

Review of Operations and Complaints

June 28 – September 30, 2018
at East Hampton Airport (HTO)

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February 5, 2019



Agenda

- Analysis overview and review of 2018 Implementation Period operations
- Review of 2018 Implementation Period complaints
- Discussion

Analysis Overview and Review of 2018 Implementation Period Operations

Analysis Overview

- Collected most recently available complaint and operations data associated with HTO for 2018 Implementation Period (June 28, 2018 - September 30, 2018)
 - HTO Operations data collected from Vector
 - Complaint data collected from PlaneNoise and Air Noise Report
 - These data sources are consistent with prior analysis conducted by HMMH at HTO for 2016 and 2017 Implementation Periods
 - Analyzed complaint and operations data for comparison against 2016 and 2017 Implementation Periods
- Goal to evaluate 2018 HTO complaints and operations trends against 2016 and 2017 Implementation Periods

Operations Top-Level Observations: 2018 Compared to 2017 Implementation Period

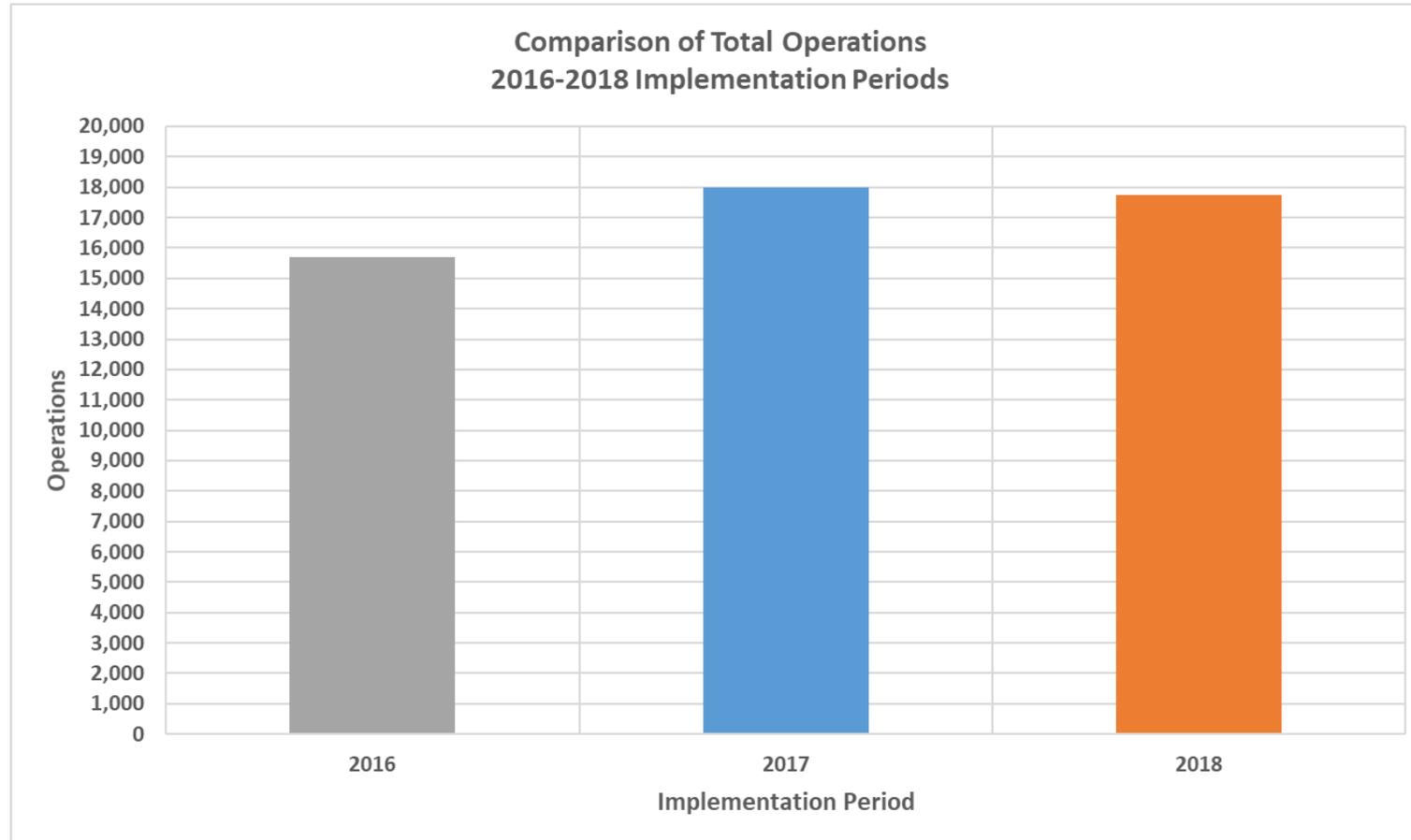
- Comparison between 2018 and 2017 Implementation Periods:
 - Overall activity decreased by 266 operations (-1%)
 - Helicopter activity increased by 152 operations (+3%)
 - Land Plane activity decreased by 305 operations (-3%)
 - Seaplane activity increased by 105 operations (+5%)
 - Undefined activity decreased by 218 operations (-27%)
- 2018 Operations continued to follow patterns from 2017 and deviate from the intent of the 2015 restrictions
 - Total operations continue to shift into the prior nighttime curfew hours
 - “Noisy” aircraft operations continued to shift out of daytime hours into prior restricted nighttime curfew and extended curfew hours



Operations Top-Level Observations: 2018 Compared to 2016 Implementation Period

- Comparison between 2018 and 2016 Implementation Periods:
 - Overall activity increased by 2,046 operations (+13%)
 - Helicopter activity increased by 1,959 operations (+52%)
 - Land Plane activity increased by 126 operations (+1%)
 - Seaplane activity decreased by 27 operations (-1%)
 - Undefined activity decreased by 12 operations (-2%)

Total Operations: 2016-2018 Implementation Periods

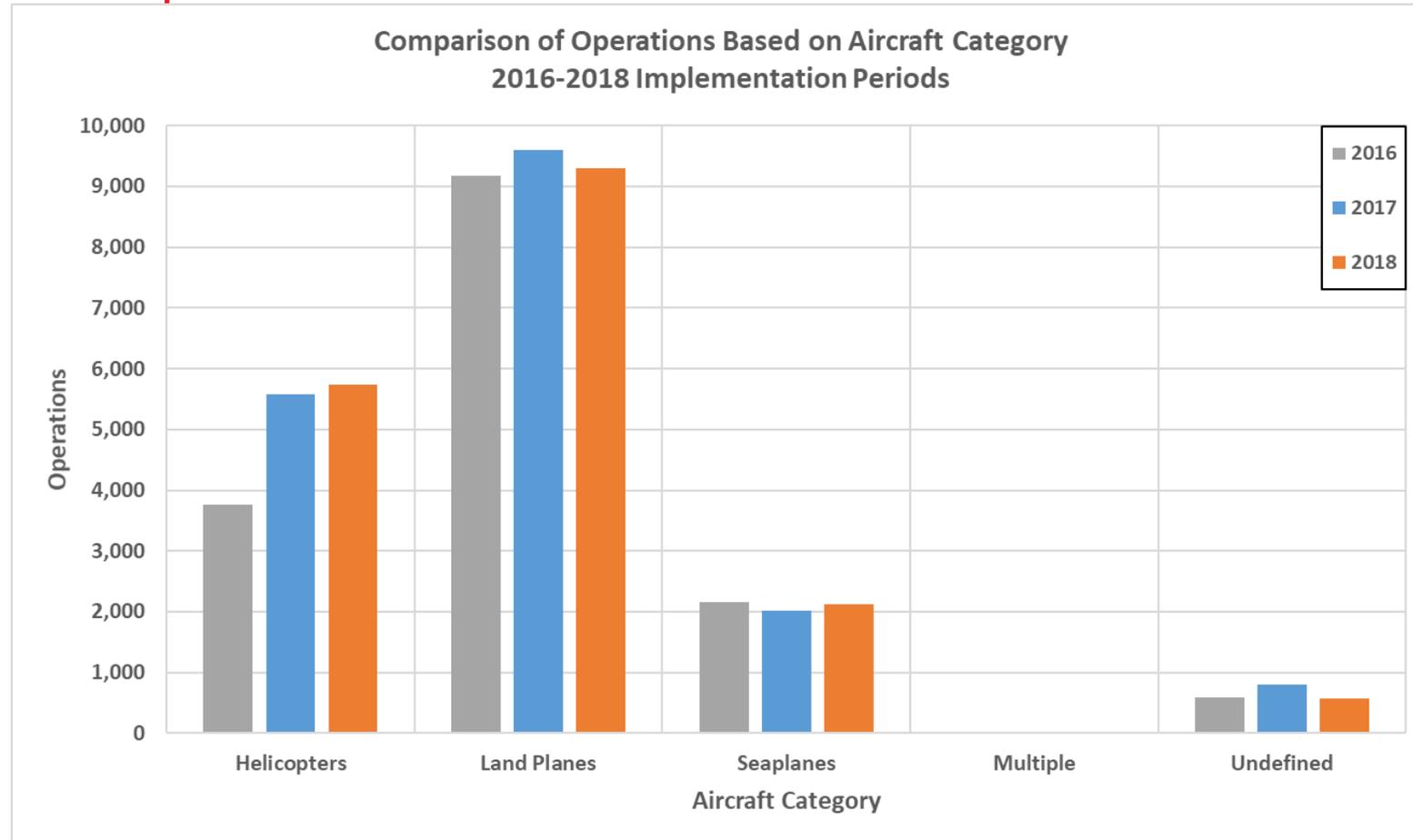


Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system



Operations by Aircraft Category: 2016-2018 Implementation Periods



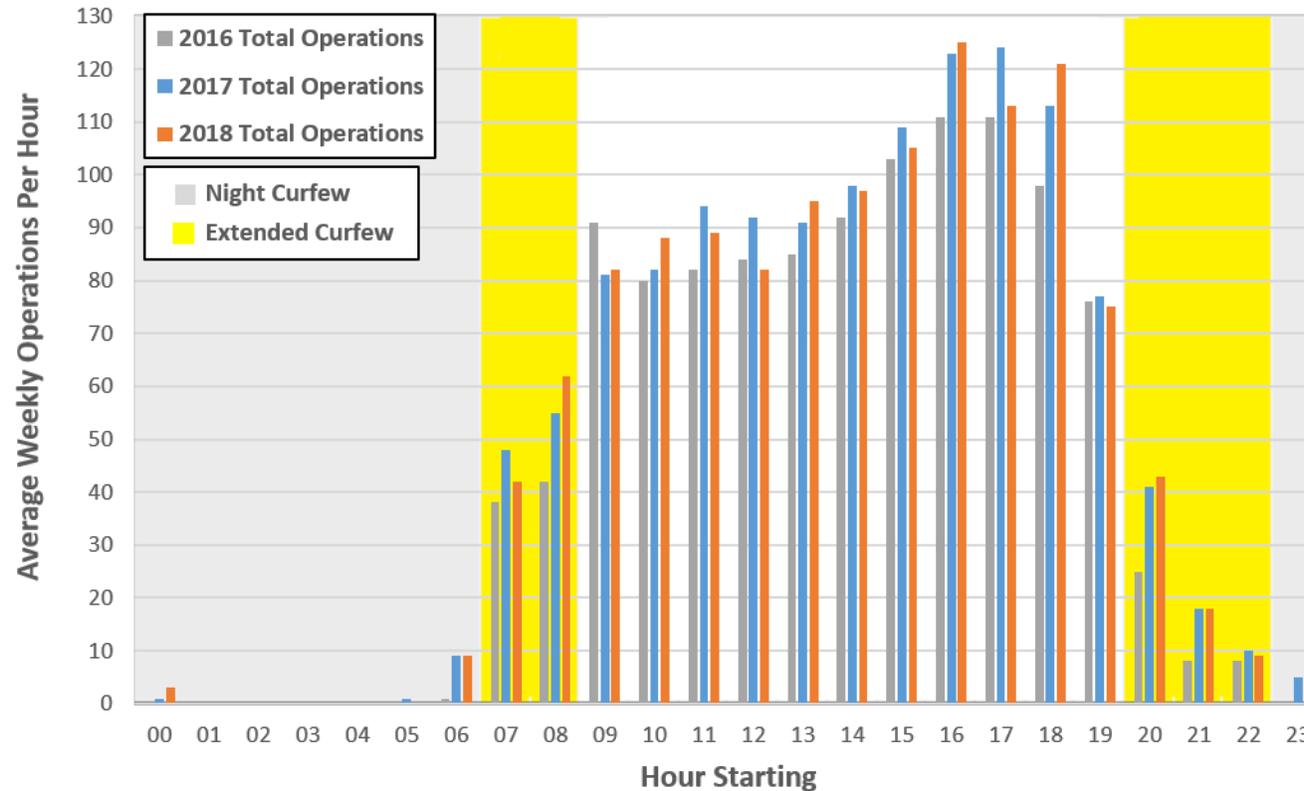
Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system



Total Average Weekly Operations per-Hour: 2016-2018 Implementation Periods

Comparison of Average Total Weekly Operations in Each Hour of the Day during the 2016 , 2017, and 2018 Implementation Periods



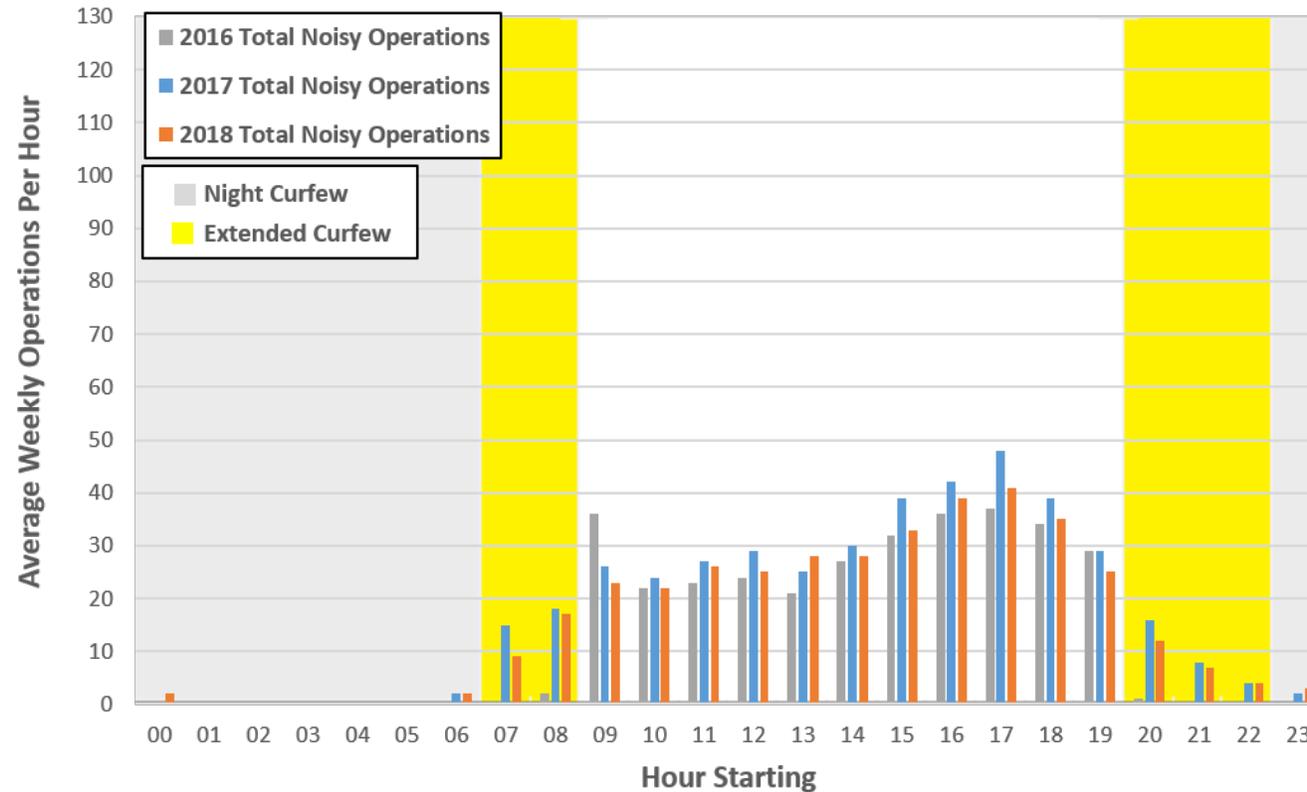
Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system



Average “Noisy” Weekly Operations per-Hour: 2016-2018 Implementation Periods

Comparison of Average Weekly Total Noisy Operations in Each Hour of the Day during the 2016, 2017, and 2018 Implementation Periods



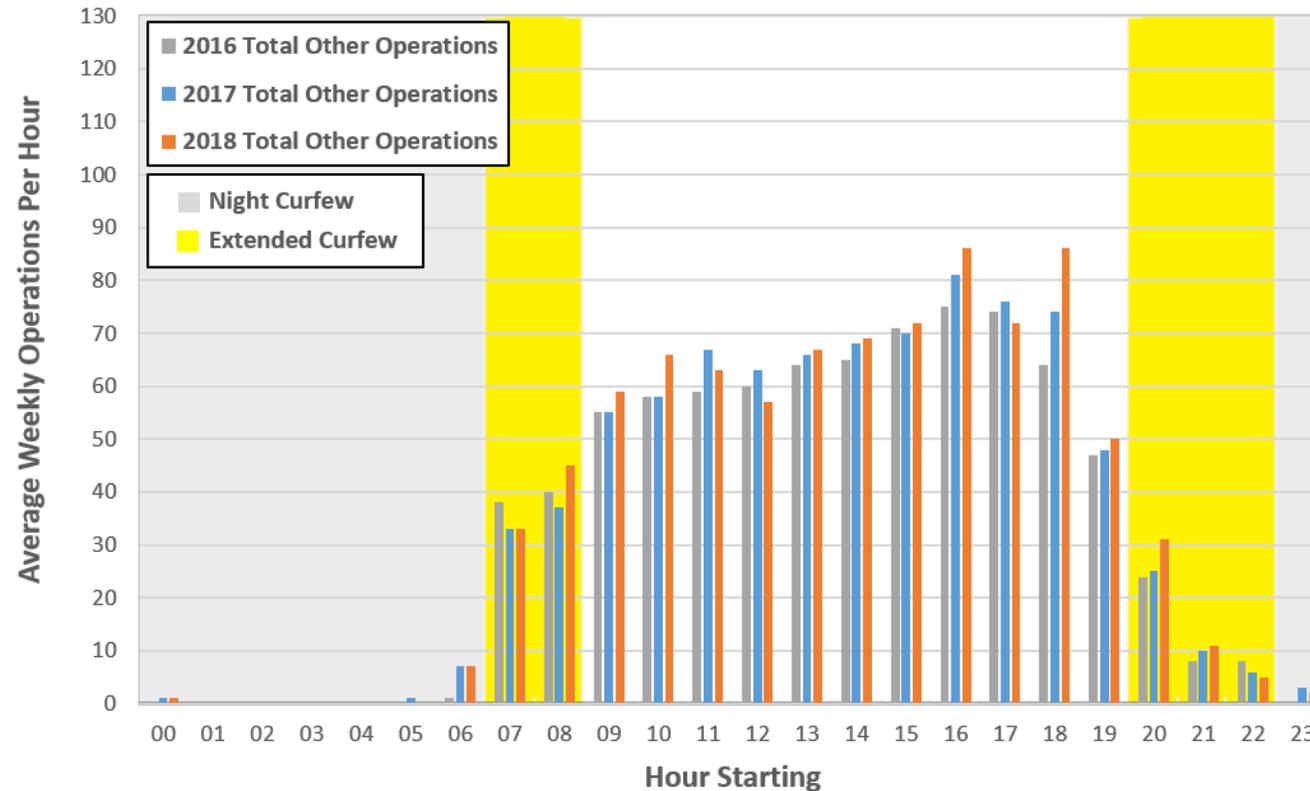
Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system



Average "Other" Weekly Operations per-Hour: 2016-2018 Implementation Periods

Comparison of Average Weekly Other Operations in Each Hour of the Day during the 2016 , 2017, and 2018 Implementation Periods



Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system

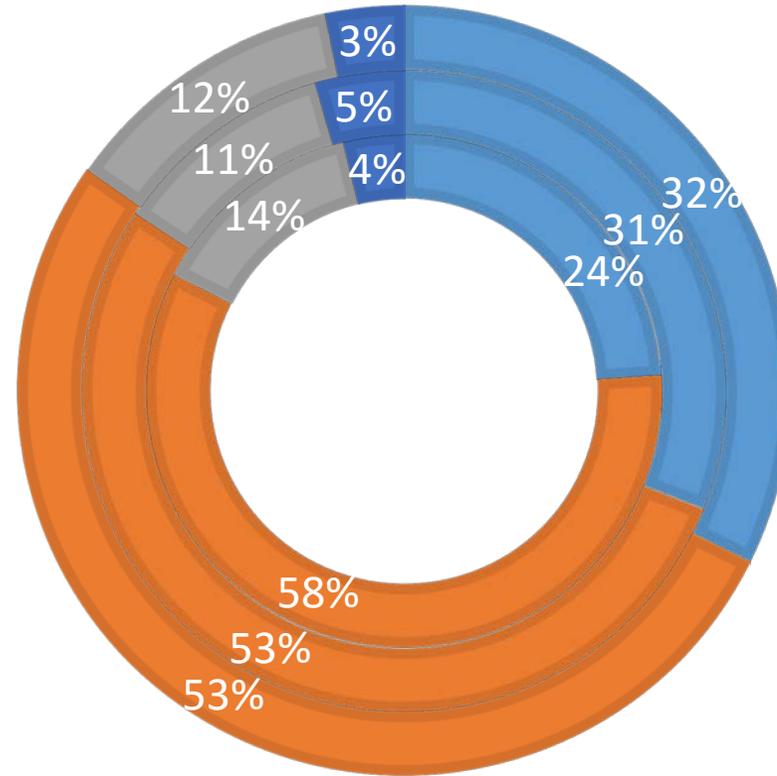


Operations Fleet Mix Top Level Observations

- General 2018 Implementation Period fleet mix observations
 - Land planes were the largest category of aircraft operating at HTO with of 52% (9,299) of all aircraft operations
 - Helicopters were the second largest category, with 32% (5,729) of all aircraft operations
 - Seaplanes were the third largest category, with 12% (2,128) of all operations
 - Undefined aircraft represented the remaining 3% (581) of all operations
- Comparison to calendar-year 2017 operations fleet mix
 - The percentage of land planes in the fleet mix decreased by 1%
 - The percentage of helicopters in the fleet increased by 1%
 - The percentage of seaplanes in the fleet mix increased by 1%
 - The percentage of undefined aircraft in the fleet mix decreased by 1%
- The 2018 Implementation Period operations fleet mix at HTO appears to be largely the same as in 2017



Operations by Aircraft Category: 2016-2018 Implementation Periods



■ Helicopters
 ■ Land Planes
 ■ Seaplanes
 ■ Multiple
 ■ Undefined

Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system



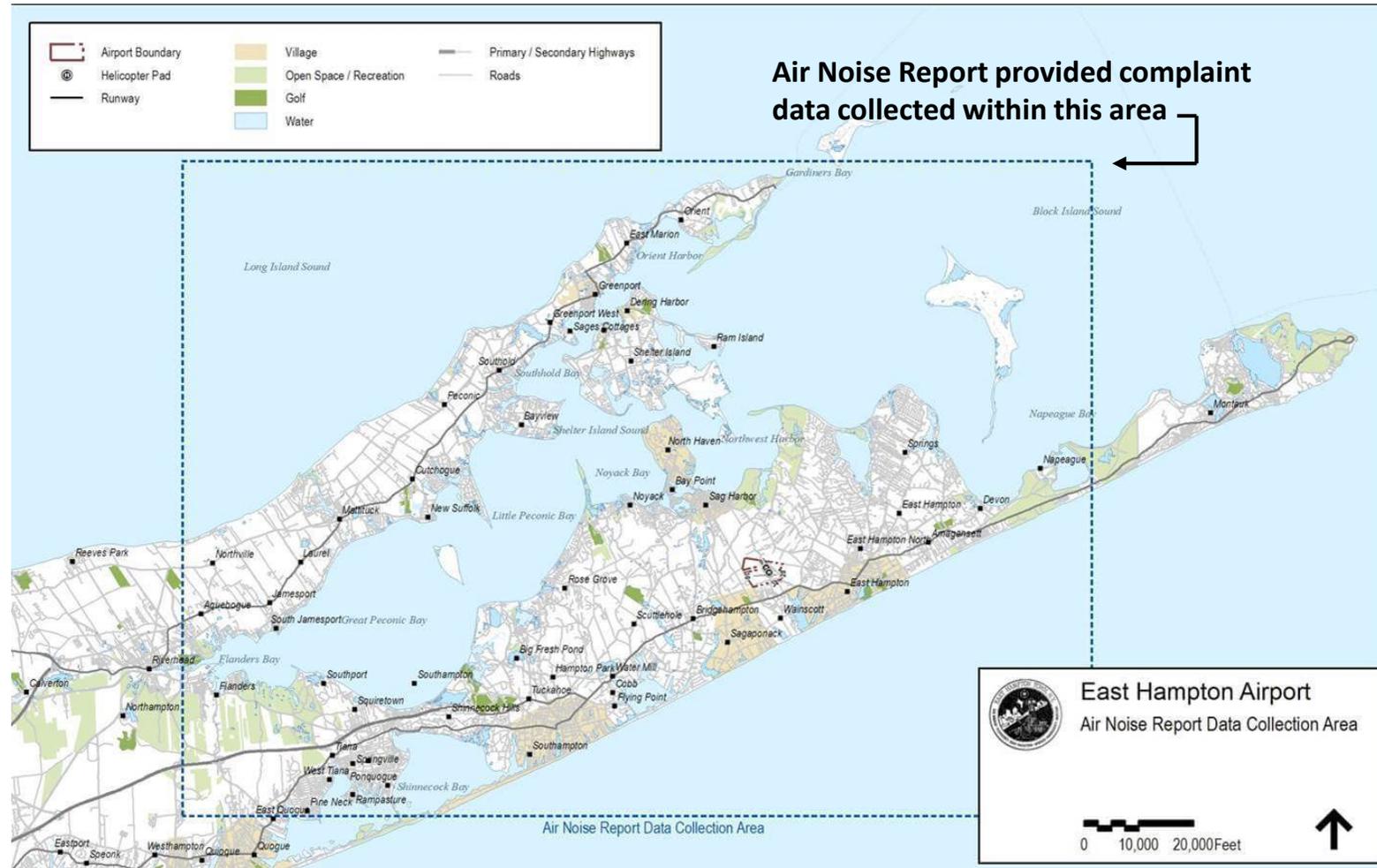
Review of 2018 Implementation Period Complaints

HTO Complaint Reporting System Review

- HTO currently tracks noise complaints from two systems:
 - PlaneNoise
 - Town has been under contract since 2012
 - Utilizes a combination of web, e-mail, fax, and phone portals for complaint entry
 - **New:** Smart phone complaint entry app “Complaint Box Mobile” introduced in June 2018
 - All complaints are address based
 - Commercial product
 - Also tracks complaints for operations associated with Montauk Airport (MTP), of which there were 10 complaints filed during the 2018 summer Implementation Period
 - Air Noise Report – A new complaint system which became fully operational in late June of 2016
 - Utilizes a web portal for complaint entry
 - Complaints can be filed based on the location of an aircraft (Mapped) or based on an address (Manual)
 - Operated and maintained by NYC resident concerned about helicopter noise
 - Not commercially available for sale
- Our analysis combines complaint data collected by both systems



Air Noise Report Geographic Coverage Provided to HTO



Air Noise Report Complaint Changes

- Recent review of complaints from Air Noise Report by operator revealed system had been accepting duplicate complaint entries
- Most duplicate entries occurred during 2018, but some duplicates were present during 2016 and 2017 Implementation Periods
- Air Noise Report complaints were identified as duplicate and removed from complaint summaries by the operator if:
 - Successive complaints shared the same e-mail address and identified aircraft type or registration
 - The time interval between successive complaints was less than 5 minutes
- For consistency of comparison of the 2018 Implementation Period to 2016 and 2017, duplicate complaints were not included in complaint summaries for all analysis periods



Categorizing Operations Responsible for Complaints

- The PlaneNoise and Air Noise Report complaint entry methods do not provide consistent bases for categorizing fixed-wing aircraft
- Air Noise Report does not support a multiple aircraft complaint

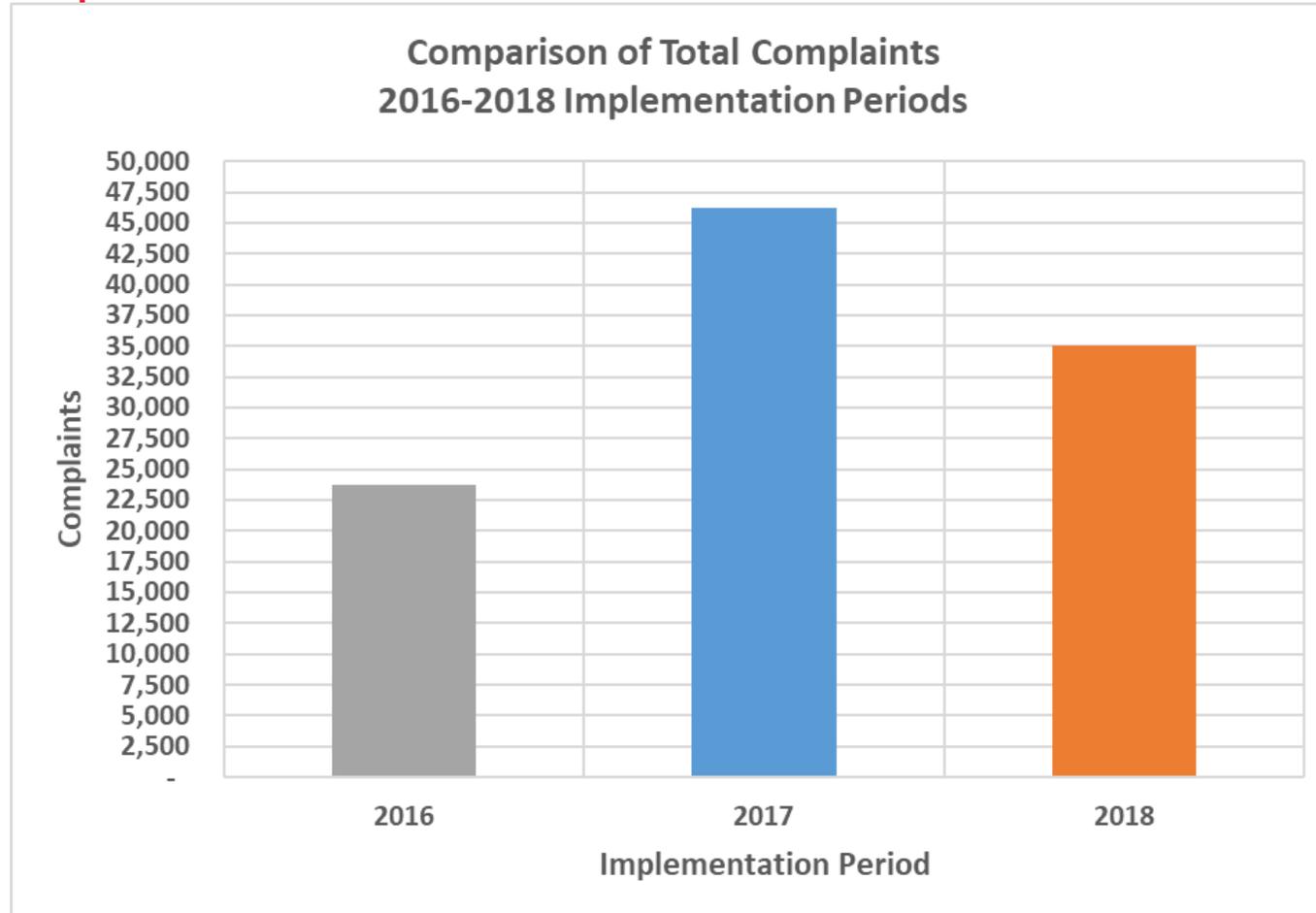
Aircraft Type Category	PlaneNoise Complaints	Air Noise Report Complaints	
		Manual	Mapped
Helicopter	Helicopter	Helicopter	ANR mapped complaints require complainant to identify a specific aircraft operation, which permits identification of the <i>exact</i> aircraft type, including “noisy” and “other” types
Fixed-Wing	Jet		
	Prop		
		Small Airplane	
		Large Airplane	
	Seaplane	Seaplane	
Undefined Type	Unknown	Unsure	<i>Applies when tail number not listed in any source</i>
Multiple Aircraft	Multiple	<i>Not supported</i>	<i>Not supported</i>



Complaints Top-Level Observations

- Comparison of 2018 and 2017 Implementation Periods
 - Overall complaints decreased by 10,586 (-23%)
 - Helicopter complaints decreased by 7,519 (-28%)
 - Land Plane complaints decreased by 1,961 (-16%)
 - Seaplane complaints decreased by 743 (-15%)
 - Multiple aircraft complaints decreased by 167 (-56%)
 - Undefined aircraft complaints decreased by 196 (-13%)

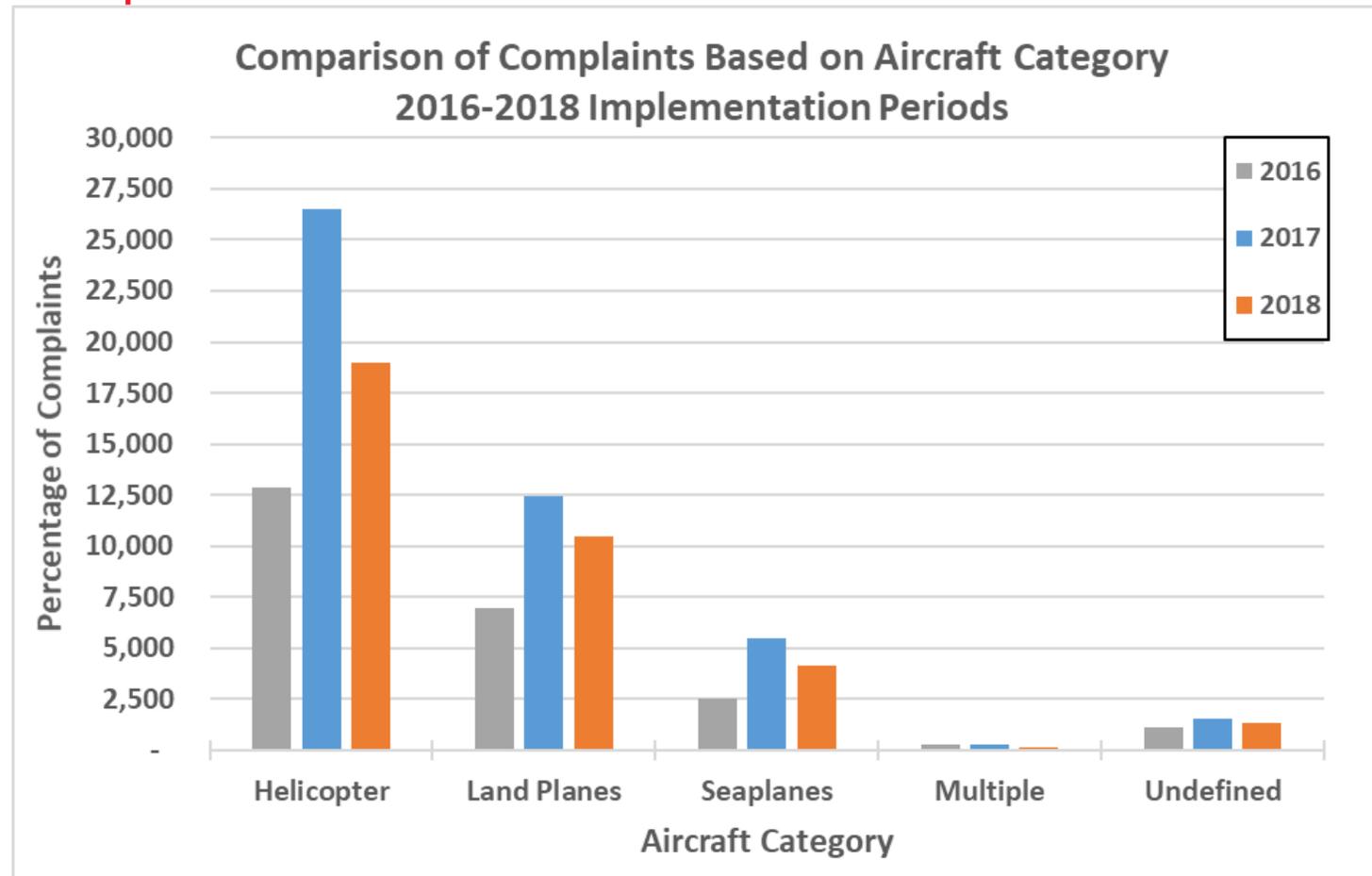
Total Complaints: 2016-2018 Implementation Periods



Note: Curfews were not in effect in 2017 or 2018



Complaints by Aircraft Category: 2016-2018 Implementation Periods



Note: Curfews were not in effect in 2017 or 2018



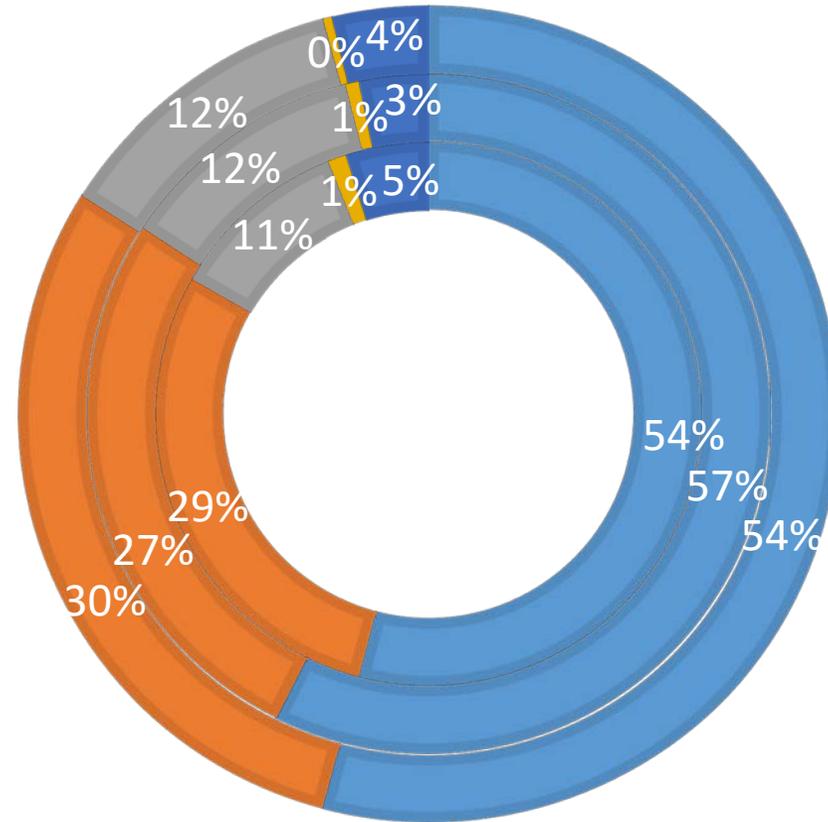
Complaint Fleet Mix Top Level Observations

- General 2018 Implementation Period fleet mix observations
 - Helicopters were the most complained about category of aircraft operating at HTO with 54% (18,983) of all aircraft complaints
 - Land planes were the second largest category, with 30% (10,456) of all aircraft complaints
 - Seaplanes were the third largest category, with 12% (4,153) of all complaints
 - Multiple aircraft represented 0% (130) of all complaints
 - Undefined aircraft represented the remaining 4% (1,317) of all complaints

2018 Complaint Fleet Mix Comparison to 2017 Implementation Period

- Comparison to 2017 Implementation Period complaint fleet mix
 - The percentage of complaints filed against helicopters decreased by 4%
 - The percentage of complaints filed against land planes increased by 3%
 - The percentage of complaints filed against seaplanes increased by 1%
 - The percentage of complaints filed against multiple and undefined aircraft remained constant
- The 2018 Implementation Period mix of complaints filed based on aircraft category have remained largely consistent with 2017. However, there was a small shift in the proportion of complaints away from helicopters to land and seaplanes

Complaints Percentage of Fleet Mix: 2016-2018 Implementation Periods



■ Helicopters
 ■ Land Planes
 ■ Seaplanes
 ■ Multiple
 ■ Undefined

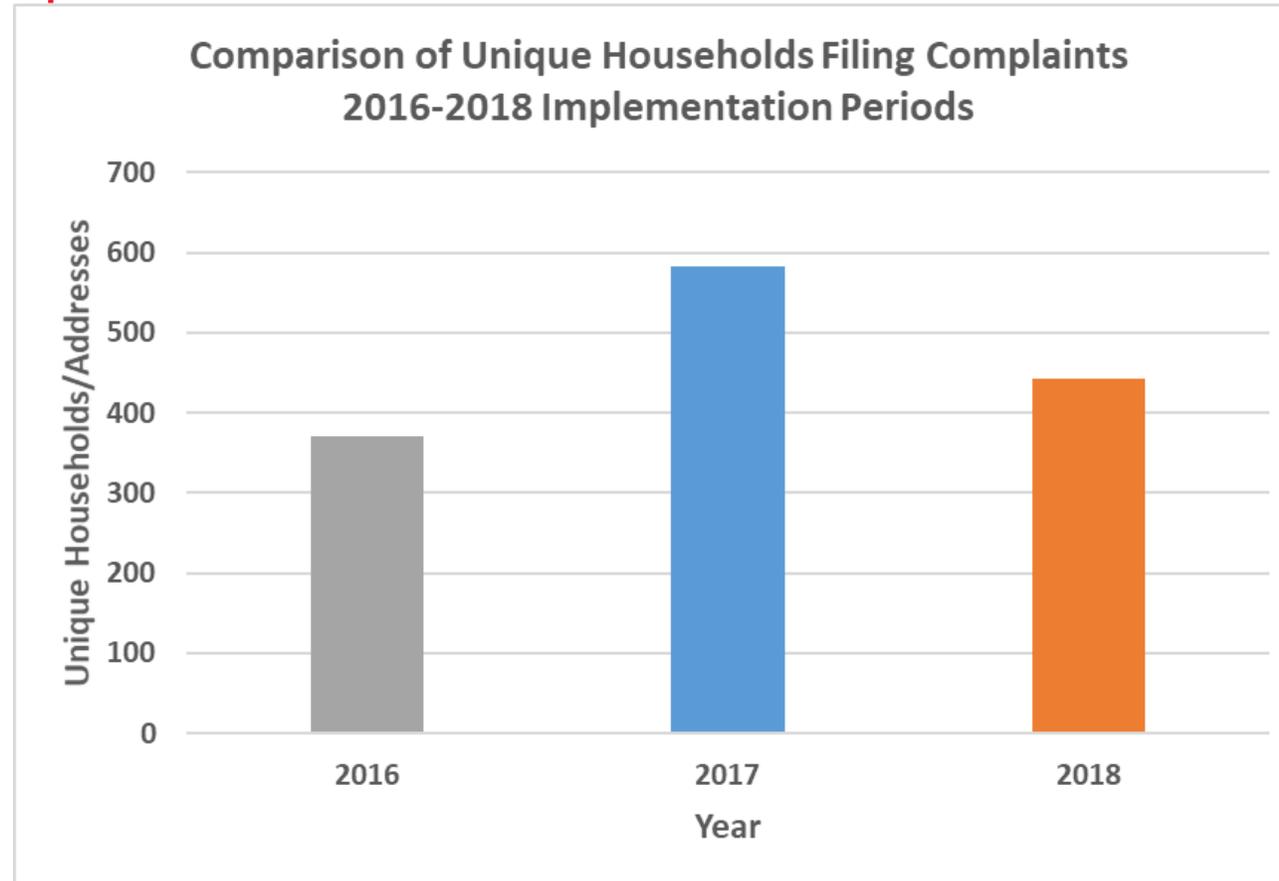
Note: Curfews were not in effect in 2017 or 2018



HTO Address-based Complaint Analysis: 2016-2018 Implementation Periods

- Only some HTO complaints contain address/household information
 - All PlaneNoise complaints – anonymized address latitude and longitude
 - Air Noise Report Manual complaints – anonymized address latitude and longitude
- Other HTO complaints do not contain address information
 - Air Noise Report Mapped complaints
 - Latitude and longitude of aircraft location when complaint is filed
 - No address information is provided when a complaint is filed
- Air Noise Report Mapped complaints were omitted from this analysis as a specific address/household could not be identified for each complaint

Unique Households Filing Complaints: 2016-2018 Implementation Periods



Notes:

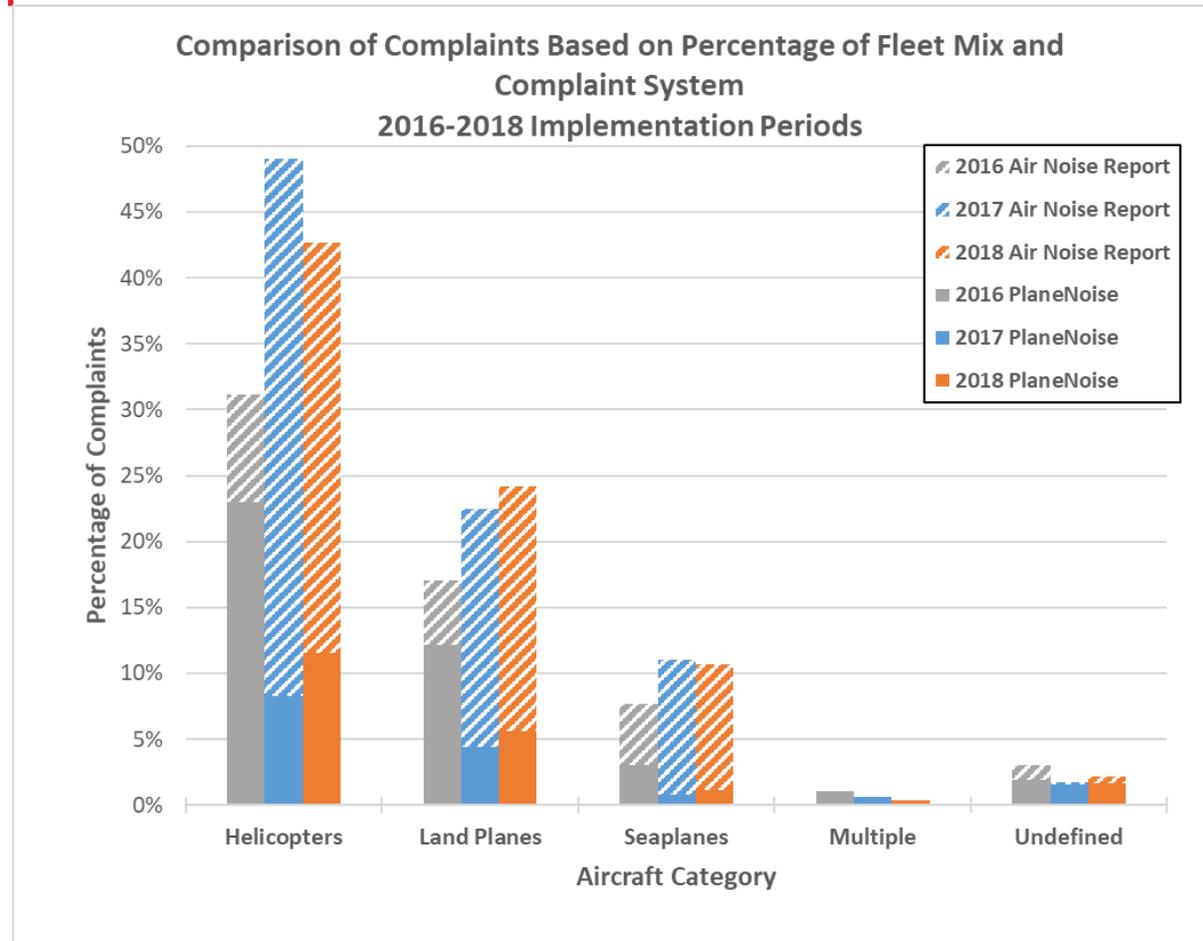
- Curfews were not in effect in 2017 or 2018
- Does Not include complaint locations filed from Air Noise Report Mapped complaints



Complaint Method of Reporting Top Level Observations

- General 2018 Implementation Period method of reporting observations
 - 80% (27,924) of all complaints were filed through Air Noise Report
 - 20% (7,115) of all complaints were filed through PlaneNoise
- Air Noise Report remained the primary method of reporting complaints as has been the case since the system became operational in 2016

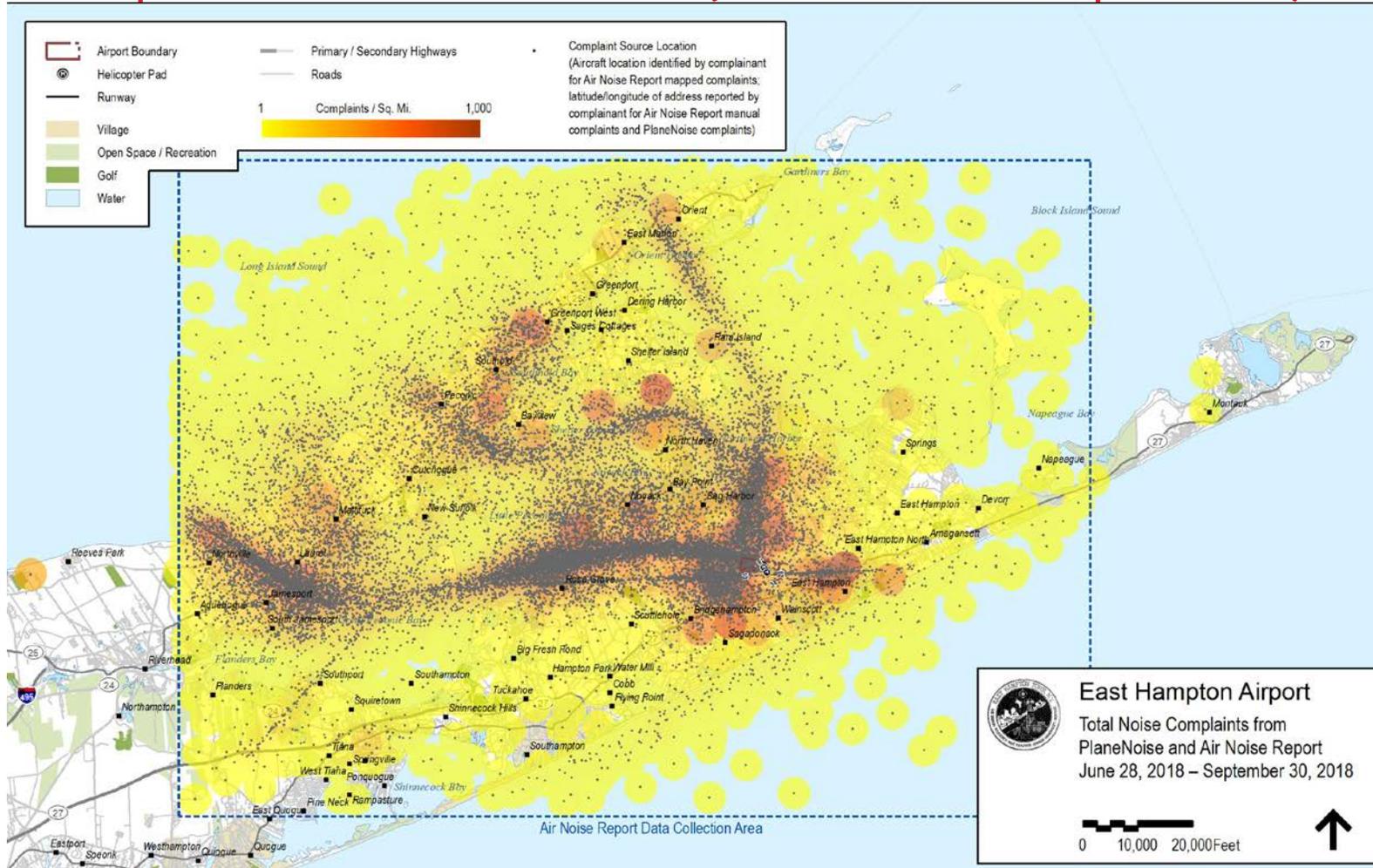
Percentage of Complaints by Reporting System: 2016-2018 Implementation Periods



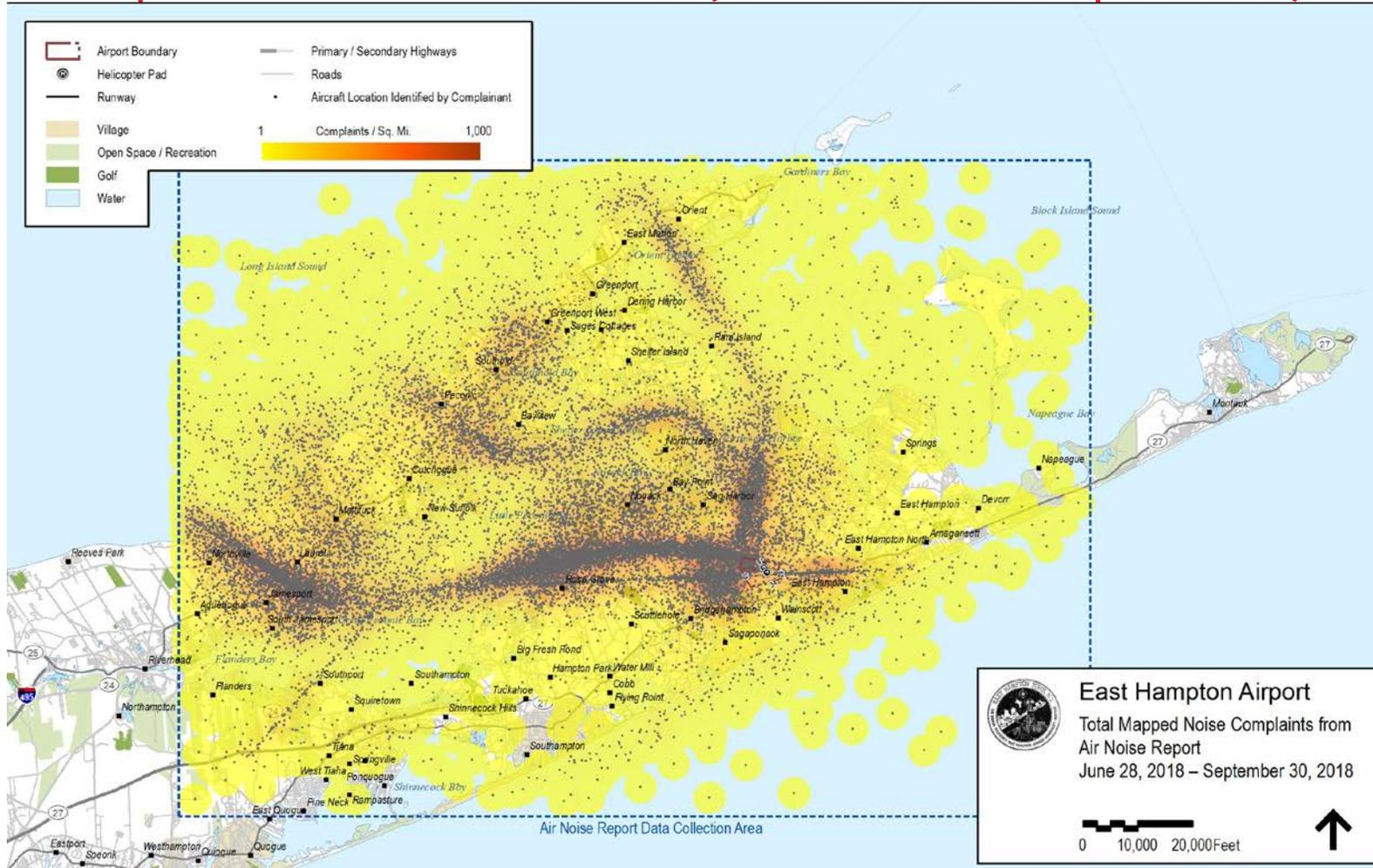
Note: Curfews were not in effect in 2017 or 2018



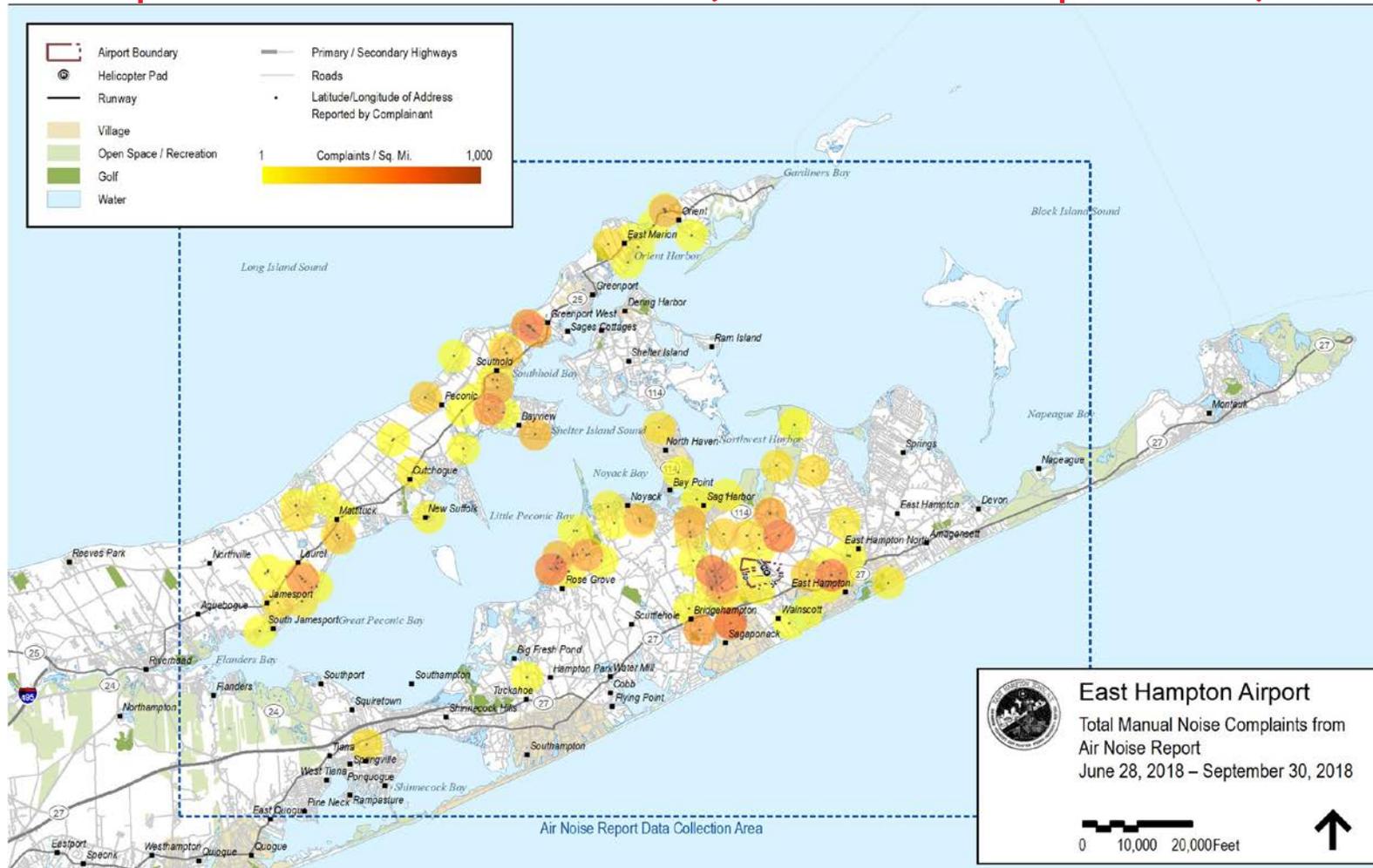
All Complaints from PlaneNoise and Air Noise Report June 28 - September 30, 2018 (35,039 Complaints)



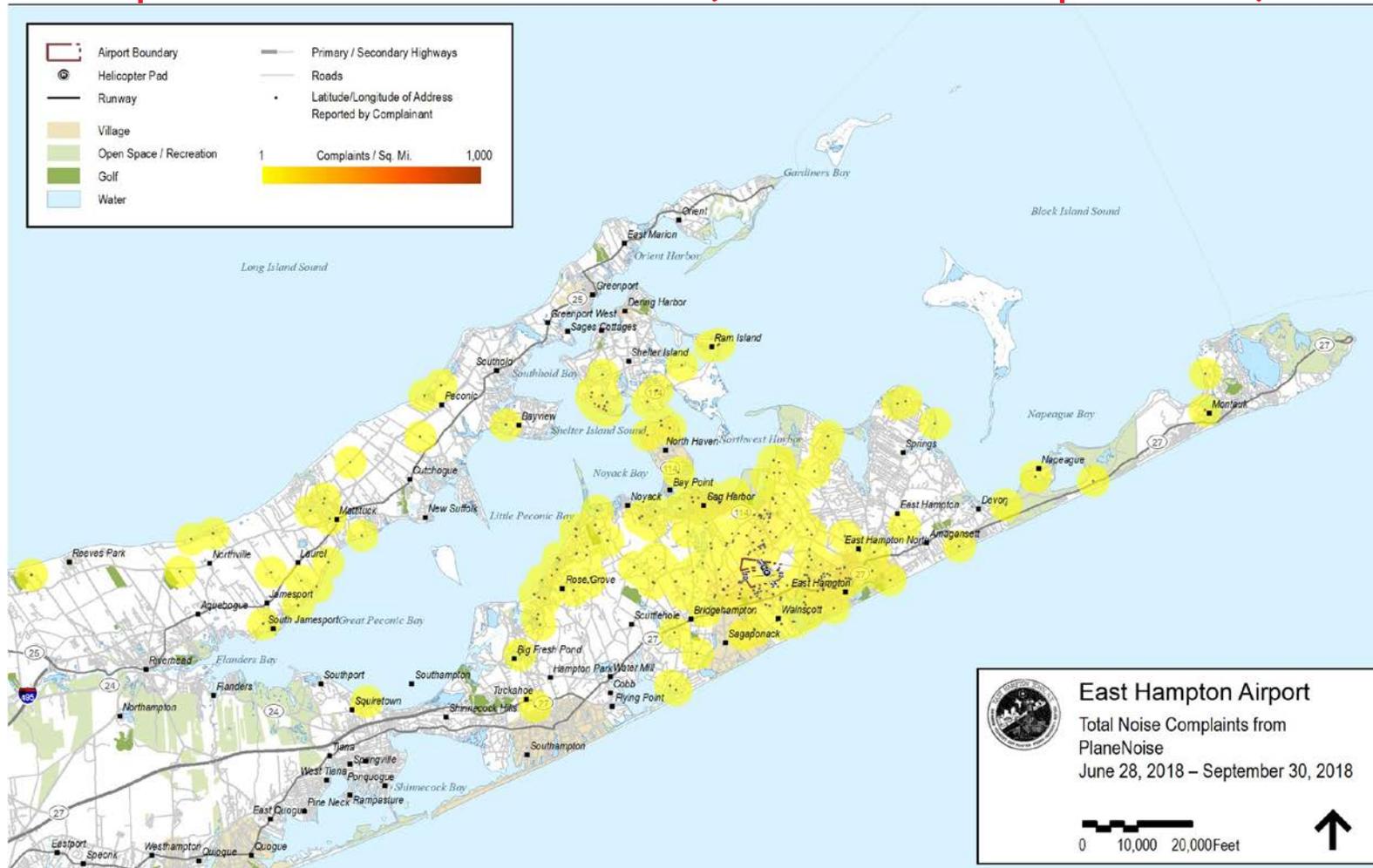
All "Mapped" Complaints from Air Noise Report June 28 - September 30, 2018 (22,388 Complaints)



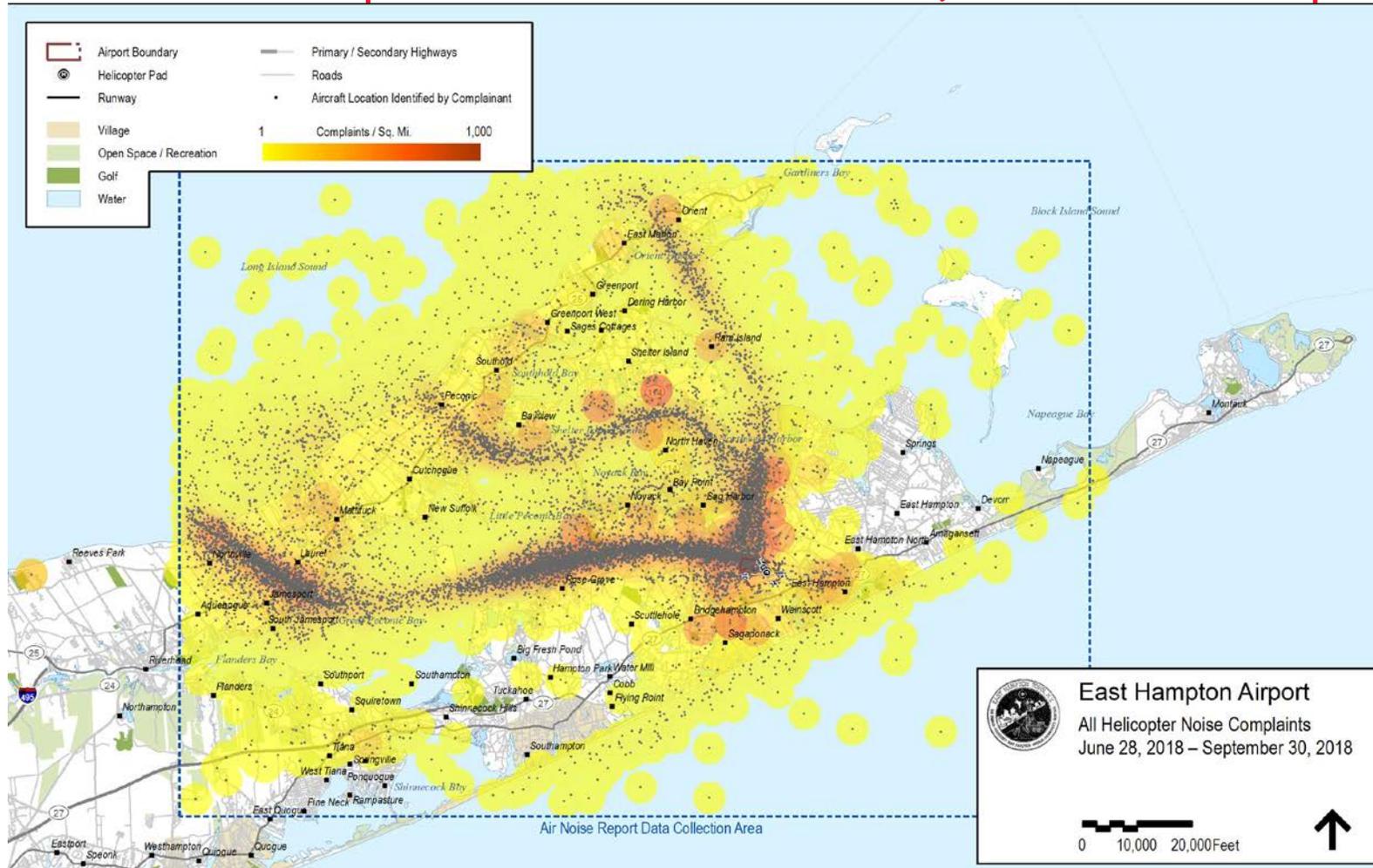
All "Manual" Complaints from Air Noise Report June 28 - September 30, 2018 (5,536 Complaints)



All Complaints from PlaneNoise June 28 - September 30, 2018 (7,115 Complaints)



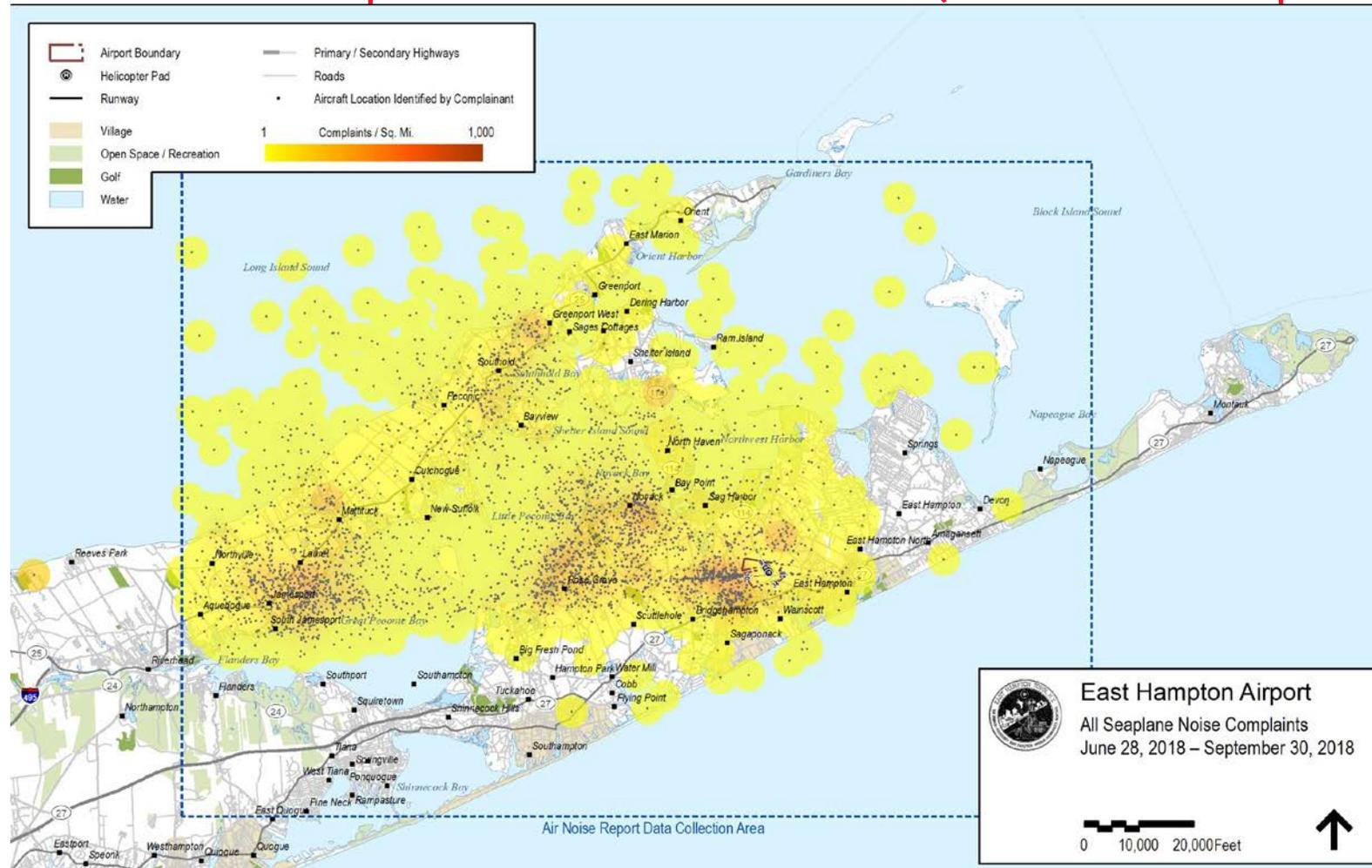
All Helicopter Complaints from PlaneNoise and Air Noise Report June 28 - September 30, 2018 (18,983 complaints)



All Helicopter Complaints from PlaneNoise and Air Noise Report June 28 - September 30, 2018 (18,983 complaints)



All Seaplane Complaints from PlaneNoise and Air Noise Report June 28 - September 30, 2018 (4,153 complaints)



Air Noise Report Mapped Complaint Aircraft Type Analysis Overview

- Only Air Noise Report Mapped complaints contain specific aircraft type information
 - PlaneNoise and Air Noise Report manual complaints allow for a selection of an aircraft category, but specific aircraft types are not provided
 - Air Noise Report Mapped complaints utilize aircraft ADS-B and MODE S information (if equipped) to identify specific aircraft type and registration based on publically available FAA data
 - Air Noise Report Mapped complaint aircraft type and registration data allows for matching with the Vector system for matching with HTO operations
- This analysis examines the top helicopter and fixed-wing aircraft types for which mapped complaints were filed in Air Noise Report for the 2018 Implementation Period and compares them to operations associated with those types at HTO



Air Noise Report Mapped Complaint Aircraft Type Analysis Overview

- The Bell 407 (a “other” helicopter) was the aircraft model that led to the most complaints
 - B407’s performed the third most operations of any aircraft model
- The Sikorsky S76 helicopter (a “noisy” helicopter) was the aircraft type that led to the second most complaints
 - S76’s performed the most operations
- The Cessna Caravan C208 seaplane (not in the “noisy” category) was the aircraft model that led to the third most complaints
 - C208s performed the second most operations
- The 2018 data continues to confirm that complaints are a function of aircraft noisiness and frequency of operation

Discussion

Appendix: History of Operational Restrictions at HTO and Helpful Definitions

April 7, 2015 Problem Statement

- Noise from aircraft operating at HTO disturbs many residents of the East End of Long Island
- Residents find helicopters more disturbing than any category of fixed-wing aircraft
- Disturbance caused by all types of aircraft is most significant when operations are (1) most frequent and (2) in evening, night, and early morning hours

History of Operational Restrictions

- Three restrictions enacted in April 2015
 - Nighttime Curfew. All aircraft, all year from 11 PM – 7 AM
 - Extended Curfew. “Noisy” aircraft, all year from 8 PM – 9 AM
 - One-Trip-Per-Week Limit. “Noisy” aircraft during the summer season (May-September)
 - Restrictions not immediately implemented due to litigation
- Two curfews implemented on July 2, 2015
 - This is the basis for analysis of the “Implementation Period,” from the Thursday before July 4 weekend to the end of the summer season on September 30
- All restrictions enjoined by federal appellate court in November 2016
- Restrictions not in effect since November 2016



Helpful Definitions

- “Noisy aircraft”: Aircraft with 91.0 EPNdB or higher published approach level
- “Implementation period”: Thursday before July 4 – September 30
 - This date range is based on initial implementation curfews in 2015
 - June 30 – September 30, 2016
 - June 29 – September 30, 2017
 - June 28 – September 30, 2018
- “Nighttime curfew”: Prohibit all aircraft operations year-round 11 PM – 7 AM enjoined in November 2016
- “Extended curfew”: Prohibit noisy aircraft year-round 8 PM – 9 AM (adds 8 – 11 PM and 7 – 9 AM evening and morning hours to nighttime curfew hours) enjoined in November 2016
- “Land planes”: Fixed-wing aircraft that land on runways and cannot land on water
- “Seaplanes”: Fixed-wing aircraft that can land on water and also (in most cases) on land



Appendix: Additional 2018 Implementation Period HTO Operations Tables

Operations Data: 2016-2018 Implementation Periods

Implementation Period Operation Comparisons							
Aircraft Category	2016 Operations	2017 Operations	2018 Operations	2016-2017 Numerical Change	2016-2017 Percentage Change	2017-2018 Numerical Change	2017-2018 Percentage Change
Helicopters	3,770	5,577	5,729	1,802	48%	152	3%
Land Planes	9,173	9,604	9,299	483	5%	-305	-3%
Seaplanes	2,155	2,023	2,128	-131	-6%	105	5%
Multiple	0	0	0	0	0%	0	0%
Undefined	593	799	581	319	54%	-218	-27%
Grand Total	15,691	18,003	17,737	2,473	16%	-266	-1%

Implementation Period Operations by Percentage of Fleet Mix								
Aircraft Category	2016 Operations	2017 Operations	2018 Operations	2016 Percentage of Operations	2017 Percentage of Operations	2018 Percentage of Operations	2016-2017 Percentage of Operations Change	2017-2018 Percentage of Operations Change
Helicopter	3,770	5,577	5,729	24%	31%	32%	7%	1%
Land Planes	9,173	9,604	9,299	58%	53%	52%	-5%	-1%
Seaplanes	2,155	2,023	2,128	14%	11%	12%	-3%	1%
Multiple	0	0	0	0%	0%	0%	0%	0%
Undefined	593	799	581	4%	4%	3%	0%	-1%
Grand Total	15,691	18,003	17,737	100%	100%	100%	n/a	n/a

Notes:

- Curfews were not in effect in 2017 or 2018
- 2017 operations revised relative to prior analyses to reflect removal of duplicates in Vector system



Appendix: Additional 2018 Implementation Period HTO Complaint Tables and Graphics

Complaint Data: 2016-2018 Implementation Periods

Implementation Period Complaint Comparisons							
Aircraft Category	2016 Complaints	2017 Complaints	2018 Complaints	2016-2017 Numerical Change	2016-2017 Percentage Change	2017-2018 Numerical Change	2017-2018 Percentage Change
Helicopters	12,837	26,502	18,983	13,665	106%	-7,519	-28%
Land Planes	6,927	12,417	10,456	5,490	79%	-1,961	-16%
Seaplanes	2,540	5,456	4,153	2,916	115%	-1,303	-24%
Multiple	257	297	130	40	16%	-167	-56%
Undefined	1,157	1,513	1,317	356	31%	-196	-13%
Grand Total	23,718	46,185	35,039	22,467	95%	-11,146	-24%

Implementation Period Complaints by Percentage of Fleet Mix								
Aircraft Category	2016 Complaints	2017 Complaints	2018 Complaints	2016 Percentage of Complaints	2017 Percentage of Complaints	2018 Percentage of Complaints	2016-2017 Percentage of Complaints Change	2017-2018 Percentage of Complaints Change
Helicopter	12,837	26,502	18,983	54%	57%	54%	3%	-3%
Land Planes	6,927	12,417	10,456	29%	27%	30%	-2%	3%
Seaplanes	2,540	5,456	4,153	11%	12%	12%	1%	0%
Multiple	257	297	130	1%	1%	0%	0%	0%
Undefined	1,157	1,513	1,317	5%	3%	4%	-2%	0%
Grand Total	23,718	46,185	35,039	100%	100%	100%	n/a	n/a

Note: Curfews were not in effect in 2017 or 2018



Complaint Data by Method of Reporting: 2016-2018 Implementation Periods

Implementation Period Complaints by Method of Reporting							
Complaint System	Method of Reporting	2016 Complaints	2017 Complaints	2018 Complaints	2016 Complaint Percentage	2017 Complaint Percentage	2018 Complaint Percentage
PlaneNoise	Hotline	3,190	1,578	1,401	13%	3%	4%
	Fax	1	0	0	0%	0%	0%
	Mobile App	0	0	2,922	0%	0%	8%
	Manual	1,247	607	269	5%	1%	1%
	Email	514	231	91	2%	0%	0%
	Webform	4,802	4,831	2421	20%	10%	7%
	PlaneNoise Total	9,754	7,247	7,115	40%	15%	20%
Air Noise Report	Manual	4,678	10,069	5,536	20%	22%	16%
	Mapped	9,286	28,869	22,388	39%	63%	64%
	Air Noise Report Total	13,964	38,938	27,924	59%	84%	80%
Grand Total		23,718	46,185	35,039	100%	100%	100%

Notes:

- Curfews were not in effect in 2017 or 2018
- PlaneNoise “manual” complaints are multiple listed dates/times from hotline and webform complaints that PlaneNoise manually enters into the system. Air Noise Report “manual” complaints are those that complainants manually entered via the webform



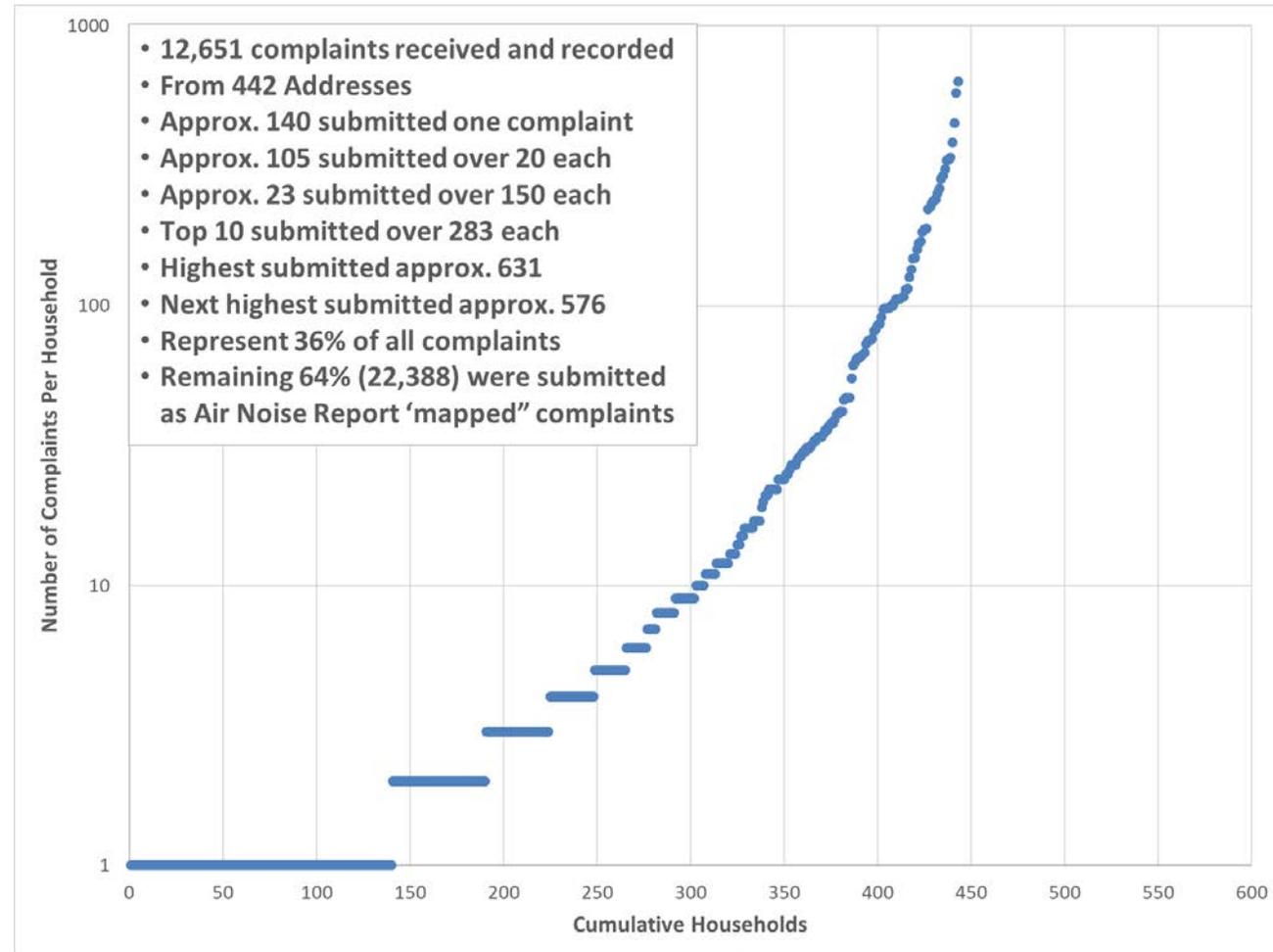
Complaint Data by Complaint System and Aircraft Category: 2016 - 2018 Implementation Periods

Implementation Period Complaints by Complaint System															
Aircraft Category	PlaneNoise Complaints			Air Noise Report Complaints			Total Complaints			PlaneNoise Percentage of Total Complaints			Air Noise Report Percentage of Total Complaints		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Helicopters	5,449	3,833	4,041	7,388	22,669	14,942	12,837	26,502	18,983	23%	8%	12%	31%	49%	43%
Land Planes	2,885	2,037	1,980	4,042	10,380	8,476	6,927	12,417	10,456	12%	4%	6%	17%	22%	24%
Seaplanes	718	375	396	1,822	5,081	3,757	2,540	5,456	4,153	3%	1%	1%	8%	11%	11%
Multiple	257	297	130	N/A	N/A	N/A	257	297	130	1%	1%	0%	n/a	n/a	n/a
Undefined	445	705	568	712	808	749	1,157	1,513	1,317	2%	2%	2%	3%	2%	2%
Grand Total	9,754	7,247	7,115	13,964	38,938	27,924	23,718	46,185	35,039	41%	16%	20%	59%	84%	80%

Note: Curfews were not in effect in 2017 or 2018



Complaints Per Household: 2018 Implementation Period



Note: Does Not include complaint locations filed from Air Noise Report Mapped complaints



Appendix:
2018 Implementation Period Air Noise Report
Mapped Complaint Aircraft Type and
Registration Operations and Complaint Tables

Top 20 Helicopter Types Associated with Air Noise Report Mapped Complaints: 2018 Implementation Period

Helicopter Category	Helicopter Type	Air Noise Report Mapped Complaints Filed for Helicopter Type (64% of Total Complaints)	HTO Operations Associated with Helicopter Type, from Vector (100% of Operations)
Other Helicopter	B407	4,312	1,600
Noisy Helicopter	S76	4,016	2,123
Noisy Helicopter	A139	680	303
Noisy Helicopter	B430	492	254
Noisy Helicopter	AS50	358	156
Other Helicopter	EC30	352	153
Noisy Helicopter	AS55	347	241
Noisy Helicopter	S92	344	96
Other Helicopter	B06	314	103
Noisy Helicopter	AS65	278	221
Other Helicopter	R66	275	88
Noisy Helicopter	B427	198	93
Noisy Helicopter	A109	164	142
Noisy Helicopter	EC55	123	53
Other Helicopter	R44	99	15
Noisy Helicopter	B429	87	16
Other Helicopter	H500	46	Note
Other Helicopter	A119	25	37
Noisy Helicopter	BK17	20	10
Noisy Helicopter	EC35	11	Note
Total		12,541	5,704

Note: Vector data did not include any HTO operations associated with this helicopter type



Top 20 Fixed-Wing Aircraft Types Associated with Air Noise Report Mapped Complaints: 2018 Implementation Period

Aircraft Category	Aircraft Type	Air Noise Report Mapped Complaints Filed for Aircraft Type (64% of Total Complaints)	HTO Operations Associated with Aircraft Type, from Vector (100% of Operations)
Seaplane	C208	3,352	2,097
Prop	SR22	647	763
Prop	C172	339	464
Prop	C208	315	168
Prop	PC12	313	722
Other Jet	CL30	264	257
Noisy Jet	C680	239	423
Prop	SR20	212	306
Other Jet	E55P	211	307
Prop	C182	208	273
Prop	PA34	164	479
Other Jet	GLEX	159	85
Other Jet	CL35	150	174
Prop	BE36	147	128
Prop	B350	144	408
Prop	PA31	142	169
Prop	P28A	138	247
Prop	BE58	134	300
Prop	PA32	126	167
Noisy Jet	C56X	120	317
Total		7,524	8,254

Note: Air Noise Report does not display most Jet operations



Top 20 Individual Helicopters Associated with Air Noise Report Mapped Complaints: 2018 Implementation Period

Helicopter Category	Helicopter Type	Aircraft #	Air Noise Report Mapped Complaints Filed Against an Individual Helicopter (64% of Total Complaints)	HTO Operations Associated with That individual Helicopter, from Vector (100% of Operations)
Other Helicopter	B407	1	635	246
Other Helicopter	B407	2	513	147
Other Helicopter	B407	3	495	207
Other Helicopter	B407	4	485	174
Noisy Helicopter	S76	5	479	162
Noisy Helicopter	S76	6	459	196
Other Helicopter	B407	7	400	128
Noisy Helicopter	S76	8	398	131
Noisy Helicopter	S76	9	388	175
Other Helicopter	B407	10	370	147
Other Helicopter	B407	11	347	104
Noisy Helicopter	A139	12	346	91
Noisy Helicopter	S92	13	344	96
Noisy Helicopter	S76	14	309	143
Noisy Helicopter	S76	15	299	142
Other Helicopter	B407	16	287	89
Other Helicopter	B407	17	264	114
Noisy Helicopter	S76	18	240	112
Noisy Helicopter	AS65	19	235	173
Other Helicopter	B407	20	224	89
Total			7,517	2,866

Note: Aircraft # represents an individual aircraft. Registration numbers are not listed for privacy purposes



Top 20 Individual Fixed-Wing Aircraft Associated with Air Noise Report Mapped Complaints: 2018 Implementation Period

Aircraft Category	Aircraft Type	Aircraft #	Air Noise Report Mapped Complaints Filed Against and individual Aircraft (64% of Total Complaints)	HTO Operations Associated with that Individual Aircraft, from Vector (100% of Operations)
Seaplane	C208	1	439	231
Seaplane	C208	2	405	213
Seaplane	C208	3	343	162
Seaplane	C208	4	333	317
Seaplane	C208	5	264	165
Seaplane	C208	6	261	164
Prop	C208	7	260	128
Seaplane	C208	8	245	167
Seaplane	C208	9	199	209
Seaplane	C208	10	176	45
Seaplane	C208	11	145	58
Seaplane	C208	12	144	94
Seaplane	C208	13	134	40
Seaplane	C208	14	123	54
Prop	PA31	15	98	105
Prop	PA34	16	71	122
Prop	SR22	17	60	38
Prop	PA32	18	57	61
Prop	PA34	19	54	128
Prop	SR22	20	54	36
Total			3,865	2,537

Note: Aircraft # represents an individual aircraft. Registration numbers are not listed for privacy purposes



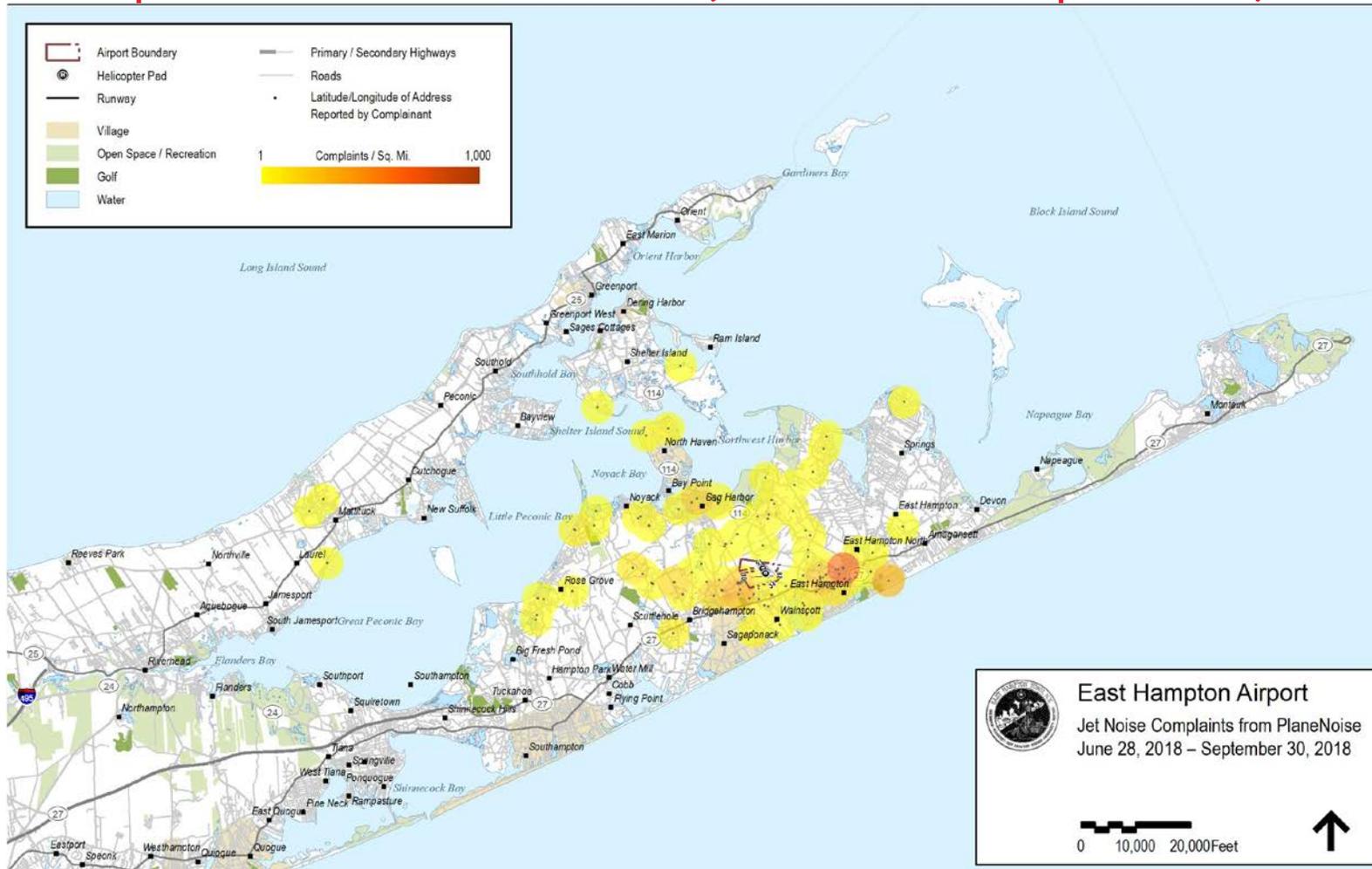
Appendix: Additional 2018 Implementation Period Maps of Geographic Distributions of Complaints

Helicopter Complaints from PlaneNoise June 28 - September 30, 2018 (4,041 Complaints)

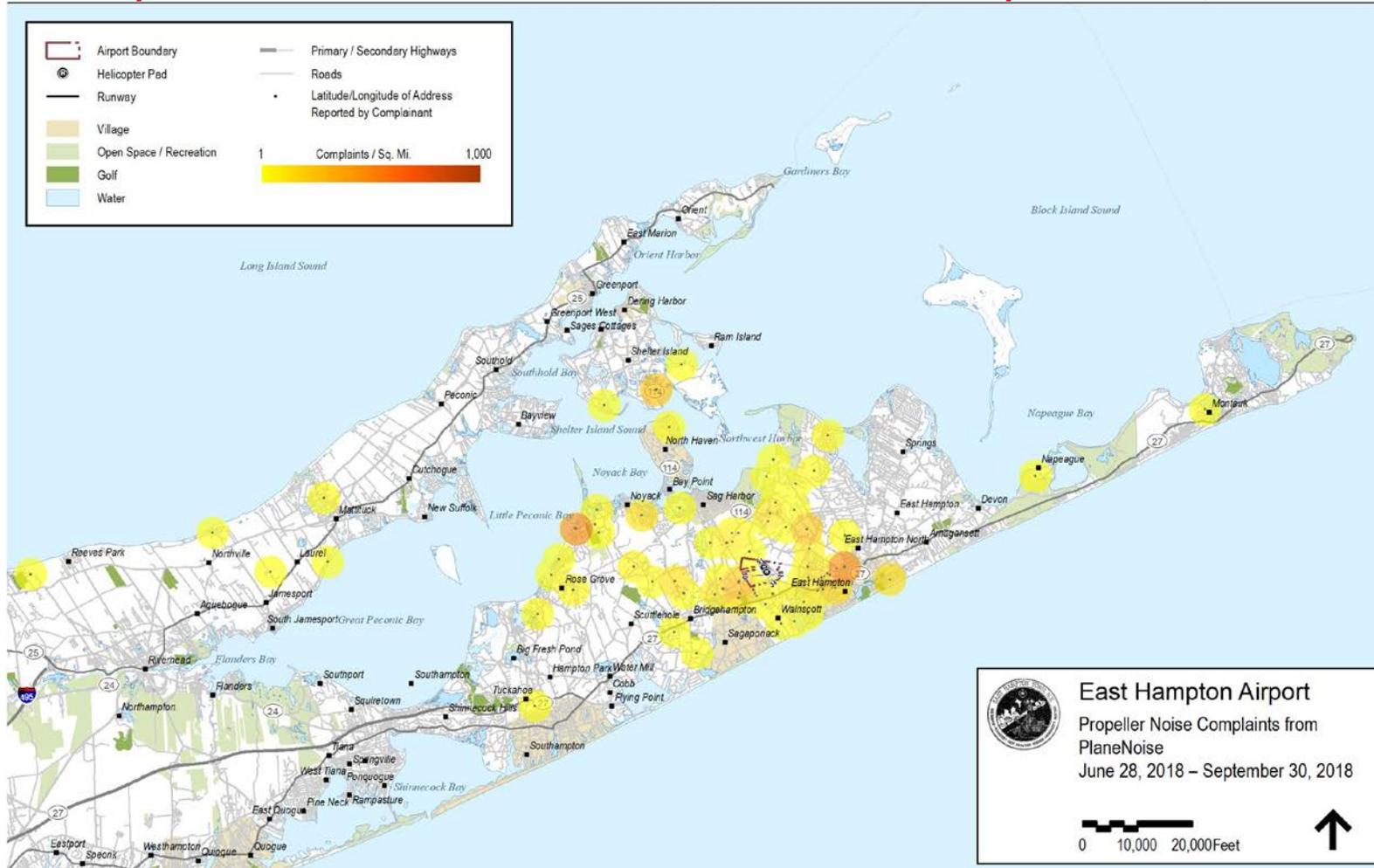


Jet Complaints from PlaneNoise

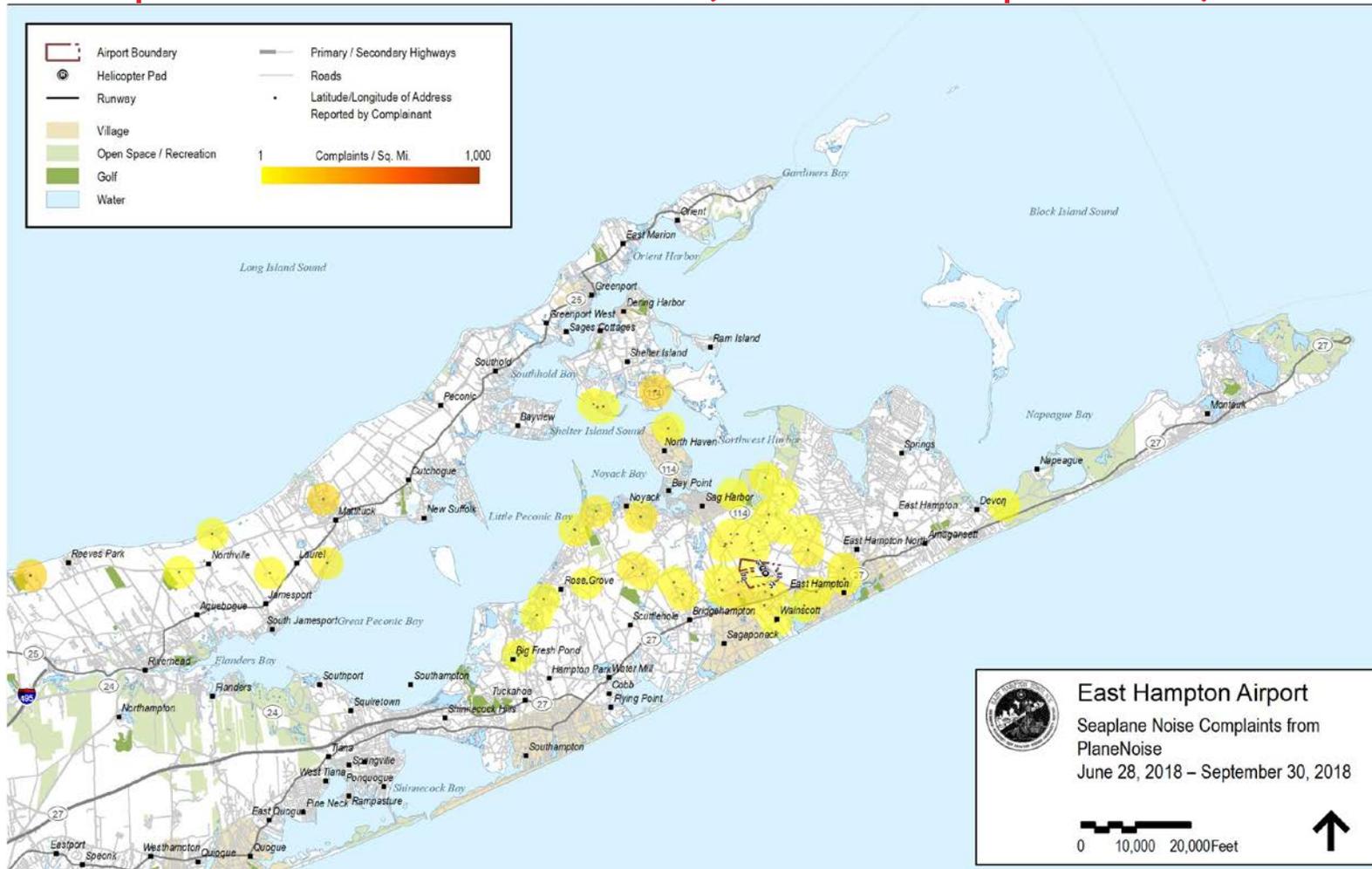
June 28 - September 30, 2018 (1,016 Complaints)



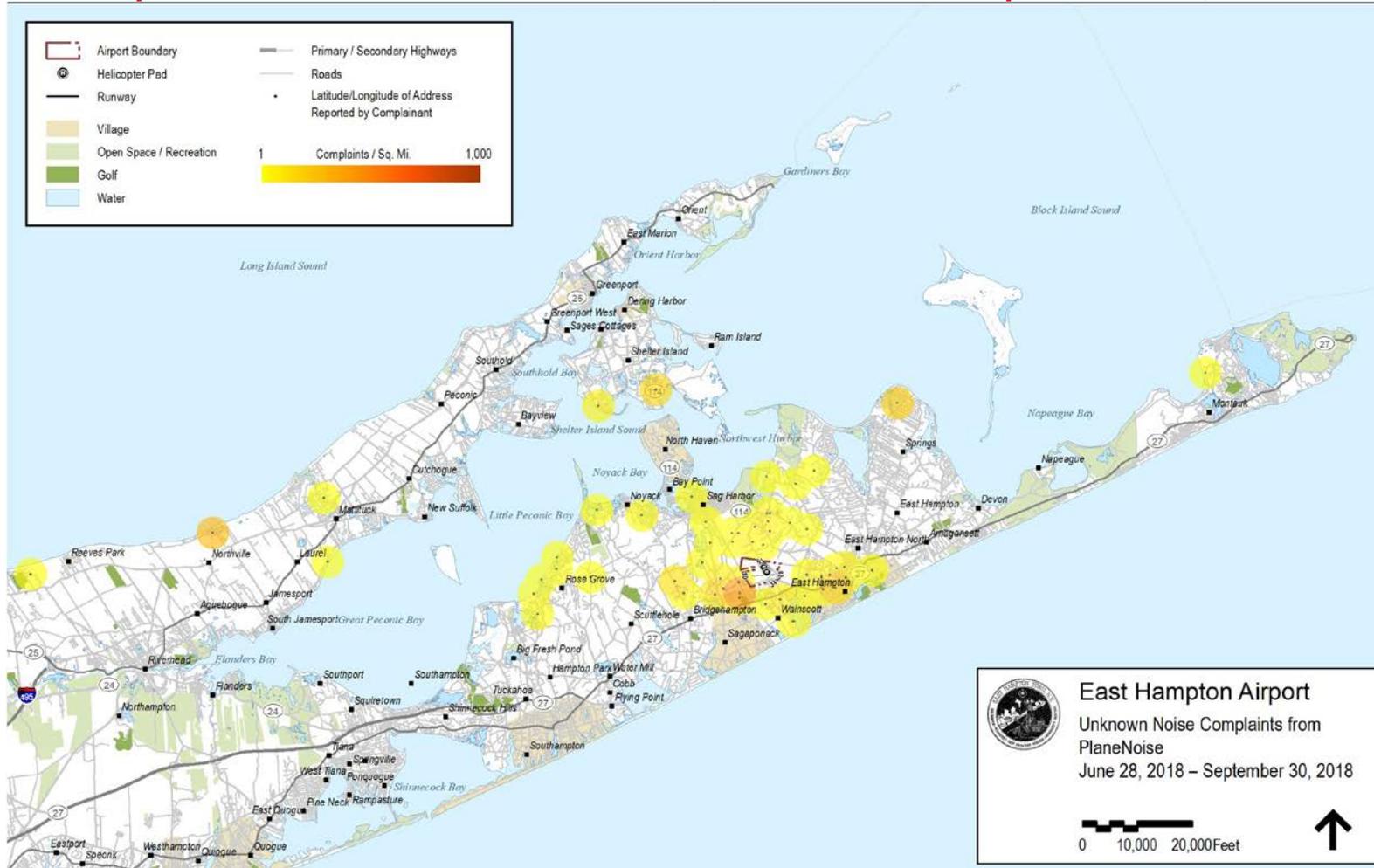
Propeller Complaints from PlaneNoise June 28 - September 30, 2018 (964 Complaints)



Seaplane Complaints from PlaneNoise June 28 - September 30, 2018 (396 Complaints)



Unknown Aircraft Complaints from PlaneNoise June 28 - September 30, 2018 (568 Complaints)



Mapped Helicopter Complaints from Air Noise Report June 28 - September 30, 2018 (12,556 Complaints)



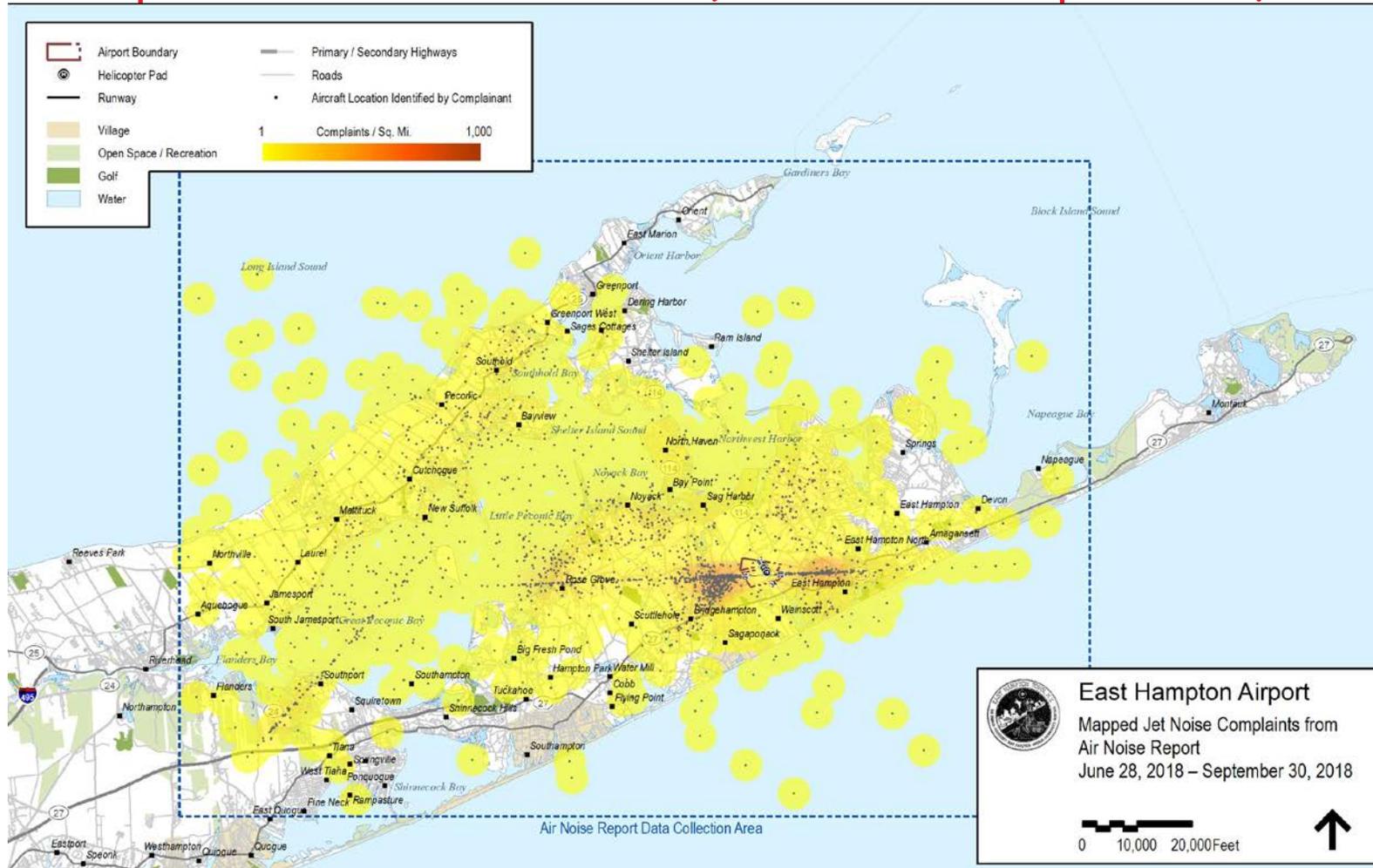
Mapped "Noisy" Helicopter Complaints from Air Noise Report June 28 - September 30, 2018 (7,118 complaints)



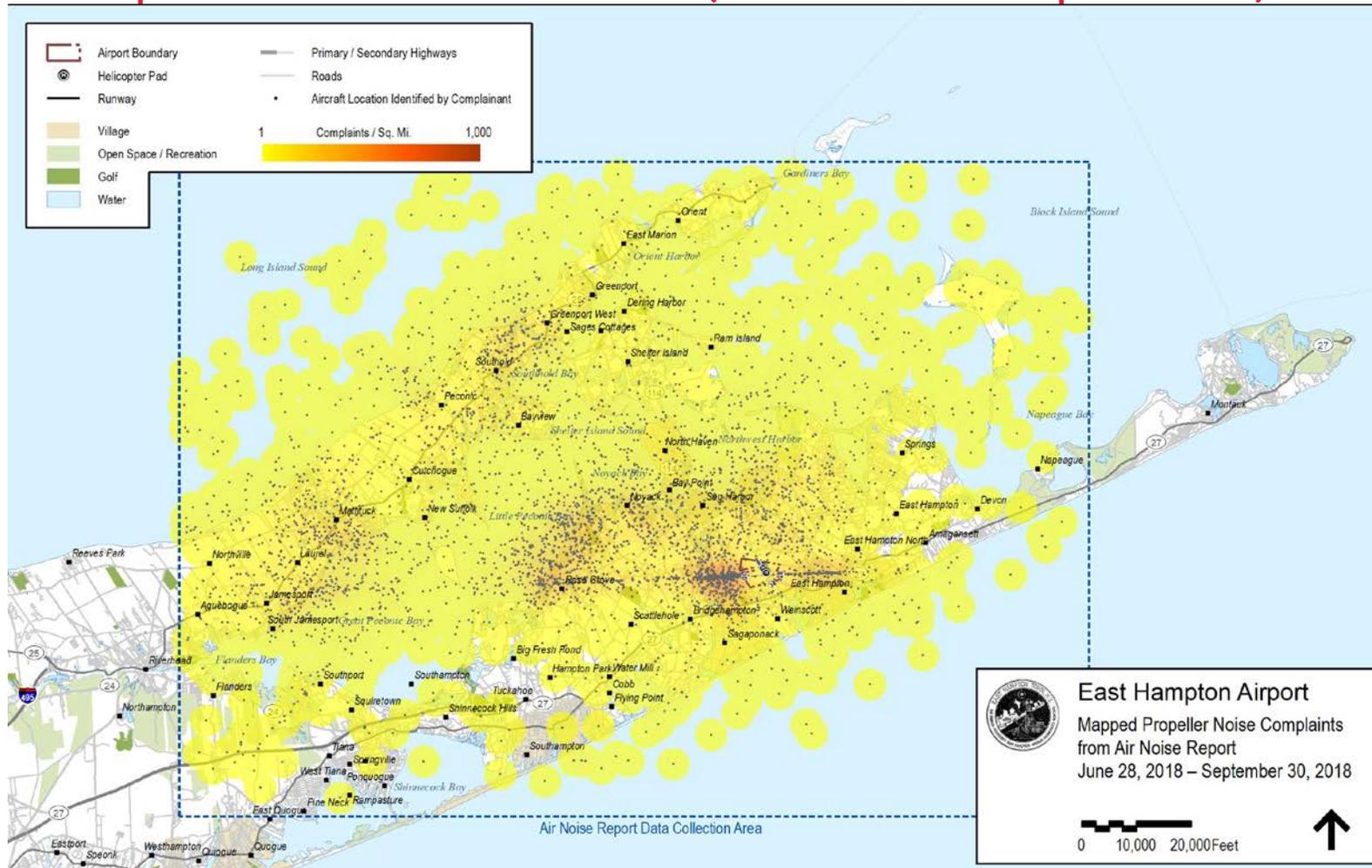
Mapped "Other" Helicopter Complaints from Air Noise Report June 28 - September 30, 2018 (5,438 Complaints)



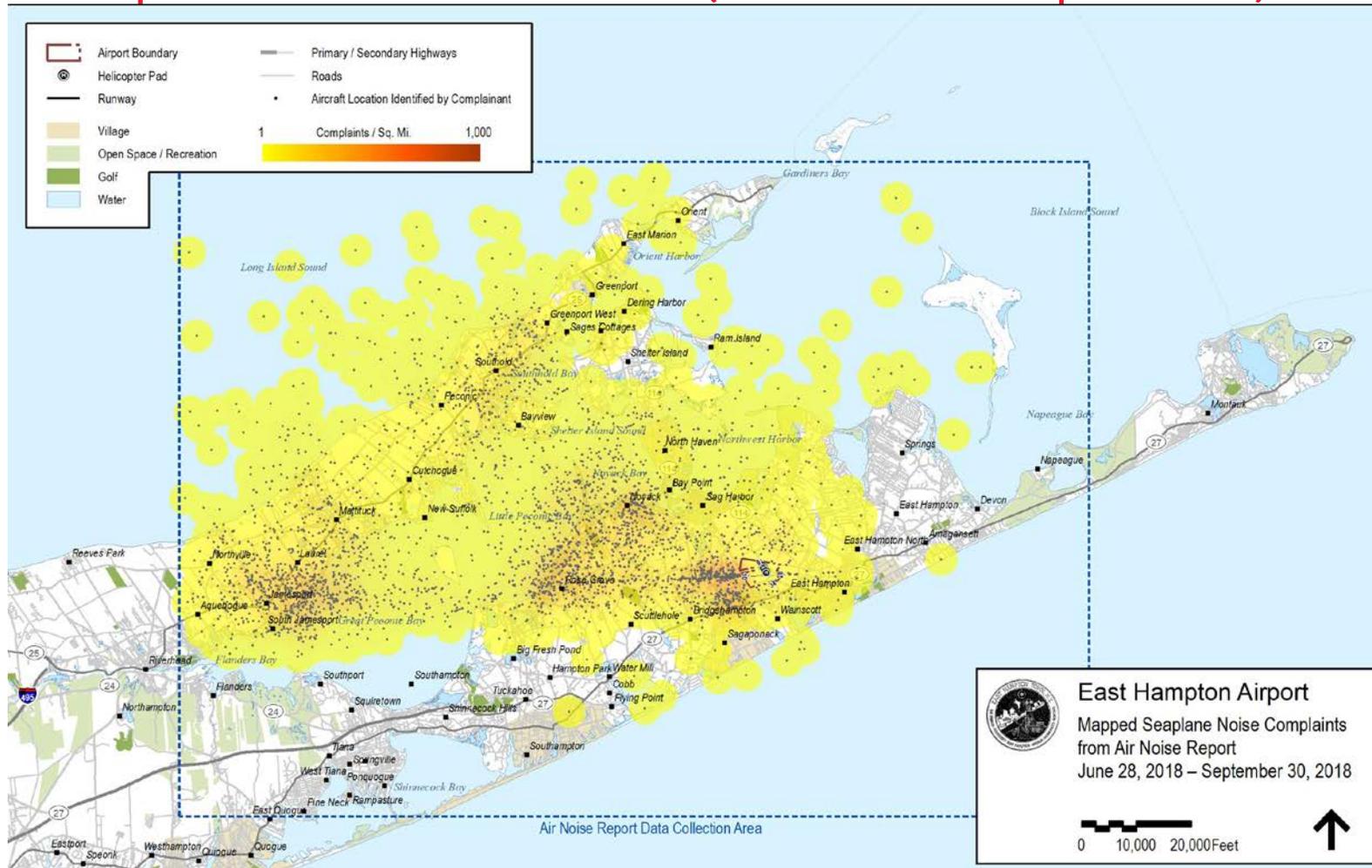
Mapped Jet Complaints from Air Noise Report June 28 - September 30, 2018 (2,000 Complaints)



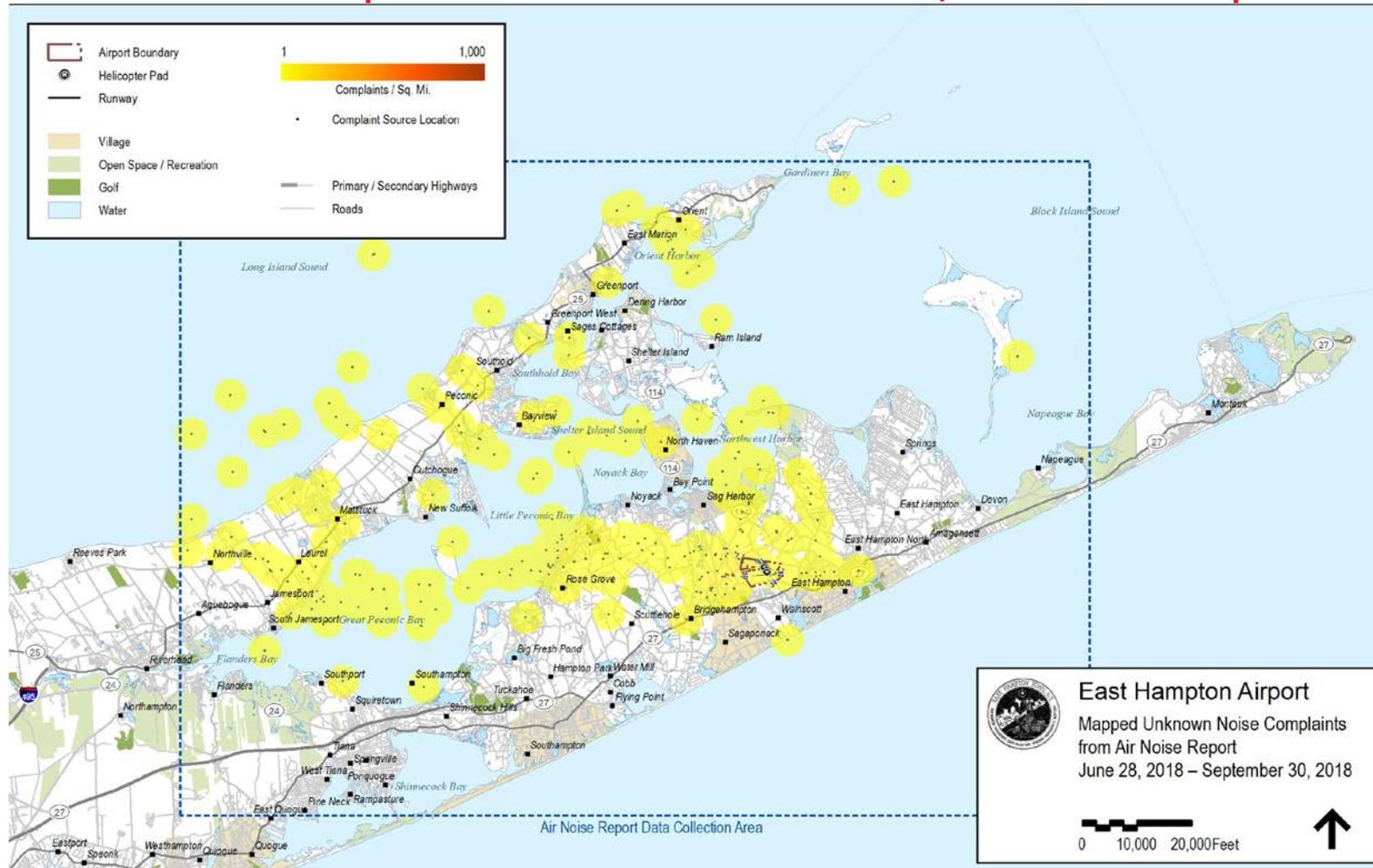
Mapped Propeller Aircraft Complaints from Air Noise Report June 28 - September 30, 2018 (4,229 Complaints)



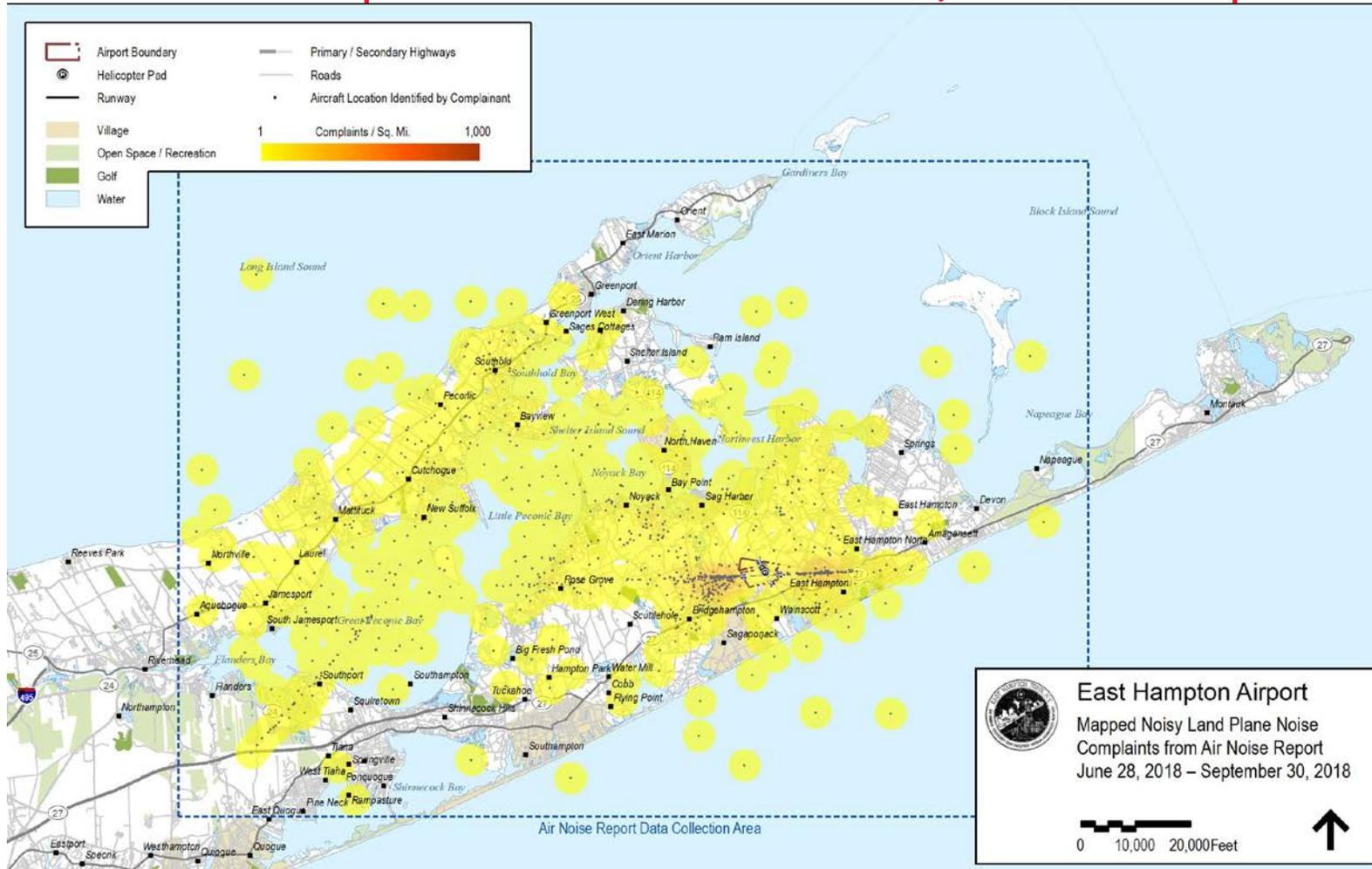
Mapped Seaplane Complaints from Air Noise Report June 28 - September 30, 2018 (3,356 Complaints)



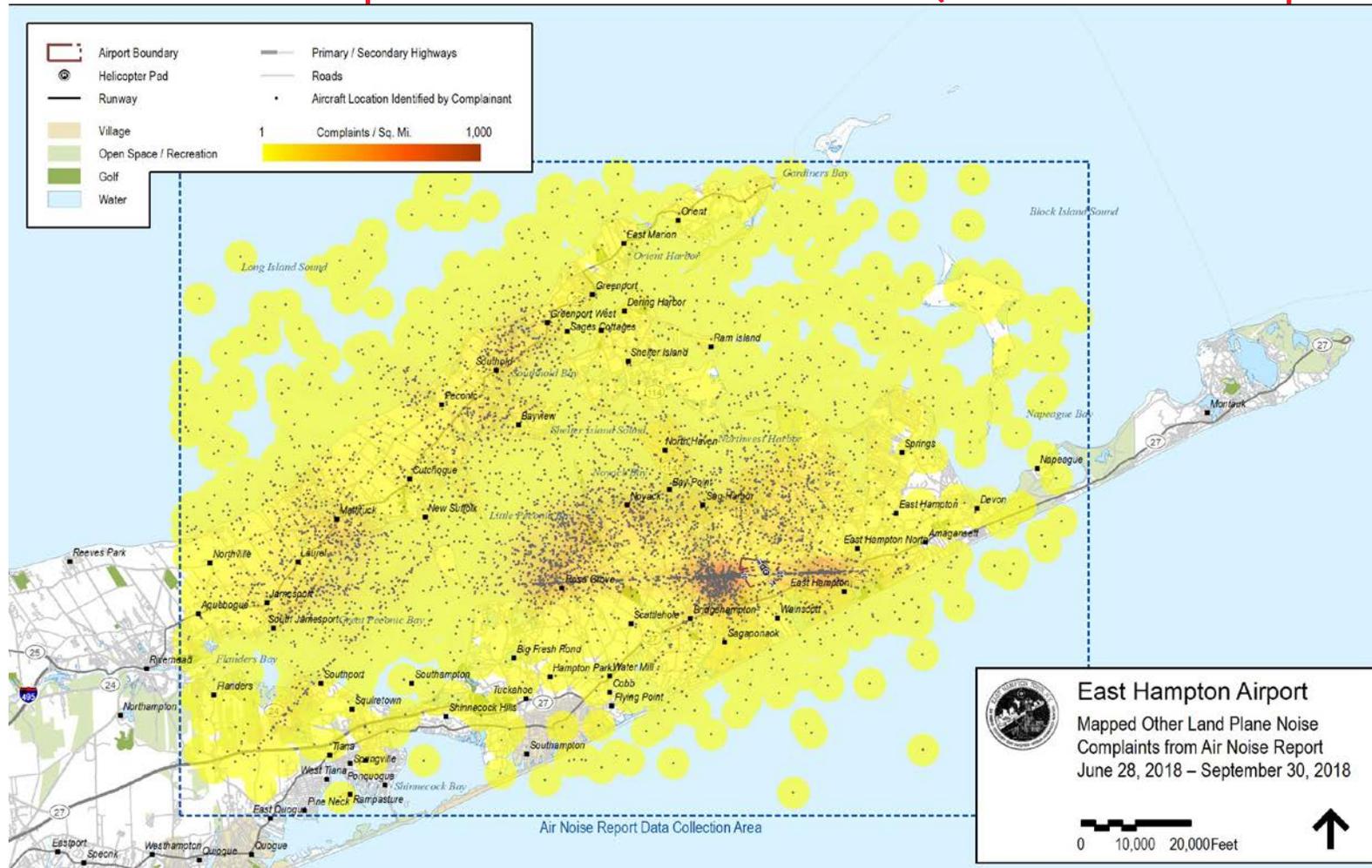
Mapped Unknown Aircraft Complaints from Air Noise Report June 28 - September 30, 2018 (247 Complaints)



Mapped "Noisy" Land Plane Complaints from Air Noise Report June 28 - September 30, 2018 (866 Complaints)



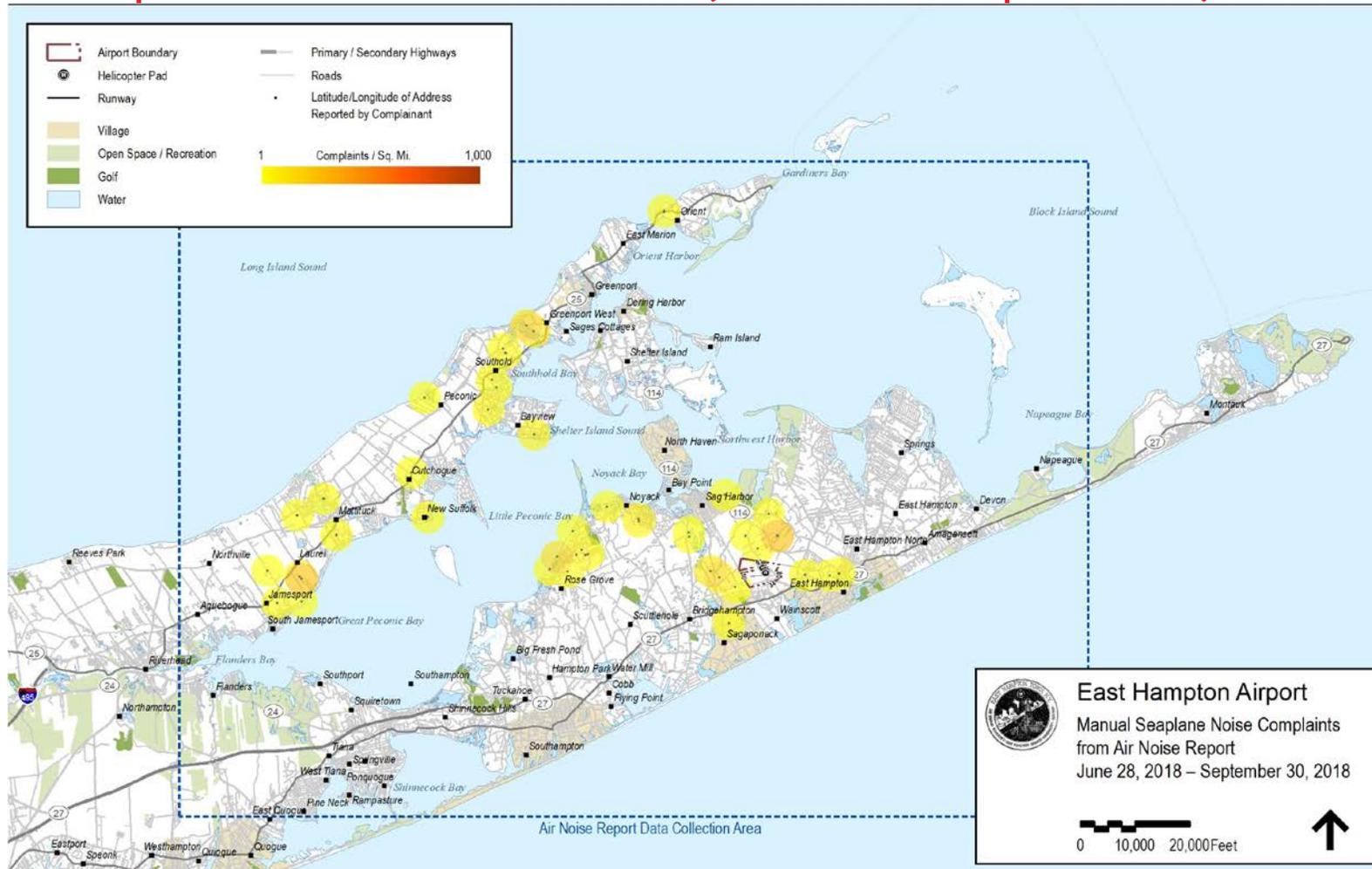
Mapped Other Land Plane Complaints from Air Noise Report June 28 - September 30, 2018 (5,363 Complaints)



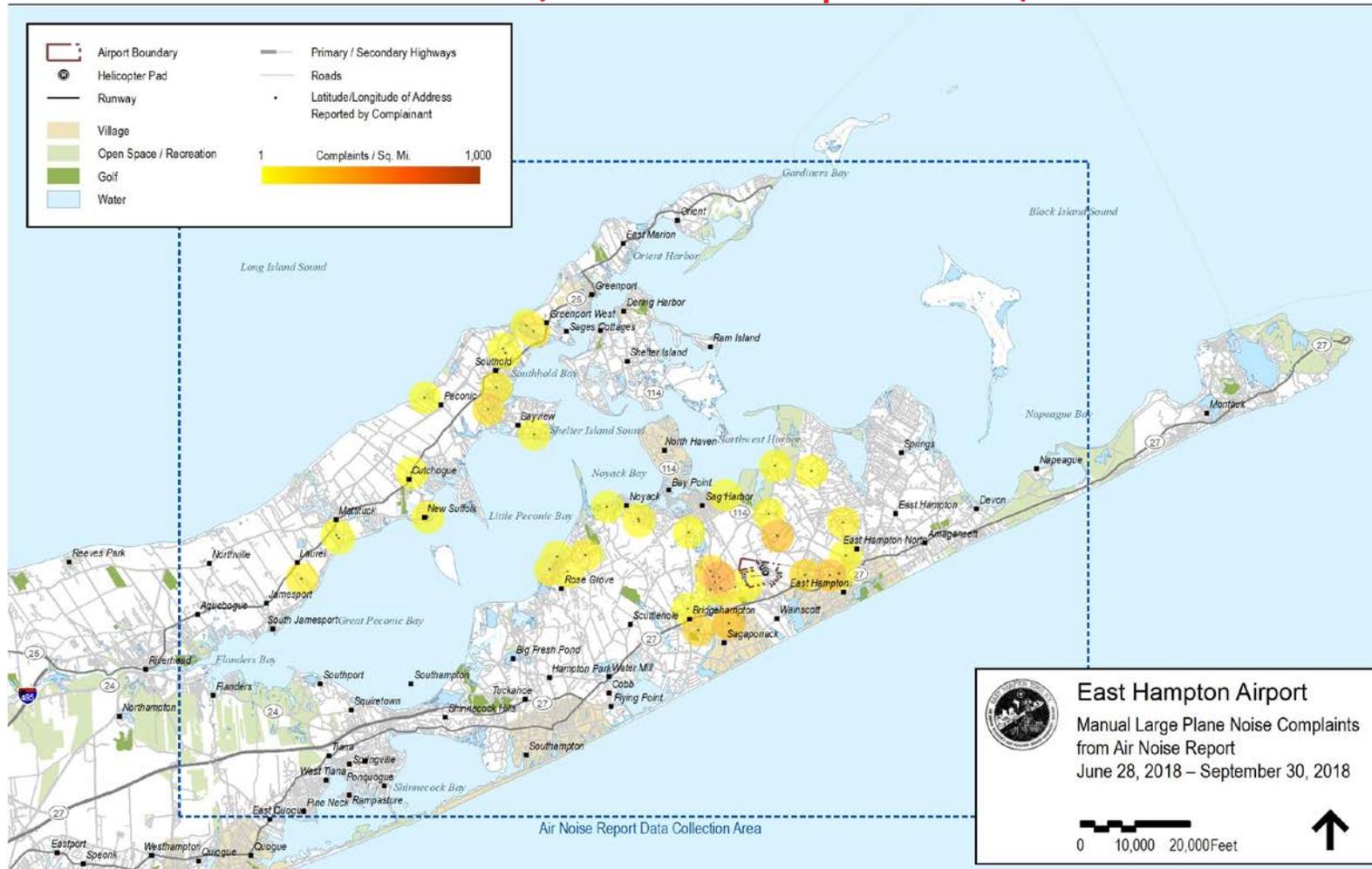
Manual Helicopter Complaints from Air Noise Report June 28 - September 30, 2018 (2,386 Complaints)



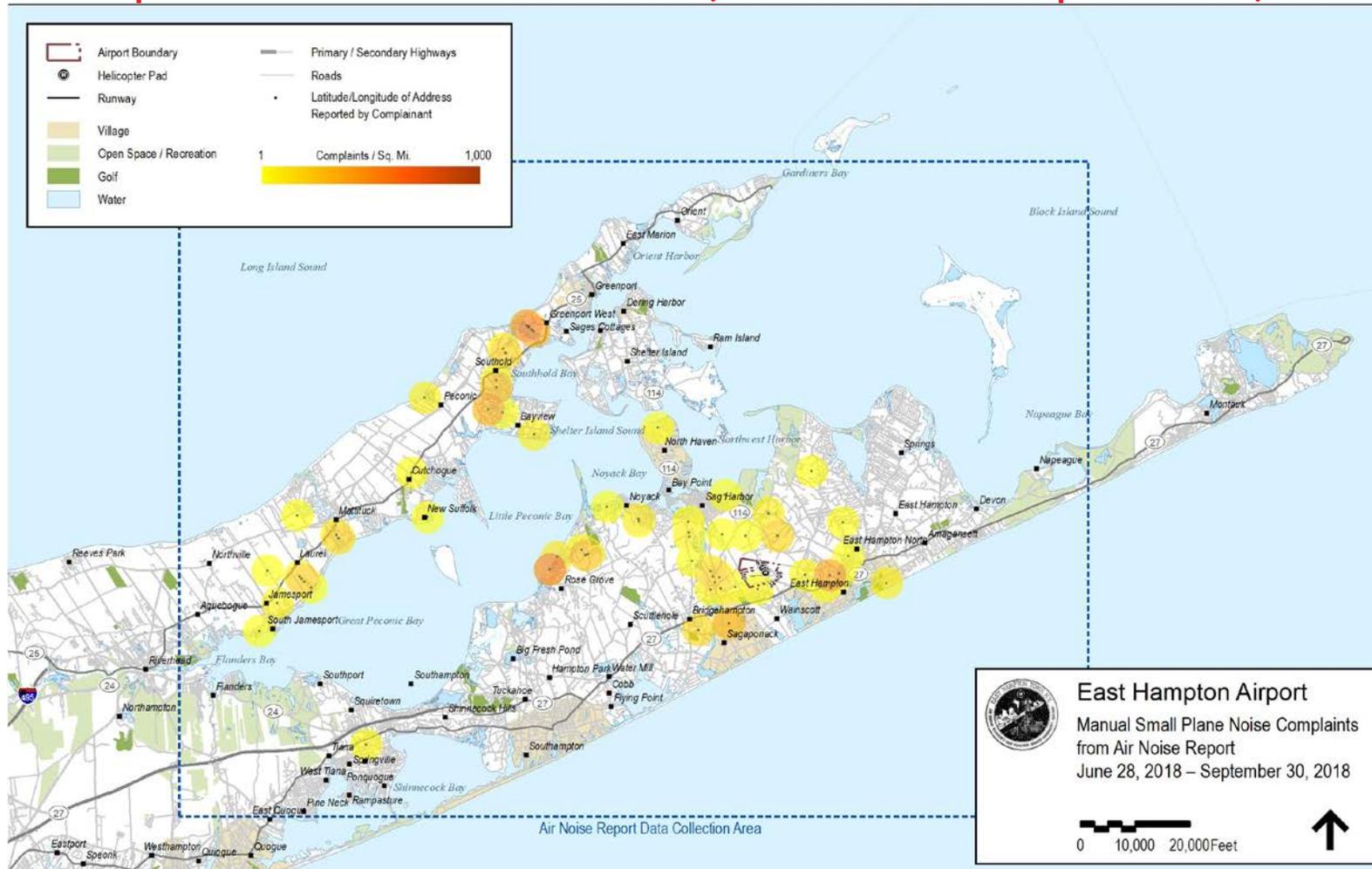
Manual Seaplane Complaints from Air Noise Report June 28 - September 30, 2018 (401 Complaints)



Manual Large Plane Complaints from Air Noise Report June 28 - September 30, 2018 (740 complaints)



Manual Small Plane Complaints from Air Noise Report June 28 - September 30, 2018 (1,507 Complaints)



Manual Unsure Aircraft Complaints from Air Noise Report June 28 - September 30, 2018 (502 Complaints)

