

MEMORANDUM

To: Town of East Hampton

Date: April 10, 2015

From: Peter Stumpp

CC: Peter Kirsch, Ted Baldwin

Subject: Potential Traffic Diversion at East Hampton Airport

Potential Traffic Diversion from Proposed Restrictions at HTO

Background

The Town of East Hampton is considering enacting three mandatory restrictions on aircraft operations at East Hampton Airport (HTO). The proposed restrictions are:

Restriction 1: A mandatory year-round curfew on all aircraft operations between 11:00 PM and 7:00 AM replacing the existing voluntary curfew.

Restriction 2: Extending this curfew to between 8:00 PM and 9:00 AM for aircraft defined by town ordinance as noisy.

Restriction 4: Prohibiting noisy aircraft from conducting more than one take-off and one landing in any calendar week from May 1 through September 30.

The Town had previously considered *Restriction 3: Prohibiting all helicopter operations on weekends and holidays from May 1 through September 30*, but is not pursuing this option at this time.

The Town is viewing the cumulative impacts of the proposed restrictions, with the potential impacts of Restriction 2 including the impacts of Restrictions 1, and Restriction 4 including the impacts of 1 and 2.

The estimates of traffic diversion in this report rely primarily on published information and experience at other noise-impacted general aviation airports¹, and they may be revised substantially as more information becomes available.

¹ Relevant experience includes participating in successful Part 161 studies at Naples, Florida and Van Nuys, California

Potential Responses

Aircraft operators and their passengers have a variety of potential responses to the proposed restrictions. They can change the timing of flights to comply with the curfew restrictions, use another airport instead of HTO, utilize quieter aircraft, use highway or rail instead of flying, and reduce the number of trips to the region. Changing flight timing appears to be a likely response for most flights affected by Restriction 1 and a number of the additional flights affected by Restriction 2.

Some diversion to other nearby airports is likely to occur under all restrictions. Gabreski Airport (FOK) in Westhampton Beach offers ample aircraft and auto parking capacity, aircraft fueling, and services for flight crews and passengers, but diversion would be constrained by its 11:00 PM to 7:00 AM voluntary curfew. Southampton Heliport (87N) would be constrained by its limited operating hours, road access, restrictions on auto parking, and lack of aircraft fueling and other services.

Exhibit 1 – Southampton Heliport Mandatory Operating Hours and Landing Fees

Dates		Operating Hours
May 1-Sep 15		8:00AM - 7:00PM
Sep 15-Oct 31		8:00AM - 6:00PM
Nov 1-Dec 31		7:00AM - 4:00PM
Jan 1-Feb (end)		7:00AM - 5:00PM
Mar 1-Apr 30		7:00AM - 6:00PM
Landing fee	< 5,000 lbs	\$150
	5,000 to 15,000 lbs	\$200

Source: Village of Southampton General Legislation, Chapter 39, <http://www.airnav.com/airport/87N>

Although Montauk Airport (MTP) has been for sale for several years and its long term future is uncertain, the airport has received FAA grant money and is obligated to remain open as an airport until at least December 31, 2019.² Diversion to Montauk would be constrained by its limited runway length, road access, lack of aircraft fueling and services, and exposure to rapid changes in weather conditions. Since Montauk airport is only staffed during daylight hours, pilots flying to Montauk at other times have no communication from the ground regarding weather and must risk flying to an airport where conditions may preclude landing.

Operators may meet proposed Restriction 2 by switching operations to quieter aircraft, including using quieter models of fixed wing aircraft or helicopters, or by switching operations from helicopters to fixed wing aircraft that meet the town's proposed noise limits. Many types of fixed wing aircraft and seven types of helicopters that operated at HTO from November 2013 to October 2014 meet the town noise limits.

Given the congestion and delays on Long Island highways particularly on summer weekends, it seems unlikely that many travelers who choose air travel to avoid the roads would switch to limousine or jitney service if proposed restrictions prohibit their flights to and from HTO. Similarly, it would be difficult to convince travelers to switch from air to rail unless the Long Island Railroad introduces new service that offers higher levels of comfort and luxury to offset the longer travel time.

Given the attractiveness of the South Fork as a vacation destination, its proximity to New York City, and the number of options for traveling to the region, it appears unlikely that the proposed restrictions would substantially reduce the demand for travel to the region, particularly during the summer season. The growth of ride-sharing services like Uber has made it much simpler to travel within the South Fork region, making it easy to fly to alternative airports and obtain ground transport to one's final destination with very little advanced planning. The substantial prices that travelers are willing to pay to fly from New York City to the South Fork indicate a strong demand to avoid driving there.

² <http://www.27east.com/news/article.cfm/East-End/96721/Airport-Officials-Not-Overly-Concerned-With-Possible-Change-In-Air-Traffic>

Proposed Restriction 1 – Mandatory 11PM to 7AM Curfew

Exhibit 2 presents the estimate of operations that would be affected by Restriction 1 based on the full year of HTO operations that occurred from November 2013 through October 2014. During the summer season there were 175 helicopter operations and 323 fixed wing operations that would be affected by the mandatory curfew. There were 83 potentially affected operations during the off-season and a total of 581 operations for the full year.³

Exhibit 2 – Estimate of Operations Affected by Restriction 1

	Landings	Take-Offs	Total
May 1-Sep 30			
Helicopter	109	66	175
Fixed Wing	155	168	323
Total	264	234	498
Oct 1-April 30			
Helicopter	17	7	24
Fixed Wing	31	28	59
Total	48	35	83
Full Year			
Helicopter	126	73	199
Fixed Wing	186	196	382
Total	312	269	581

Source: HMMH analysis

Estimating how operators will react to the proposed restrictions involves a high degree of uncertainty. The initial estimates are based on experience from other noise-impacted general aviation airports but do not reflect survey data or other direct information from HTO operators. Surveys are unlikely to provide reliable information about potential responses because of competition among carriers providing air service and privacy concerns among their passengers. As a result, the estimates are subject to change in the future as additional data becomes available.

³ More landings (312) than take-offs (269) occur during the 11PM to 7AM curfew hours and would be affected by making the curfew mandatory.

Of the 581 operations potentially affected by Restriction 1, 288 operations or approximately 50% took place between 6AM and 7AM. These flights would require a delay of 60 minutes or less to comply with the proposed restriction. For this reason these operators are expected to respond to the curfew by incurring a short delay. An additional 115 flights or approximately 20% took place between 11PM and midnight, including 44 departures and 71 arrivals. All the departing flights are expected to re-schedule and depart by 11PM to meet curfew requirements. As an initial estimate, 50% of the 11PM to midnight arrivals are expected to re-schedule to meet curfew requirements, and 50% that are unable to reschedule are expected to use alternative airports. The same 50/50 estimate is used for the 178 flights between midnight and 6AM, half re-scheduling to meet curfew requirements and half diverting to alternative airports.

Under these conclusions, enacting Restriction 1 would cause 457 operations to be re-scheduled and 125 operations including 43 helicopter operations to be diverted to other airports. Because operations are banned at Southampton Heliport during the HTO curfew hours, operations diverted as a result of Restriction 1 would probably shift to Montauk Airport and Gabreski Airport, even though Gabreski has a voluntary curfew during the same hours as the proposed HTO mandatory curfew. Diversions to Montauk would be limited because it is not staffed at night and pilots are unable to communicate with the airport. Exhibit 3 shows the estimated responses to Restriction 1.

Exhibit 3 – Estimate of Changes in Operations in Response to Restriction 1

	Re-schedule	Divert	Total
Full Year			
Helicopter	156	43	199
Fixed Wing	301	82	382
Total	457	125	581

Note: Rows may not total due to rounding

Proposed Restriction 2 – Adding Extended Curfew for Noisy Aircraft

Exhibit 4 presents an estimate of operations that would be affected by Restriction 2. Adding an extended curfew for noisy aircraft to the proposed mandatory 11PM-7AM curfew would affect a total of 1,824 operations, including 1,013 helicopter operations from May through September.

Exhibit 4 – Estimate of Operations Affected by Restriction 2

	Landings	Take-Offs	Total
May 1-Sep 30			
Helicopter	570	443	1,013
Fixed Wing	268	284	552
Total	838	727	1,565
Oct 1-April 30			
Helicopter	85	74	159
Fixed Wing	55	45	100
Total	140	119	259
Full Year			
Helicopter	655	517	1,172
Fixed Wing	323	329	652
Total	978	846	1,824

Source: HMMH analysis

Since the extended curfew applies only to aircraft defined by town ordinance as noisy, aircraft operators at HTO will have three ways to comply with Restriction 2: re-schedule flights, use alternate airports, or switch to aircraft that meet town noise standards. Switching aircraft can involve substituting quieter helicopter or fixed wing aircraft for noisier helicopter or fixed wing aircraft, or replacing noisy helicopters with fixed wing aircraft that meet town noise limits. Operators who have both noisy and quiet aircraft in their fleets could choose to substitute quieter aircraft for most or all of their HTO operations. Switching from helicopter to fixed wing service may involve increased service by fixed wing operators offsetting a decline in service by helicopter operators. Aircraft operators are not likely to acquire new aircraft specifically to meet the proposed town noise limits until they are confident that those limits will not be changed during the economic life of the aircraft.

Exhibit 5 shows an estimate of the responses to Restriction 2. It reflects the conclusion that AM arrivals and departures and PM departures that require a delay of an hour or less to comply with the curfews will choose to re-schedule. Operators of all other flights divide their responses evenly between re-scheduling, diverting to other airports, and switching to quieter aircraft. Under these conclusions 1,102 flights re-schedule, 361 including 246 helicopters divert to alternate airports, and an equal number choose to operate quieter aircraft that meet town noise limits.

Exhibit 5 – Estimate of Changes in Operations in Response to Restriction 2

	Re-schedule	Divert	Use Quiet Aircraft	Total
Full Year				
Helicopter	679	246	246	1,172
Fixed Wing	423	115	115	652
Total	1,102	361	361	1,824

Note: Rows may not total due to rounding

Operators of AM helicopter flights can choose among Southampton Heliport (after 8AM in-season and 7AM off-season), Montauk Airport, and Gabreski Airport for diversion. Operators of PM helicopter flights and fixed wing aircraft can choose between Montauk and Gabreski.

Proposed Restriction 4 – Limiting Noisy Aircraft to One Take-off and One Landing per Week from May through September

Like Restriction 2, proposed Restriction 4 is designed to reduce the impacts from noisy aircraft operations at HTO. Exhibit 6 shows the number of fixed wing and helicopter operations at HTO from May through September 2014.

Exhibit 6 – Fixed Wing and Helicopter Operations at HTO May through September

Aircraft Type	Operations May-Sept
Fixed Wing Total	14,004
Fixed Wing Noisy	1,663
Percent Noisy	11.9%
Helicopter Total	5,855
Helicopter Noisy	5,384
Percent Noisy	92.0%
Helicopter Share of Total Noisy Operations	76.4%

Source: HTO records, HMMH analysis

During the summer season there were 14,004 fixed wing operations at HTO, with 11.9% by aircraft defined as noisy. During the same period there were 5,855 helicopter operations, including 5,384 or 92.0% by aircraft defined as noisy. From May through September helicopters accounted for over three quarters of the noisy aircraft operations at HTO.

Exhibit 7 shows the four largest noisy helicopter operators at HTO during the May-September season. During this period Associated Aircraft Group had 1,346 noisy helicopter operations, 25% of all noisy HTO helicopter operations. HeliFlite, Liberty Helicopters, and Analar also performed large numbers of noisy helicopter operations. Together these four operators accounted for almost three quarters of all noisy helicopter operations at HTO during the summer season. None of these carriers operated any flights by quiet helicopters at HTO.

Exhibit 7 – Noisy Helicopter Operators at HTO May-Sept

Noisy Helicopter Operators	Operations May-Sept	Share of Total
Associated Aircraft Group	1,346	25.0%
HeliFlite Shares	1,075	20.0%
Liberty Helicopters	1,007	18.7%
Analar Corporation	540	10.0%
Subtotal	3,968	73.7%
All Other Noisy Operations	1,416	26.3%
Total	5,384	100.0%

Source: HTO records

Exhibit 8 presents an estimate of operations that would be affected by Restriction 4. Adding a summer limit of two operations per week on noisy aircraft to the mandatory 11PM-7AM curfew for all aircraft and the extended curfew hours for noisy aircraft would affect a full year total of 5,822 operations, including 4,728 helicopter operations from May through September.

Exhibit 8 – Estimate of Operations Affected by Restriction 4

	Operations Affected
May 1-Sep 30	
Helicopter	4,728
Fixed Wing	835
Total	5,563
Oct 1 -April 30	
Helicopter	159
Fixed Wing	100
Total	259
Full Year	
Helicopter	4,887
Fixed Wing	935
Total	5,822

Source: HMMH analysis

Exhibit 9 shows an estimate of the responses to Restriction 4. Adding a summer limit on operations by individual noisy aircraft to the curfew restrictions would lead to a total of 2,538 to 3,216 diversions to other airports, primarily by helicopters. At the same time it would also increase the use of quiet aircraft by 1,504 to 2,182 operations, including some shifting from noisy helicopters to fixed wing aircraft that meet town noise limits.

The largest helicopter operators at HTO currently operate only noisy aircraft at HTO and are not expected in the short run to add new helicopter types that meet the town noise limits. As a result, the rate at which operations switch to quieter aircraft will depend largely on how rapidly operators of quieter helicopters at HTO can strengthen their market presence and provide service that substitutes for current service using noisy aircraft.

Exhibit 9 – Estimate of Changes in Operations in Response to Restriction 4

	Re-schedule	Divert	Switch to Quiet Aircraft	Total
Full Year				
Helicopter	679	2,197-2,846	1,361-2,010	4,887
Fixed Wing	423	341-369	143-171	935
Total	1,102	2,538-3,216	1,504-2,182	5,822

Note: Rows or columns may not total due to rounding

Traffic Diversion Summary

Exhibit 10 summarizes the estimated decrease in landings by proposed restriction.

Exhibit 10 – Annual Decrease in HTO Landings by Restriction

	Restriction 1	Restriction 2	Restriction 4
Full Year			
Helicopter	22	123	1,099-1,423
Fixed Wing	41	57	171-185
Total	62	181	1,269-1,608
Share of HTO Operations	0.5%	1.4%	9.9%-12.5%

Restrictions 1 and 2 are expected to cause only a small share of HTO traffic to divert to other airports, namely Gabreski Airport (FOK), Southampton Heliport (87N), and Montauk Airport (MTP). Restriction 4, limiting noisy aircraft to two operations per week at HTO, would cause from 1,269 to 1,608 landings per year to shift from HTO to alternative airports.

A large number of factors will determine which alternative airport each flight will choose, including distance and driving time to the ultimate destination. Exhibit 11 compares the highway mileage from the three airports to seven representative destinations.

Exhibit 11 – Distance from Alternative Airports to Selected Destinations

	Gabreski Airport	Montauk Airport	Southampton Heliport
Driving Distance in Miles			
Amagansett	31.5	16.0	20.9
Bridgehampton	22.2	25.1	12.3
East Hampton Village	28.9	18.4	18.3
Sagaponack	23.6	25.0	12.9
Shelter Island	30.6	31.5	22.8
Southampton Village	17.7	31.3	5.5
Water Mill	19.5	28.0	8.8
<i>Closest</i>			
<i>Middle</i>			
<i>Furthest</i>			

Driving distances from Google Maps

Southampton Heliport is closest to six of the seven, while Montauk Airport is closest to one but furthest from five. Driving time is generally more critical than distance alone, but variation in highway congestion by time of day and day of the week during the peak season make it impossible to measure driving time consistently.

Location, constraints, and availability of services will all affect the decisions to use each of the alternative airports. Southampton Heliport is the most centrally located, but is constrained by operating hours, restrictions on parking, poor highway access, and lack of services.

Gabreski is a full service airport with very good access to the Sunrise Highway, but road traffic from Gabreski to South Fork destinations is likely to encounter traffic congestion, particularly on weekends. Of the three airports only Gabreski offers aircraft refueling.

Autos traveling to and from Montauk Airport on weekends have the advantage of traveling against the heaviest traffic flow, but must funnel through the congested hamlet centers of Montauk, Amagansett and East Hampton Village to reach destinations to the west along the Montauk Highway. Montauk Airport offers no services, and the weather at Montauk often changes more rapidly than at the other alternative

airports. Communication with airport staff regarding weather conditions is only available during daylight hours.

Because the aircraft operating restrictions proposed for HTO are unprecedented, it is not possible at this point to make a definite estimate of the number of flights diverted to each of the three potential diversion airports. Given the pros and cons of each potential diversion airport, it appears likely that all three will attract shares of the diverted traffic, with no single airport receiving the lion's share. All of the potential airports appear to have the capacity to handle diverted traffic. FAA records indicate that during the early 1990s Gabreski had over 100,000 annual operations and Montauk Airport over 40,000, well over current traffic levels.⁴ The FAA does not keep comparable records for Southampton Heliport, but given typical drop-off or pick-up and go helicopter operations, its airfield capacity does not appear to be an issue.

Two of the potential diversion airports – Montauk Airport and Southampton Heliport – are reached by narrow, two-lane roads, raising the issue that flights diverted from HTO could possibly lead to highway congestion near these airports. This appears unlikely because of the limited number of flights diverted. Most flight diversions as a result of the curfew restrictions will occur at night when highway traffic tends to be light. The Restriction 4 limits on noisy aircraft during the summer are expected to increase the number of diverted helicopter flights by 976 to 1,300 arrivals and diverted fixed wing flights by 113 to 128 arrivals for the season. With the summer season having 153 days, limiting noisy aircraft at HTO to one flight (one landing and one take-off) per week would lead to an average of 6.4 to 8.5 helicopter arrivals diverted per day, and less than one fixed wing arrival per day.

The peak day for helicopter activity at HTO had a total of 65 arrivals, or 1.9% of total May to September helicopter arrivals. If the peak day for helicopter diversions follows the same pattern as arrivals at HTO, between 18.5 and 24.7 helicopter flights could be diverted from HTO. The first helicopter on the peak day at HTO arrived at 7:41 AM and the last arrived at 9:11 PM, so diversions would most likely be spread over a similar period. Peak day helicopter arrivals averaged 4.3 per hour with a maximum of 10 per hour. With diverted flights spread over a period of time and three alternative airports, it appears unlikely that Restriction 4 would add more than a handful of vehicles per hour to the current traffic on the Montauk Airport and Southampton Heliport access roads.

⁴ <https://aspm.faa.gov/>, FAA Terminal Area Forecasts,