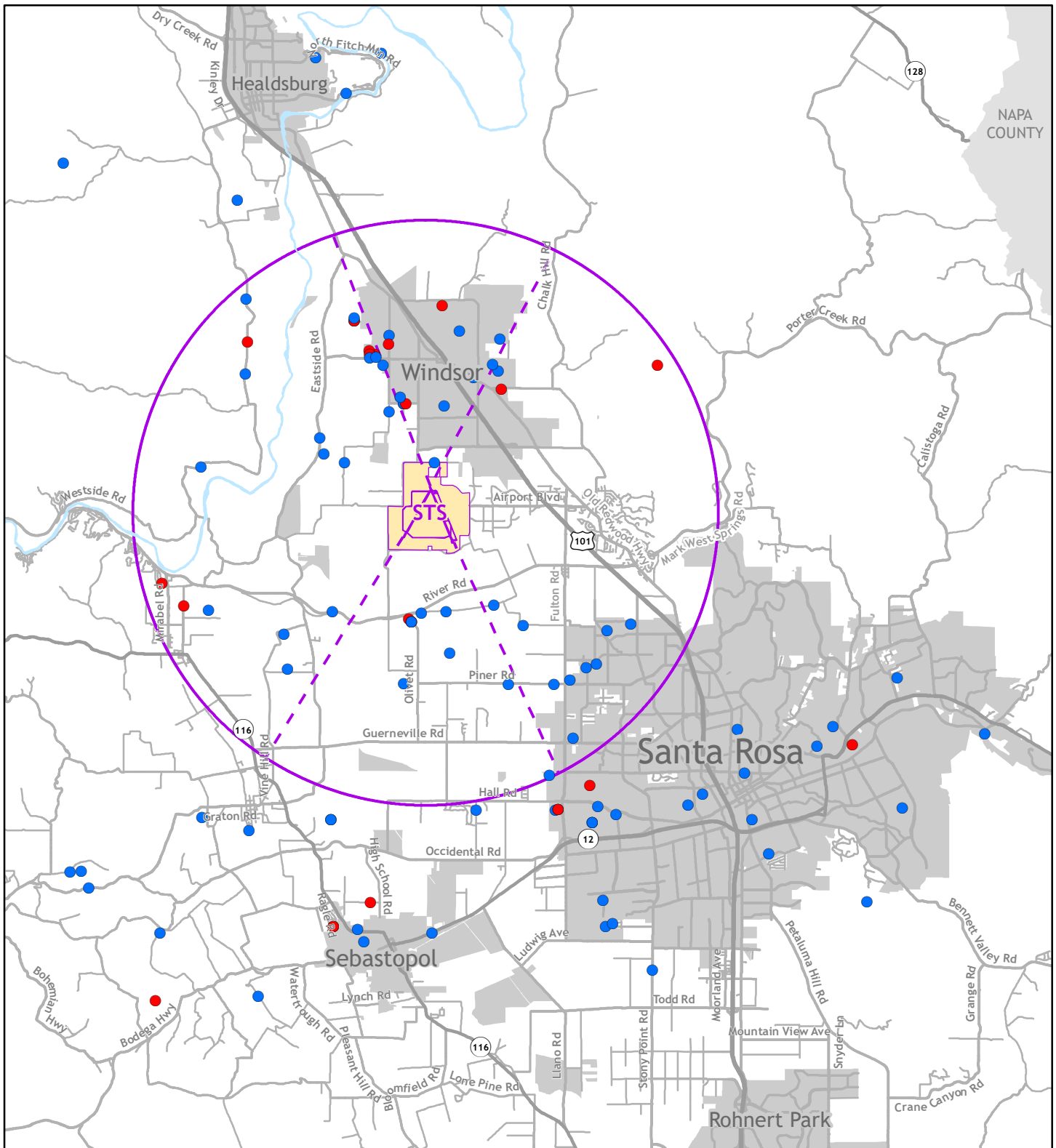
2018 saw a decrease in complaints primarily attributed to the departure of Allegiant Airlines.

Noise Abatement in 2020 and Beyond

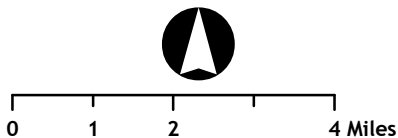
The Airport's current Noise Abatement Program was established in 1988. STS is working with our Aviation Commission and a community advisory group to re-write the Airport's Noise Abatement Guide and associated procedures. Using flight-tracking and noise management software, the Airport also provides monthly complaint reports to airlines so that operators can use real data to update flight practices and fly friendly. Airlines have been receptive to STS requests regarding noise-sensitive areas and airline and STS staff have been meeting regularly in 2020 to discuss next steps for noise abatement in Sonoma County. Private operators also receive notifications from STS when their operation generates a complaint from a neighbor. The Airport is currently exploring the development of an alternate approach to Runway 14 that will hopefully resolve some of the issues experienced by the standard approach and by the more-recently established alternate, western approach.

2019 Noise Complaints

Charles M. Schulz - Sonoma County Airport



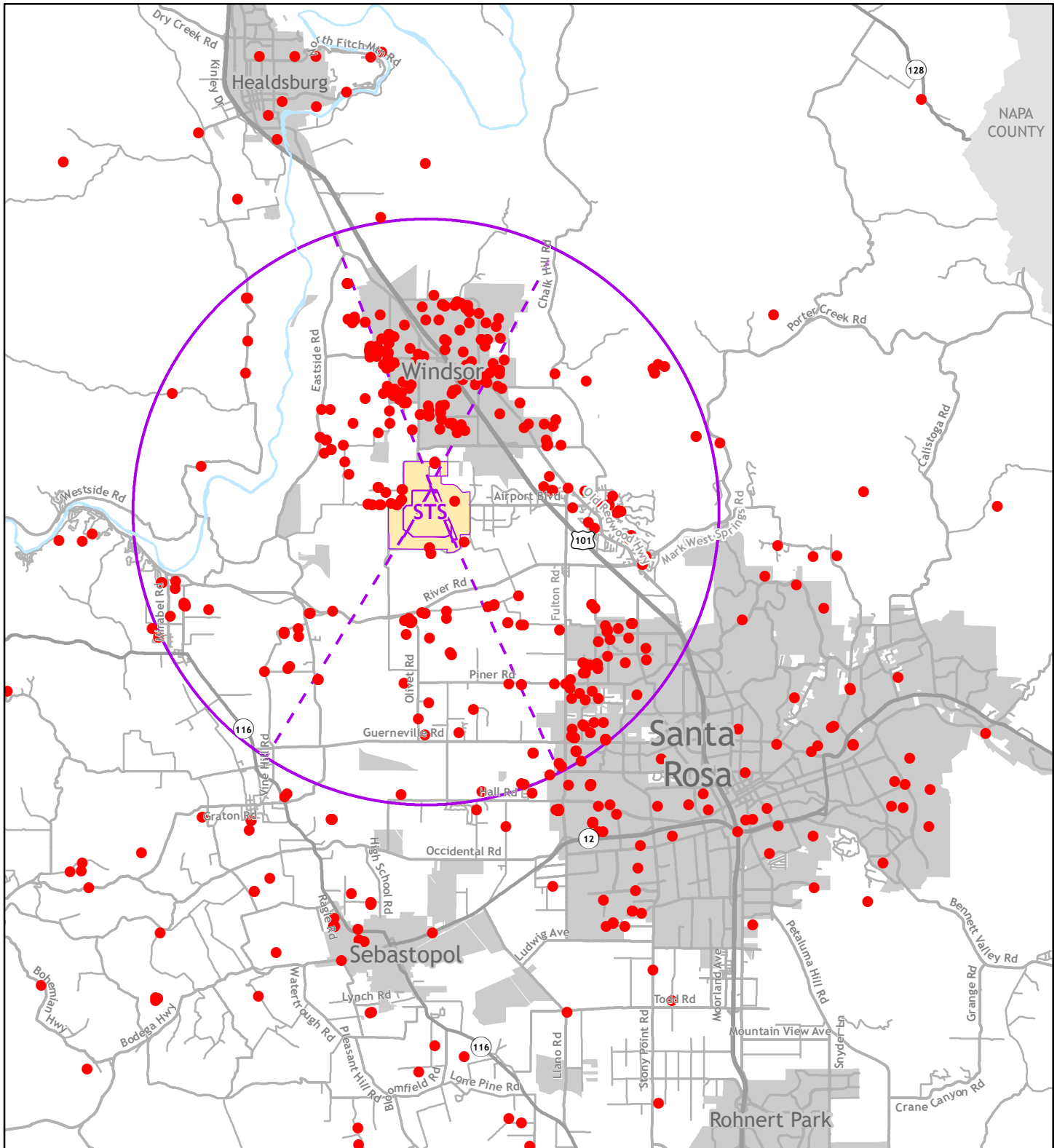
● First-time Callers
 ● Frequent Callers
 STS Airport Property
 --- Runway Extension Lines
 5 Mile Airport Radius



Callers:	First Time	Frequent	Total	Total 2019 complaints:	327
Within Map Area:	83	22	105	Airport-related complaints:	294
Outside Map Area:	10	1	11	Anonymous or no address:	8
Total:	93	23	116	Total addresses outside of mapped area:	11

2015-2019 Noise Complaints

Charles M. Schulz - Sonoma County Airport

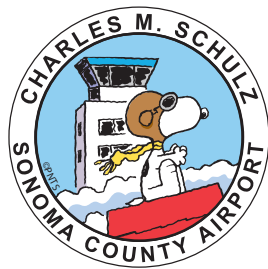


- Airport Noise Complaints
- Runway Extension Lines
- STS Airport Property
- 5 Mile Airport Radius



0 1 2 4 Miles

	2015	2016	2017	2018	2019
Total complaints:	229	304	531	162	327
Airport-related complaints:	200	273	476	150	294
Anonymous or no address:	22	39	20	20	8
Total addresses outside of mapped area:	3	2	3	20	11



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