

East Hampton Airport Phase II Noise Analysis

December 2, 2014

Presenters

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HARRIS MILLER MILLER & HANSON INC.

HMMH Background

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- Environmental consulting, with a focus on noise
- Assistance to East Hampton since 2003
 - Measurements, modeling, abatement recommendations
 - Noise program implementation
 - Pilot outreach, operations monitoring, complaint data management
 - Noise analyses for EA on seasonal tower

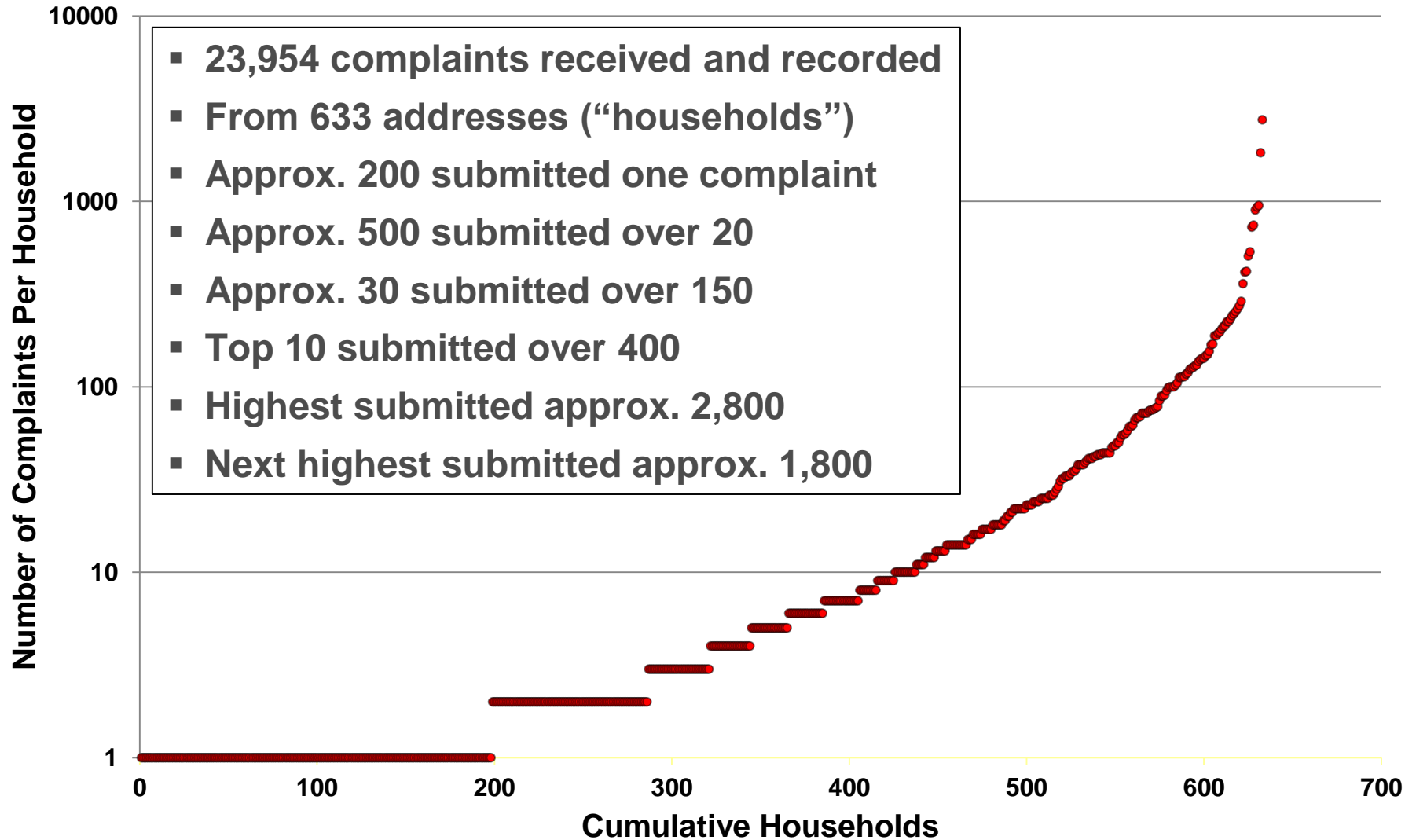


Study context

- **October 30, 2014 Special Town Board Meeting**
 - Presentation of “Noise Analysis Interim Report”
 - Preliminary draft problem definition
 - Initial list of potential alternatives
 - Request for public comment
- **Town Board direction**
 - Recommend problem definition
 - Recommend refined (short) list of most promising alternatives
- **Basic study parameters**
 - Focus on complaints for November 1, 2013 - October 31, 2014
 - Focus on operations data from Vector airfield monitoring system
 - Consider AirScene flight tracking data in next study phase

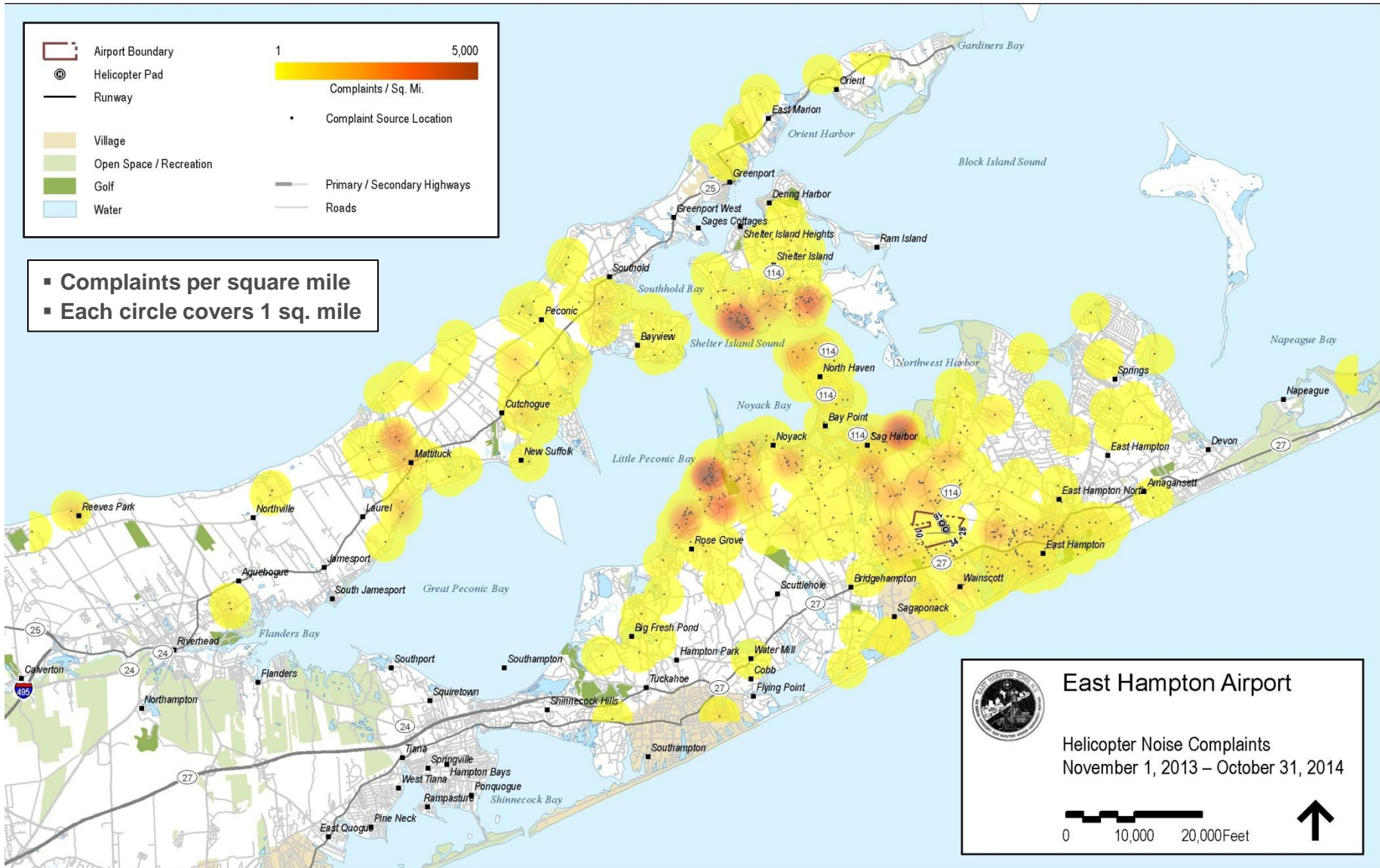
Some overall complaint statistics (11/1/13 – 10/31/14)

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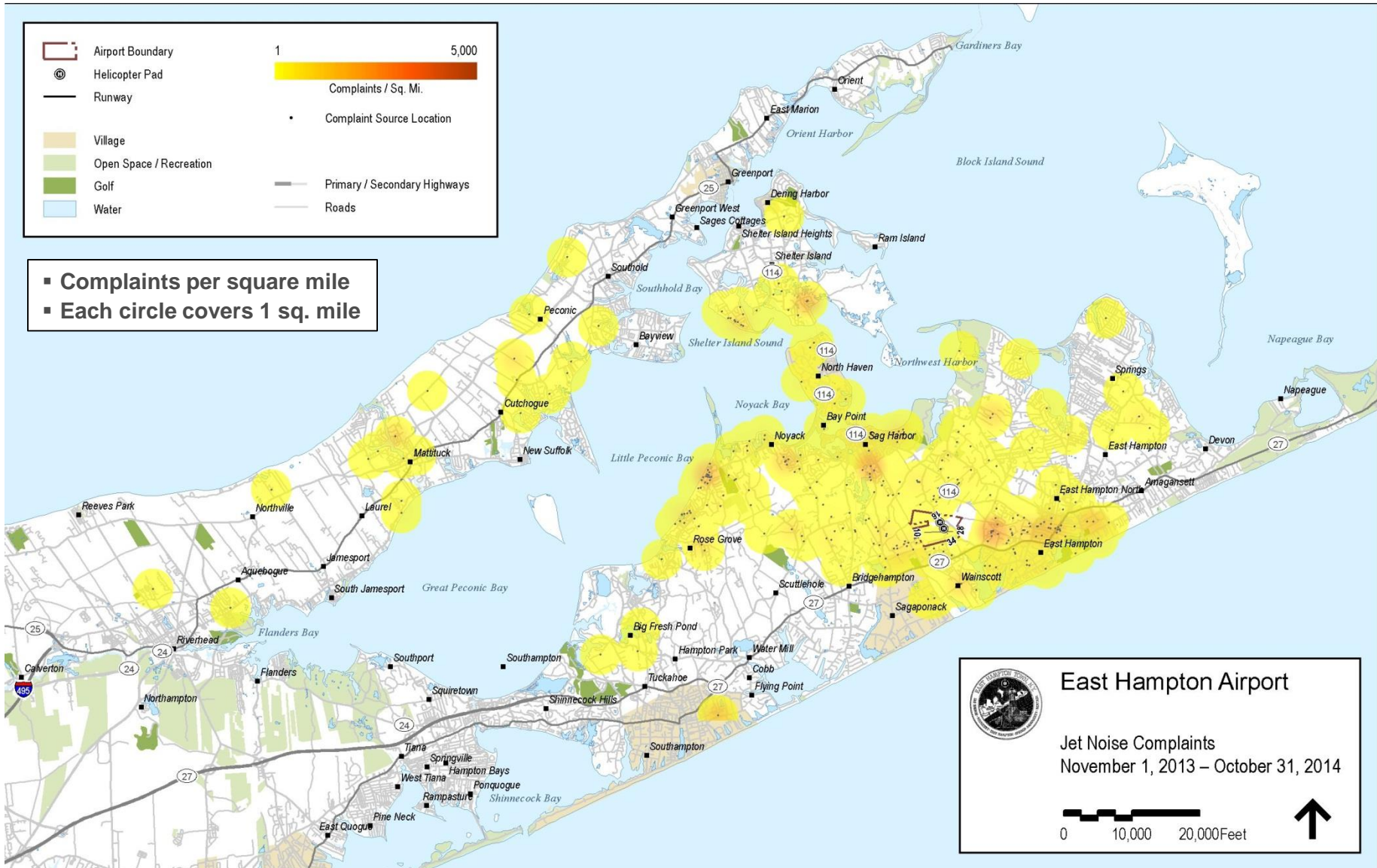
Complaint Density - Helicopters (11/1/13 – 10/31/14)

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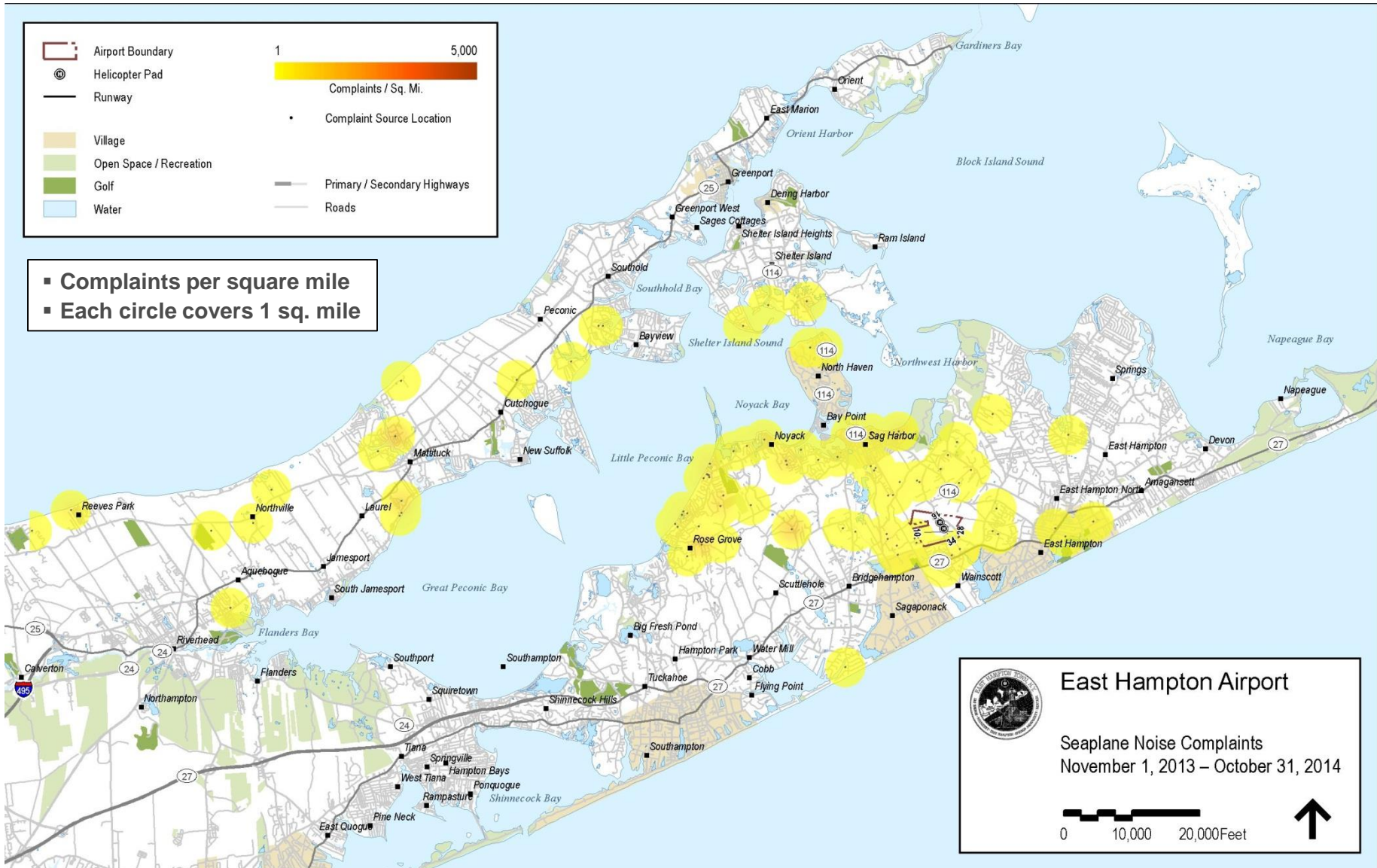
Complaint Density - Jets

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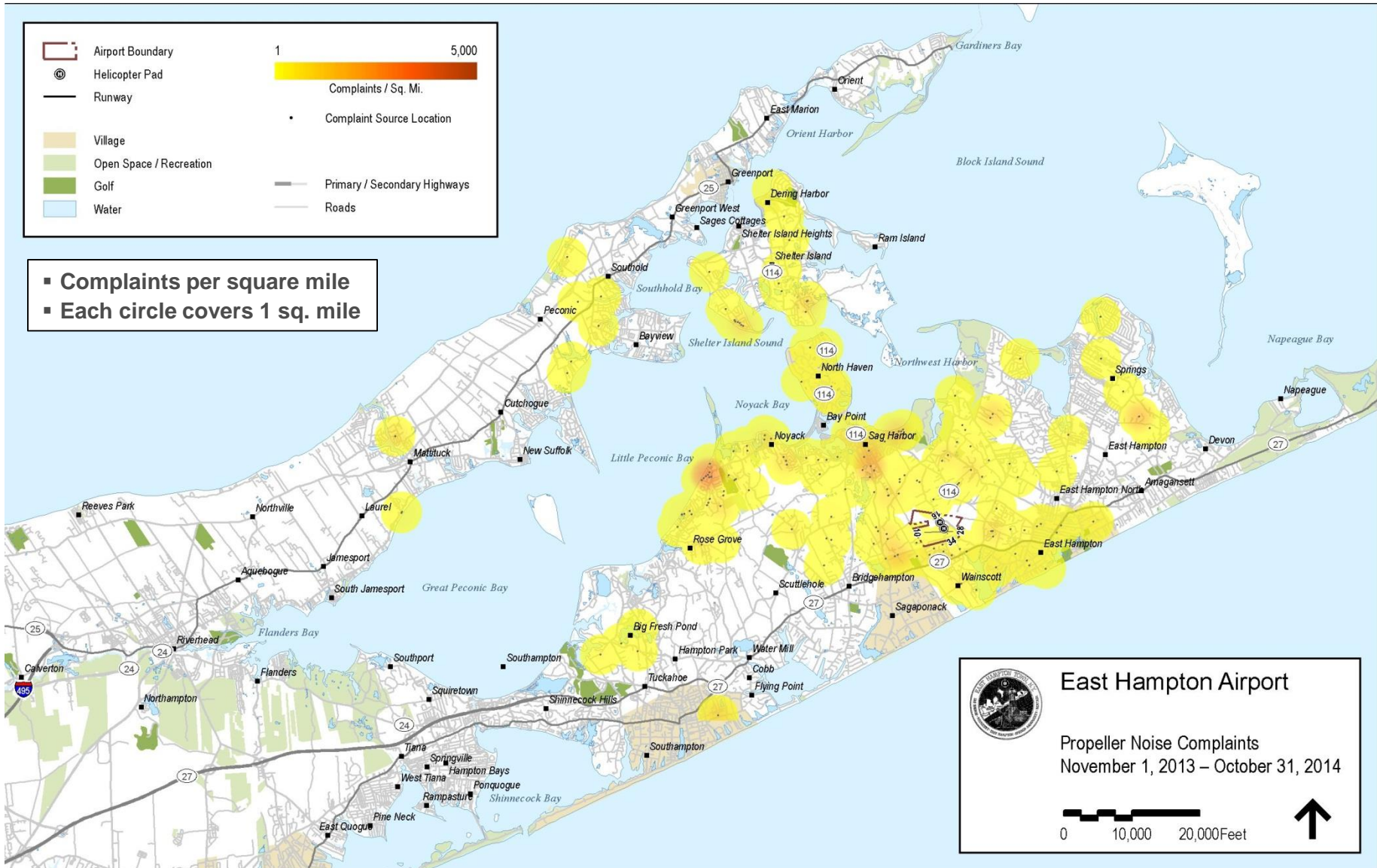
Complaint Density - Seaplanes

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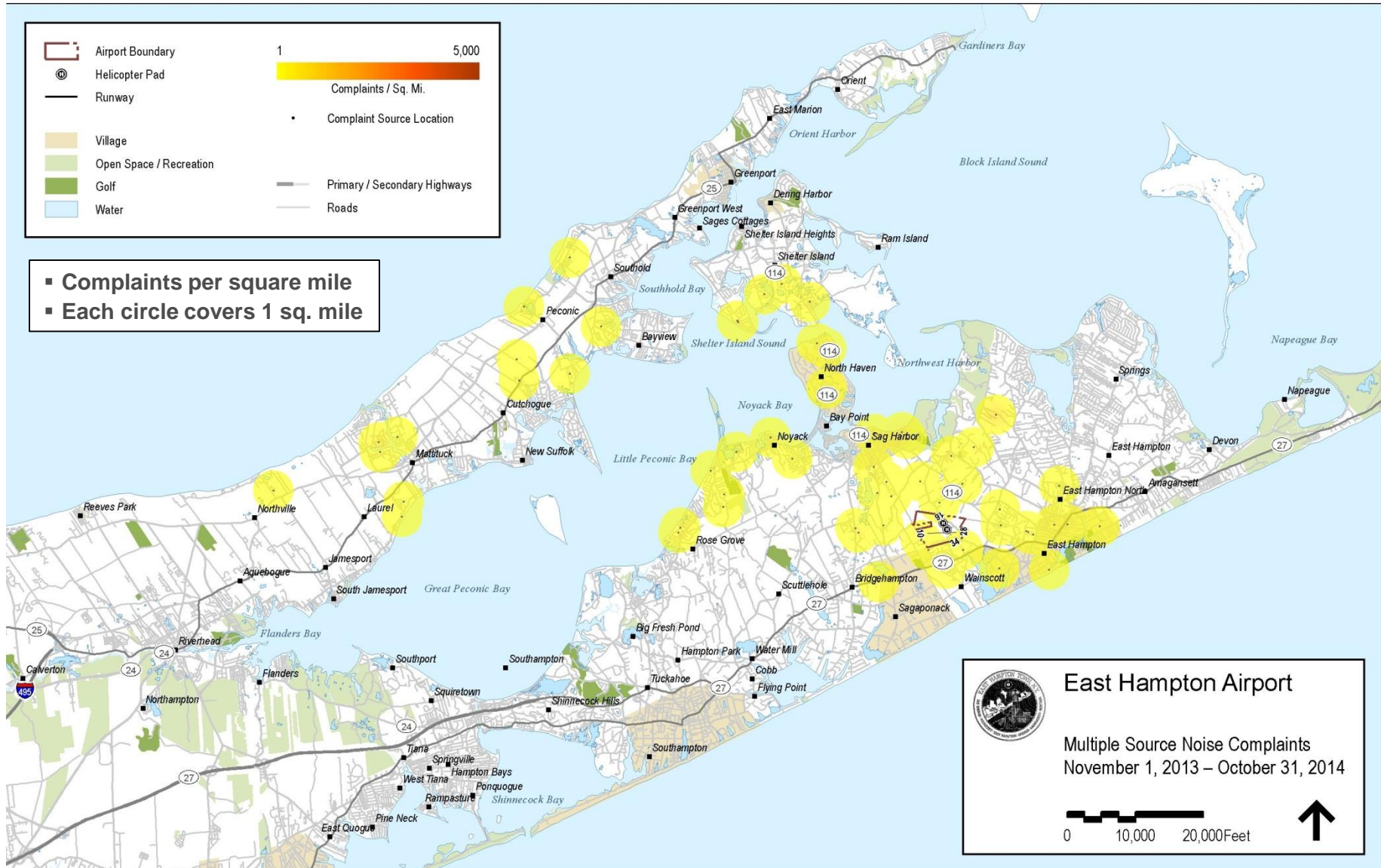
Complaint Density - Non-Seaplane Propeller

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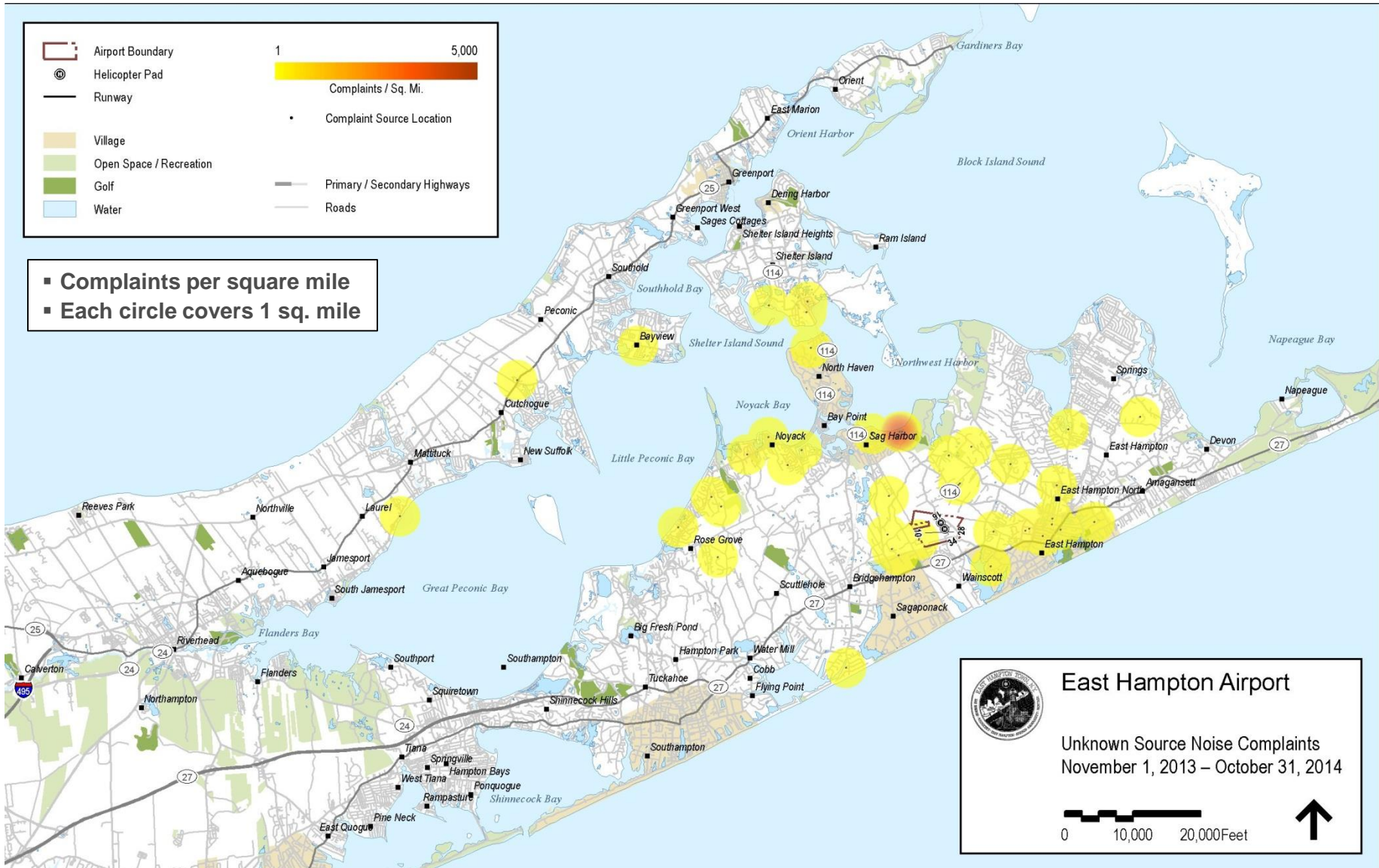
Complaint Density - Multiple Aircraft

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Complaint Density - Unknown Aircraft

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Contribution to problem definition?

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Noise from aircraft operating at East Hampton Airport disturbs many residents of the east end of Long Island.

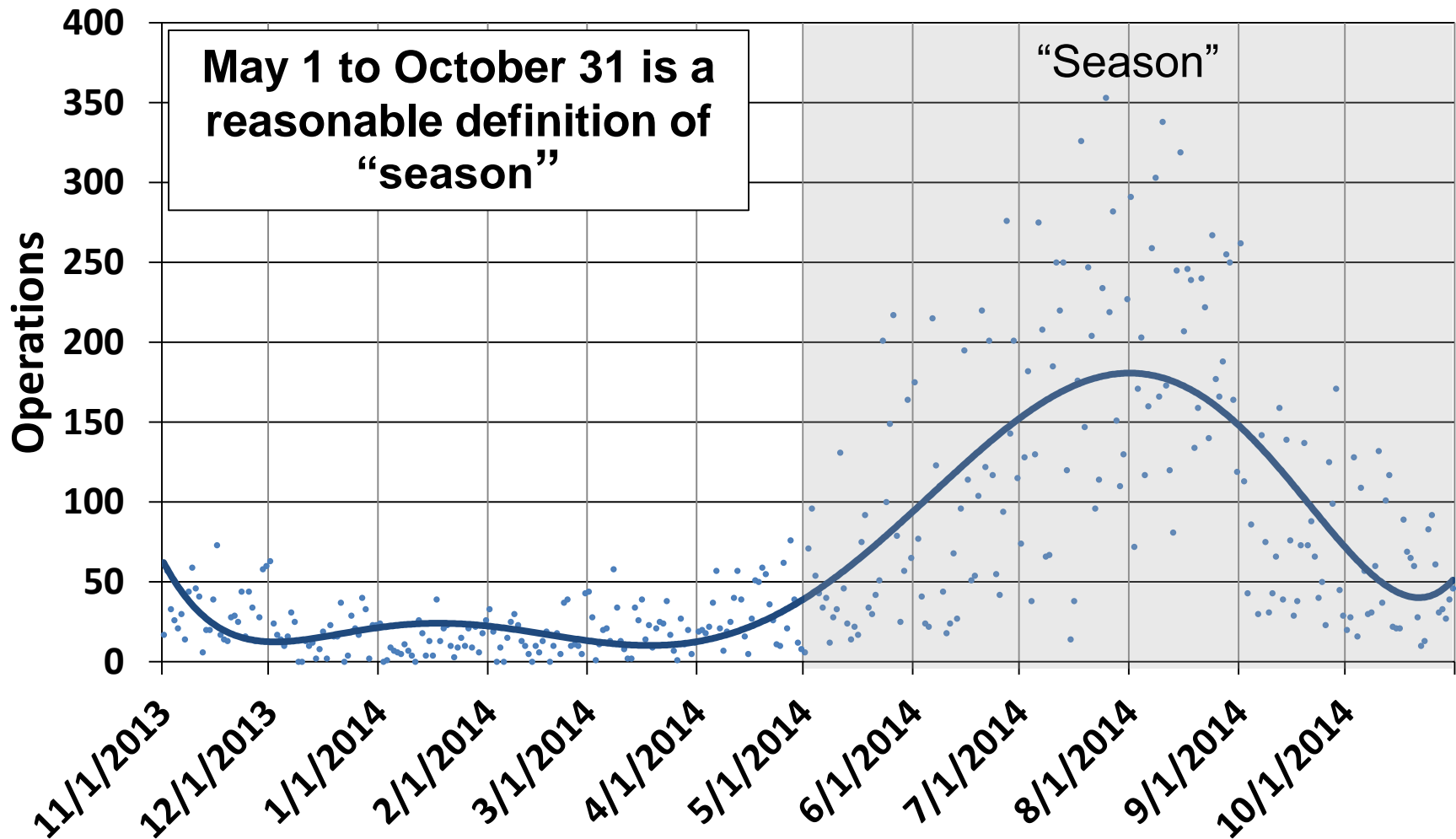
Some overall Vector operations statistics

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- Recorded approximately 26,000 operations (roughly 13,000 takeoffs / 13,000 landings) from 11/1/13 – 10/31/14
 - Conducted by approximately 2,600 specific aircraft
- Approximately 25% of all annual operations were conducted by 25 specific aircraft
 - 14 helicopters
 - 5 single turbopropeller seaplanes
 - 5 other propeller aircraft
 - 1 jet
- The aircraft that flew the most operations over the entire year was a twin-engine piston propeller
- The second most frequently operated aircraft was a single engine turbopropeller seaplane

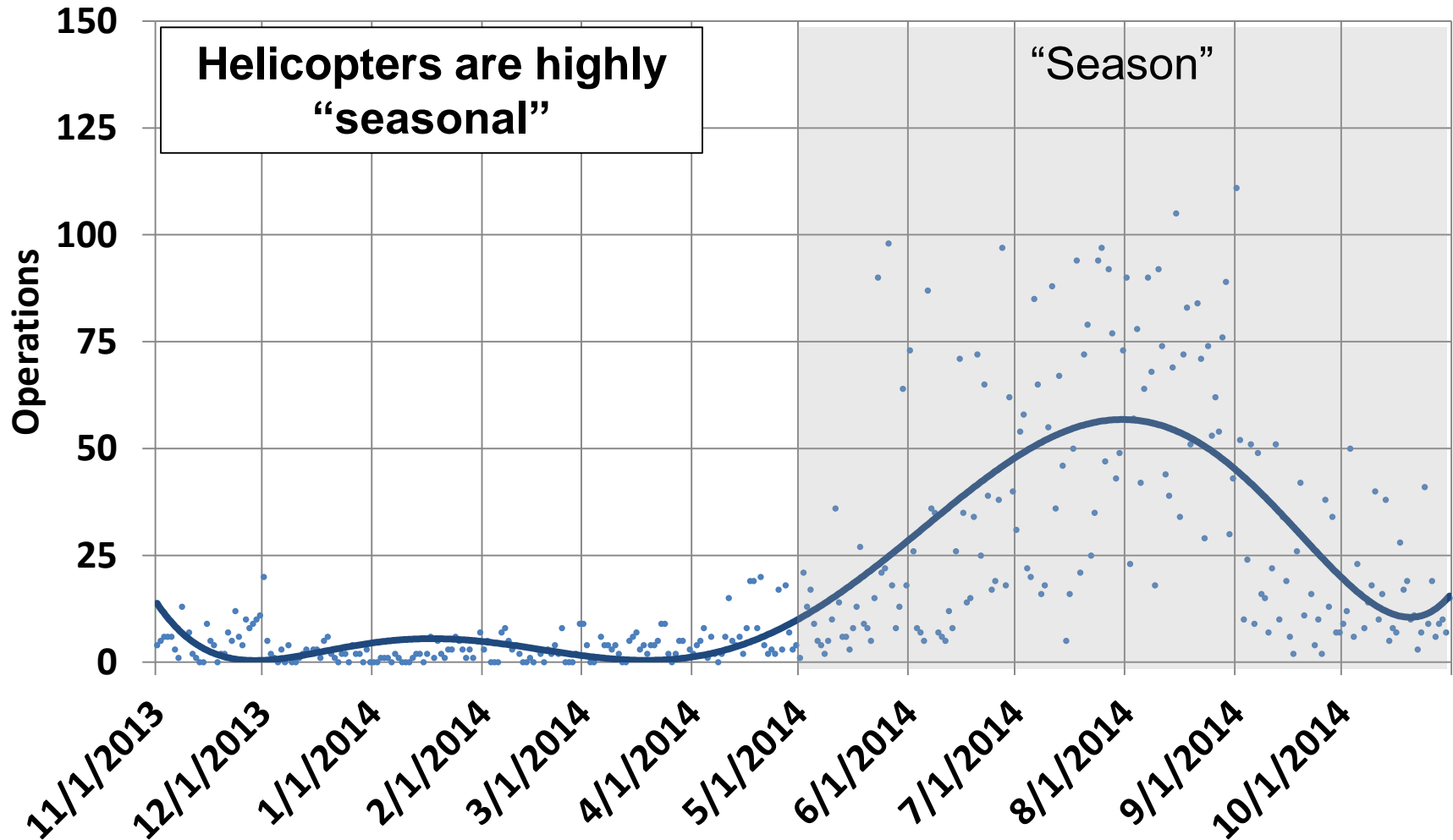
When do operations occur?

All Aircraft Operations by Day, 11/1/2013 - 10/31/2014



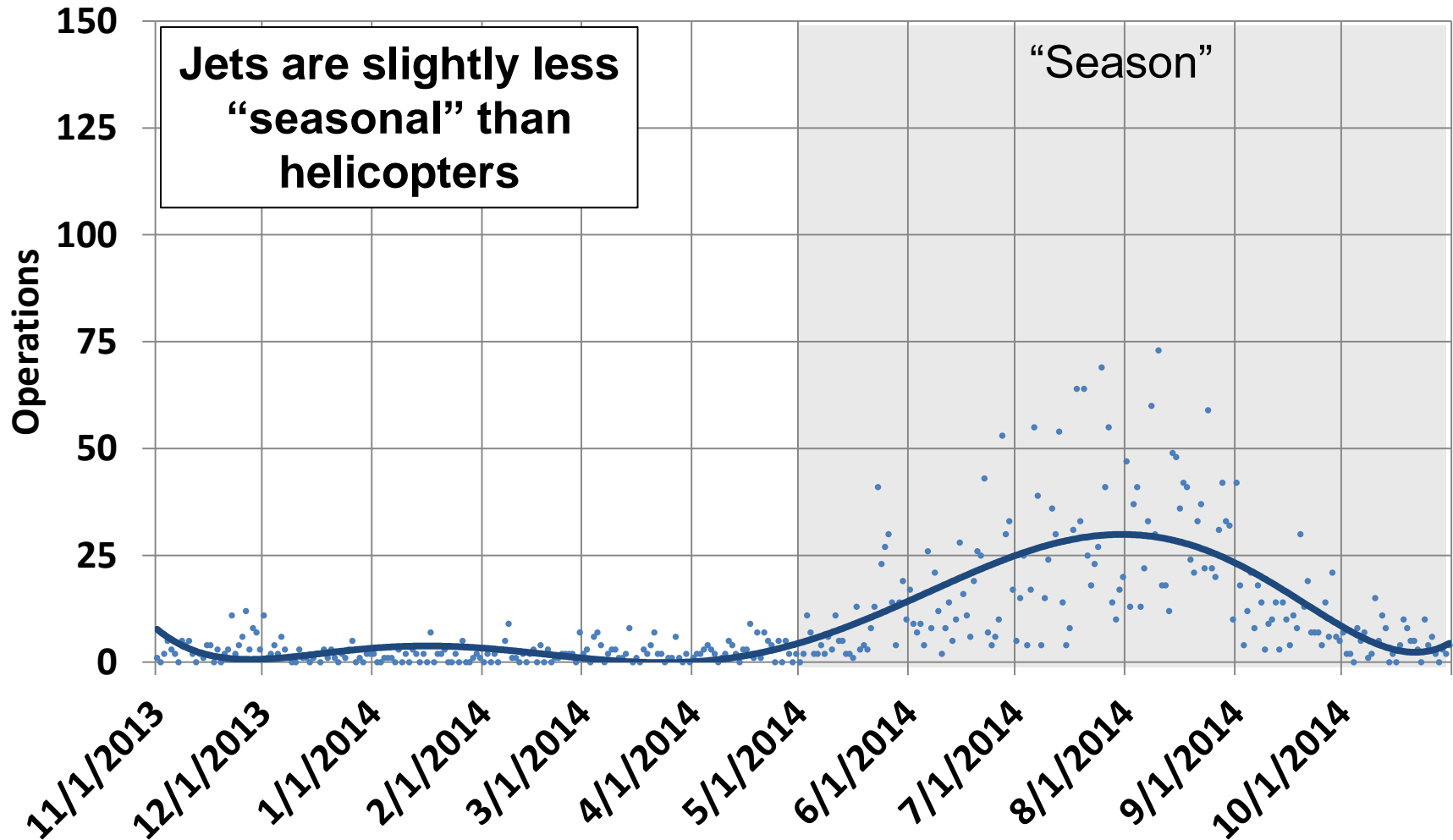
When do operations occur?

Helicopter Operations by Day, 11/1/2013 - 10/31/2014



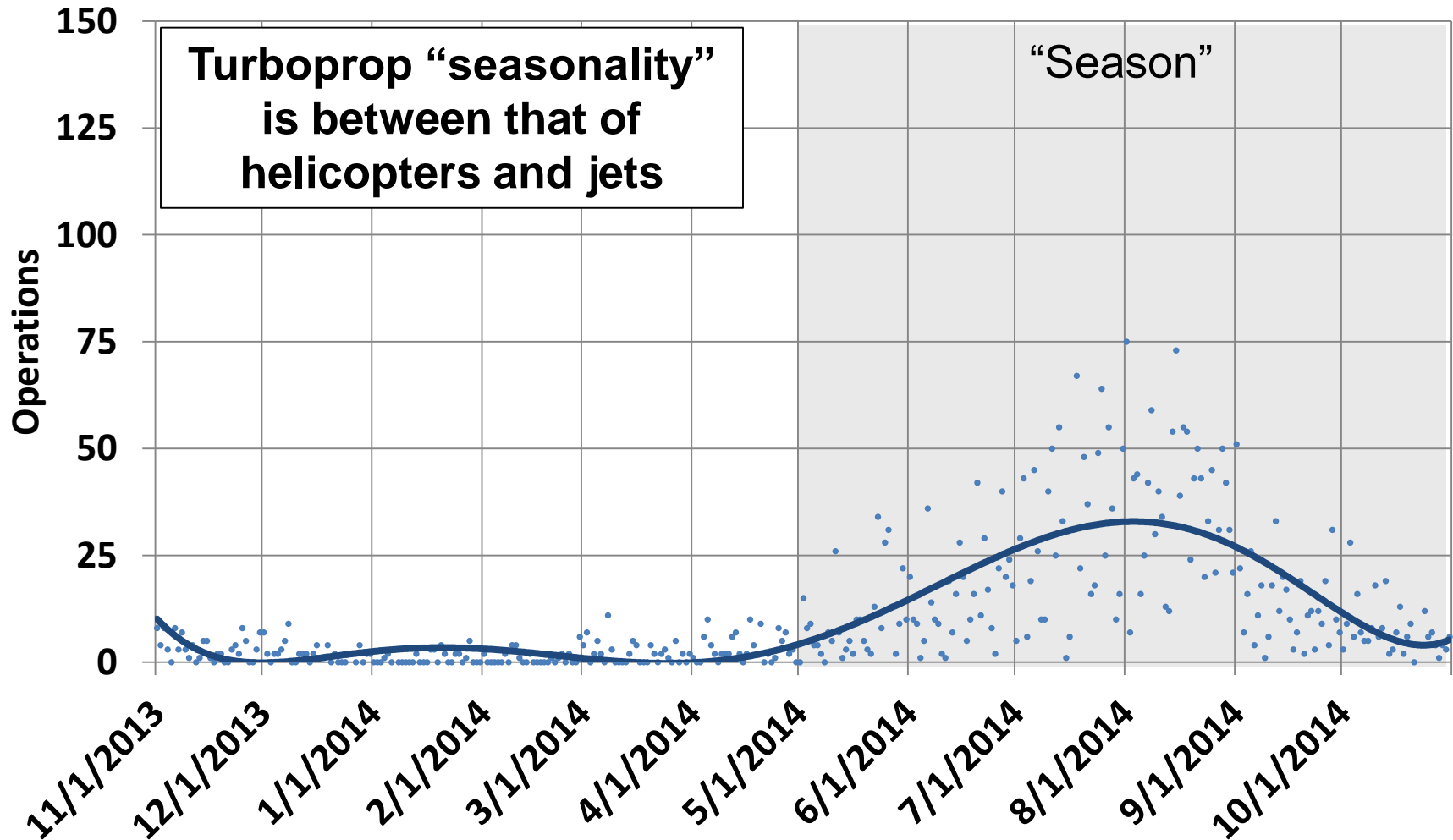
When do operations occur?

Jet Operations by Day, 11/1/2013 - 10/31/2014



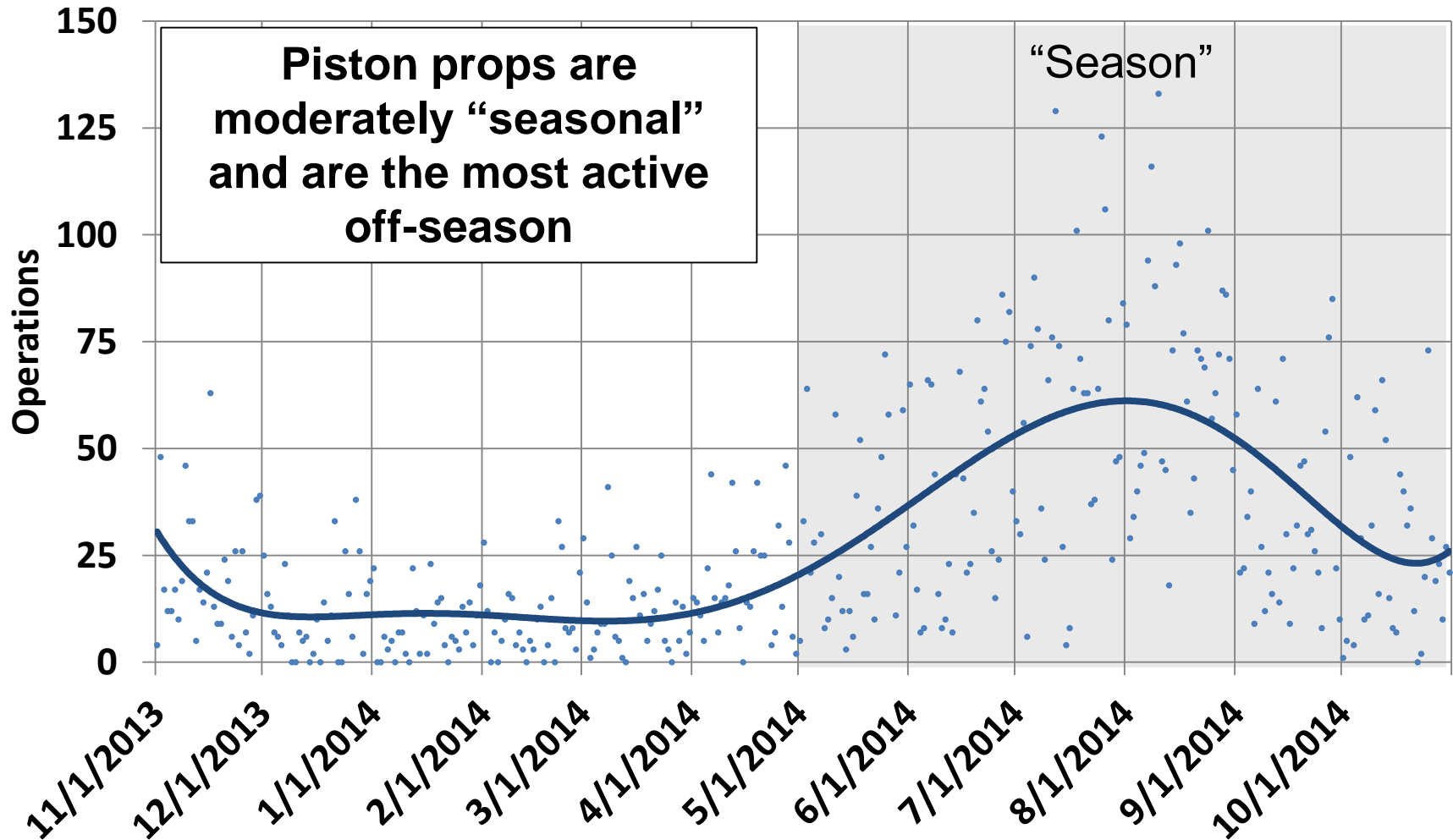
When do operations occur?

Turbopropeller Operations by Day, 11/1/2013 - 10/31/2014



When do operations occur?

Piston Prop Operations by Day, 11/1/2013 - 10/31/2014



Many aircraft conduct multiple operations a day

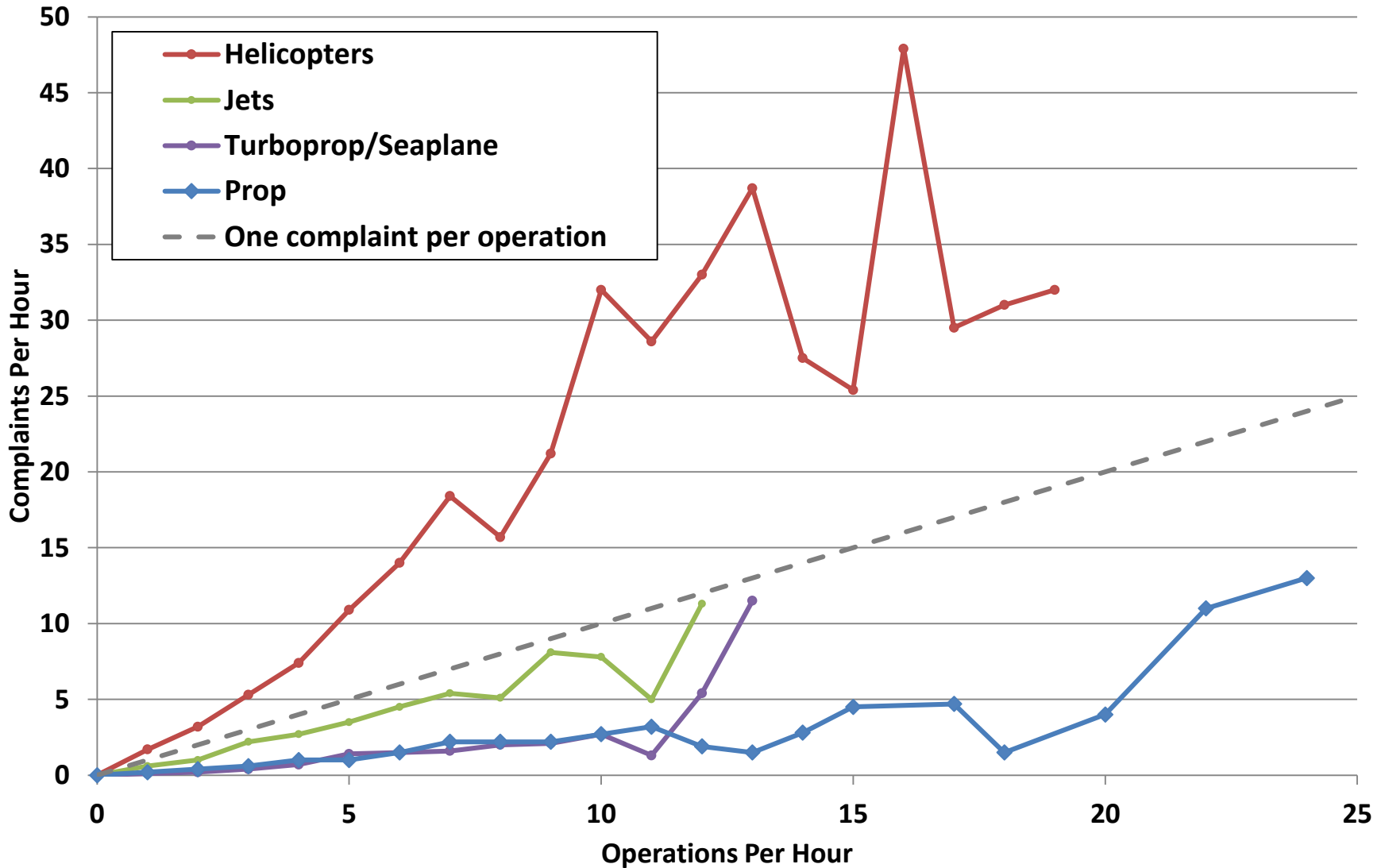
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	Maximum Daily Operations Conducted at HTO by a Specific Aircraft on a Given Day	
	In Season	Out of Season
Helicopters	10	5
Jets	4	5
Turboprops	12	5
Piston Props	9	6

- HTO is not a typical general aviation airport where users (other than pilots conducting training operations) typically conduct only one or two operations on a given day
- It is not unusual for a specific aircraft to conduct multiple round trips on a given day
- Multiple round trips are most common in helicopters and turboprops, particularly around weekends in season

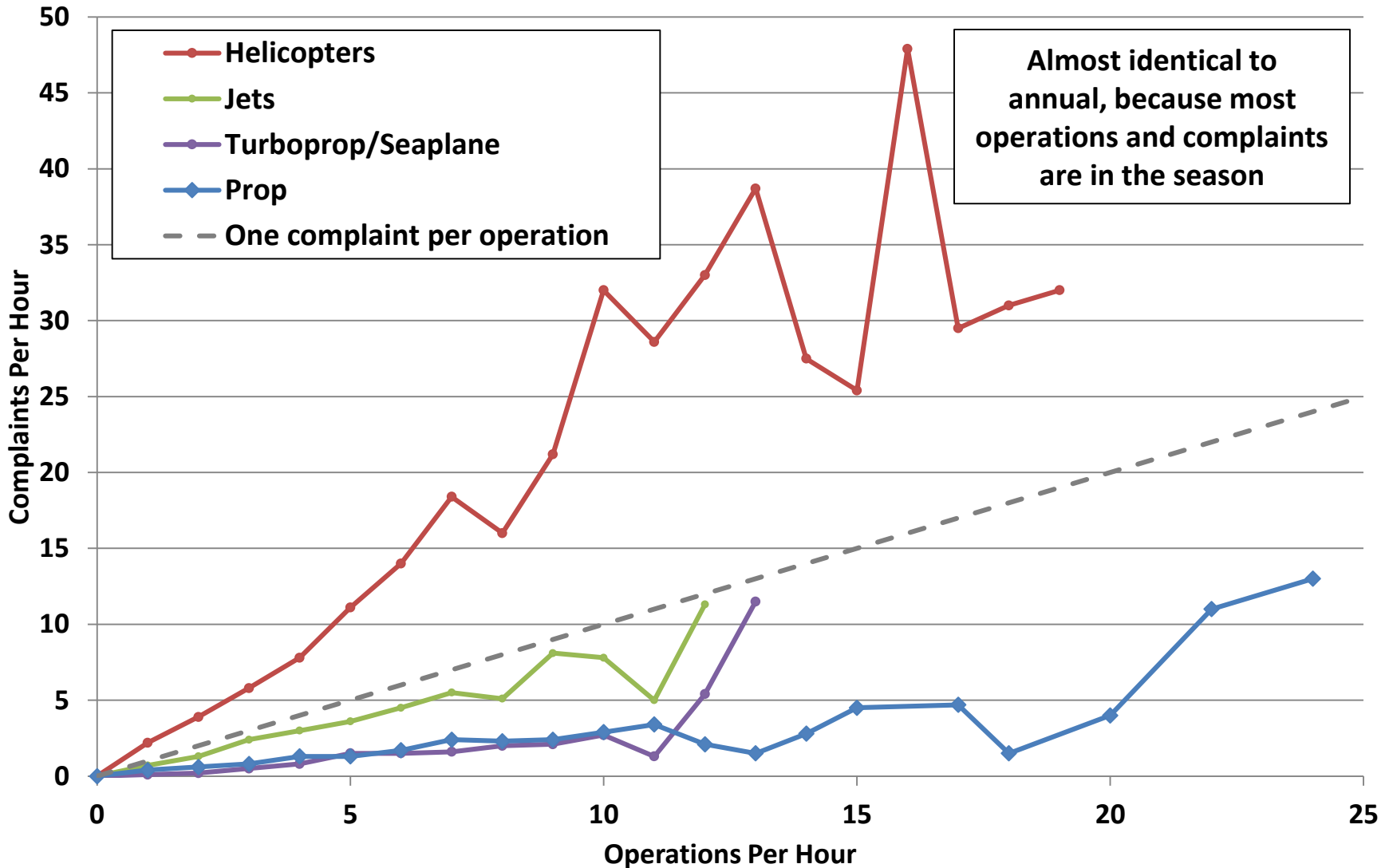
Annual complaints versus operations 11/1/13 - 10/31/14

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Seasonal complaints versus operations 5/1 - 10/31/14

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Complaints per operation observations

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- **Complaints about fixed-wing operations**
 - Increase in a roughly “linear” or “straight-line” fashion
 - Even during busiest hours, there is never more than one complaint per operation on average for jets, seaplanes, or other propeller operations
- **Complaints about helicopter operations**
 - People are far more likely to complain about helicopter operations than jet, seaplane, or other propeller operations
 - The rate at which helicopter complaints are submitted increases faster than the rate at which operations increases
 - On average, there is more than one complaint per helicopter operation in any given hour
- **“Seasonal” and annual results are essentially identical**
 - Because most operations and complaints are in the season

Contribution to problem definition?

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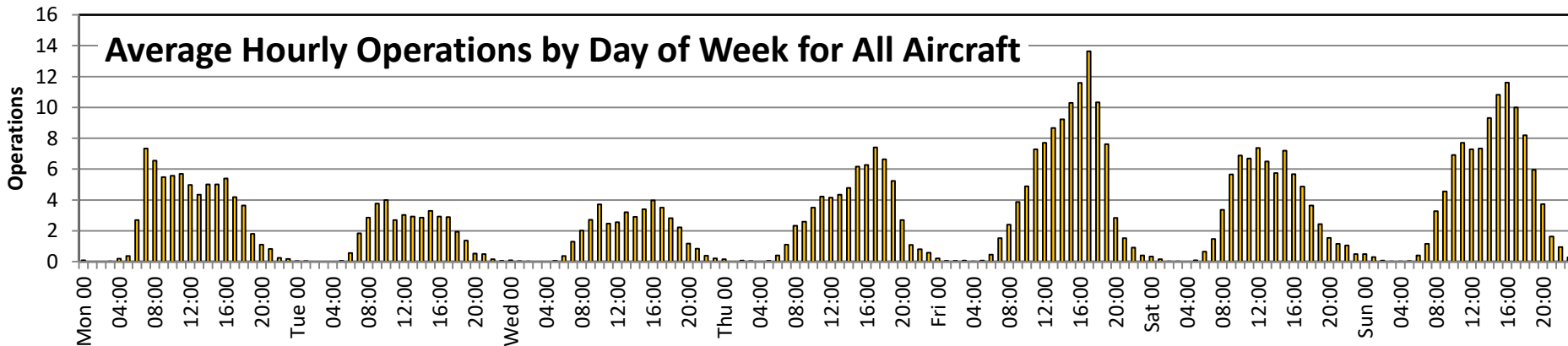
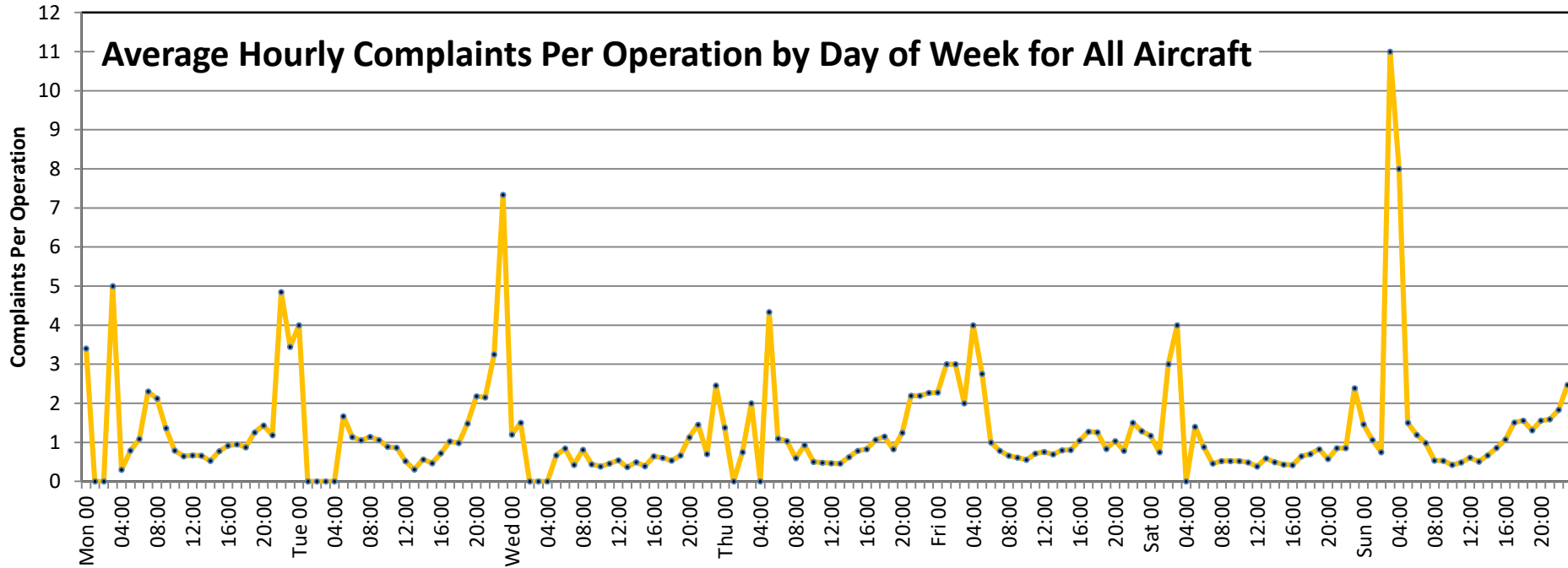
Noise from aircraft operating at East Hampton Airport disturbs many residents of the east end of Long Island.

Residents find helicopters more disturbing than any category of fixed-wing aircraft.

(Helicopter complaints increase faster than the rate at which operations increase.)

Complaints per operation (in all aircraft types) versus activity across the average annual week, 11/1/13-10/31/14

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Contribution to problem definition?

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Noise from aircraft events disturbs many residents of the east end of Long Island. Residents find helicopters more disturbing than any category of fixed-wing aircraft.









Residents are most disturbed by all types of aircraft operations under two circumstances: (1) during evening and night hours, and (2) when operations are most frequent.

Problem Definition

Noise from aircraft operating at East Hampton Airport 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 and night hours.



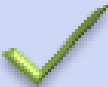





Consideration of possible alternatives

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Category	Details		Reasonable solution to problem?
1. No action	No action		<u>Not</u> a reasonable alternative
2. Bans	Ban “noisy” aircraft Ban certain aircraft types (e.g., helicopters)		<i>Needs more analysis</i>
3. Time-Based Restrictions	Time of day restriction Day of week restriction Seasonal restriction		<u>Possibly</u> a reasonable alternative
4. Fee-Based	Increase fees during peak periods Increase fees for specific equipment		<u>Not</u> a reasonable alternative
5. Air Traffic Flow Mgmt.	Slots (limits by time or type)		<u>Possibly</u> a reasonable alternative
6. Mitigation	Sound insulation Residential acquisition		<u>Not</u> a reasonable alternative
7. Voluntary	Voluntary measures Voluntary agreement from operators		<i>Needs more analysis</i>
8. Federal Restrictions	North or South Shore routes Altitudes and routes to HTO		<i>Needs more analysis</i>

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Alternatives that have been rejected as not reasonable

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- **No action**
- **Noise mitigation**
- **Fee-based restrictions**
 - To address the problem, the fee would have to be high enough to change behavior
 - Such a high fee may not be reasonable under federal law
 - Fee-based alternatives run a high risk of unintended consequences, *e.g.*, practical limits on who can use the airport, including users of light aircraft



Alternatives that merit additional review

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- **Several alternatives are not directly responsive to the problem statement**
- **Additional analysis is needed to determine effectiveness and reasonableness**



Ban(s)

- **Can a ban address the problem?**
 - **Ban “noisy” aircraft**
 - In general, jets are louder than helicopters on a single event basis
 - Complaints, however, appear to respond to frequency and timing of operations ***rather than decibel level***
 - **Ban specific aircraft types (e.g., helicopters)**
 - Residents do find helicopters most disturbing
 - Complaints, however, appear to respond to frequency and timing of operations ***rather than aircraft type***
 - **Ban specific types of operations (e.g., touch-and-go)**
 - Residents have cited touch-and-go patterns as an issue
 - Complaints, however, appear to respond to frequency and timing ***rather than type of operation***



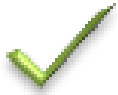
Voluntary measures

- **Can voluntary measures address the problem?**
 - Existing voluntary measures
 - Result of many years of testing and refinement
 - Need to analyze 2014 data
 - Was compliance better in 2014 than in 2013?
 - Need to coordinate with operators
 - How do we measure effectiveness?



Required routes or altitudes

- **Are required routes or altitudes a “reasonable” answer?**
 - Required routes or altitudes might address the problem
 - The Town itself has no authority to regulate aircraft in flight
 - The Town could encourage FAA to enforce optimal flight paths



Possibly reasonable alternatives

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- **Time of day/week/year restrictions**
 - Restricting/prohibiting operations during evening/night/early a.m. and/or peak periods would address the identified problem
 - Example:
 - Evening, night, and early morning curfew
- **Air traffic flow management**
 - Implementing a “slot” system to limit concentrated operations for any given time or day would address the identified problem
 - Examples:
 - Focus on individual aircraft conducting multiple arrival/departure “cycles” on a given day and require advance permission for *multiple* cycles on any day
 - Require advance permission during peak periods

Finding the solution to the problem

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- One alternative alone may not address the problem
- Recommend that the Town consider a menu of options

**** ILLUSTRATION ONLY ****

- 1. Curfew.** Close airport during evening, night, and early morning.
- 2. Slot/allocation system.**
 - Limit the number of hourly arrivals.
 - Prohibit multiple, daily arrivals by any given aircraft .
 - Require advance permission for operation in peak periods.

-1-

**** ILLUSTRATION ONLY ****

- 3. Compliance and Enforcement.**
 - Vector Airport Solutions is responsible for monitoring.
 - Violations are misdemeanors subject to civil penalties.
 - Exemptions for emergency and safety circumstances.

-2-

Questions / Discussion

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- Comment today or at future public meetings
 - Submit written comments to:
HTOcomments@EHamptonNY.gov