DEVELOPMENT OF PROPOSED ACCESS RESTRICTIONS AT EAST HAMPTON AIRPORT

A Staff Compilation for the Town Board

April 2015

OVERVIEW

Over the past two decades, the East Hampton Town Board has devoted extensive time and resources to develop solutions to the problem of noise from aircraft flying to and from East Hampton Airport ("HTO" or "Airport"). During the course of that work, the Town Board has received and reviewed a great number of documents addressing different aspects of the aircraft noise issue. Many of those documents were generated by the Town itself, committees and task forces appointed by the Town Board, and consultants and experts retained by the Town. Other documents were presented by third parties, primarily federal, state, and local governments and agencies, concerned citizens, community organizations, airport users and their industry associations, and other stakeholders. The Town recently established a website to collect, and make available to the public, the most important non-confidential documents related to the Town's consideration of aircraft noise legislation (http://www.htoplanning.com).

On April 16, 2015, the Town Board is scheduled to consider proposed local laws intended to address different elements of the aircraft noise problem. The purpose of this Staff Report is to summarize the history of the Town's consideration of noise control measures and to compile the key documents related to that effort in order assist the Town Board in its consideration of the proposed local laws. It is important to note that the documents identified here do not represent all of the documents or other information the Town Board members considered in connection with their deliberations over the proposed Town Laws. The Town and individual Town Board members have received thousands of letters and comments from residents about aircraft noise issues. (Because of confidentiality concerns, most of these have not been posted on the public website.) In addition, Town Board members have had innumerable conversations with stakeholders, at both public hearings and in private, regarding these issues. Given the sheer volume of data and information made available to the Town Board, this Staff Report does not seek to discuss all of the materials available to the Town Board; instead, it simply seeks to summarize the most salient materials.

HISTORY OF NOISE AND ABATEMENT MEASURES AT EAST HAMPTON AIRPORT

The Town of East Hampton is an established resort community that is renowned for its peaceful, quiet beaches and outdoor areas. The area surrounding the East Hampton Airport is uncommonly quiet, because of the lack of industrial noises, relatively low population density, and rural roadway network.[1] Residents and visitors alike are attracted to the Town and the East End of Long Island to enjoy the area's unique scenic beauty, its outdoor spaces, and the peaceful and restful atmosphere they provide.

Increasing noise from aircraft overflights has disrupted outdoor activities and diminished the quality of life in the Town and the entire East End. This problem has been a topic of controversy and public debate in East Hampton for many years.[2] Helicopter operations in particular have been particularly disruptive and the focus of much controversy. In addition to formal noise complaints, residents and visitors have expressed their anger and frustration about aircraft noise at numerous public meetings, Town Board meetings, in letters to local papers, in petitions, and in communications with Town officials and other elected officials from throughout the region.[3] Concern about aircraft noise also has spawned lawsuits aimed, directly or indirectly, at reducing aircraft noise.[4] The problem of aircraft noise has become one of the most important and controversial political topics for the Town for at least the last several years. And, just as importantly, the significance of the noise problem has not respected the boundaries of towns in the East End: the Town Board has been petitioned by residents and elected officials from many other towns whose residents experience serious deleterious effects from noise from aircraft using the East Hampton Airport.[5]

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[1] Young Environmental Sciences, Inc. et al, *East Hampton Airport Final Generic Environmental Impact Statement* (2010) at 30.

[2] *E.g.*, Jeffrey Bragman, Guestwords: Some Simple Airport Talk (March 28, 2012), available at http://www.quietskiescoalition.org/files/GUESTWORDS-3-28-12-Jeff_Bragman.pdf ("Airport noise affects thousands of residents in and near East Hampton, across a large geographic area. The town has logged more than 8,000 complaints in a single year, … ."); Barry Raebeck, Letter to the Editor, East Hampton Star (Sept. 3, 2011) ("…17 years ago my family built our current house almost two miles from the airport — and nowhere near any flight paths. There were no helicopters or sea planes anywhere near us or our neighbors. And no jet ever screamed 200 feet overhead. Now we have all of these awful things, and often at 30-second intervals."); Airport Noise Still "Canker" for People, Sag Harbor Express (Sept. 28, 2009).

[3] *E.g.*, Town Meeting Minutes (Aug. 27, 2014); Town Meeting Minutes (Oct. 30, 2014); Town Meeting Minutes (Dec. 2, 2014); http://petitions.moveon.org/sign/east-hampton-town-board-1; https://www.change.org/p/north-fork-ban-helicopters-to-stop-noise.

[4] *E.g.*, *In re the Committee to Stop Airport Expansion v. Wilkinson*, 2012 WL 3058626 (N.Y. Sup.Ct. 2012), *aff'd* 2015 WL 1035643 (N.Y. App. Div. Mar. 11, 2015); *Gorman v. Town Bd. of East Hampton*, 1998 N.Y. Misc. LEXIS 712 (N.Y. Sup. Ct. 1998), *appeal dismissed at* 273 A.D.2d 235 (N.Y. App. 2000).

[5] *E.g.*, Town of Southold Resolution 2013-422 (May 21, 2013); Town of Southampton Resolution 2014-897 (Aug. 14, 2014); North Haven Village Memorializing Resolution re: East Hampton Airport (August 26, 2014); Village of East Hampton Resolution 32-2014 (Sept. 4, 2014); Village of Sag Harbor Meeting Minutes (Sept. 9, 2014); Letter to L. Cantwell forwarding Shelter Island Resolutions from August and December 2014 (Dec. 5, 2014).

The proposed laws represent the latest step in a many-year, multiple-step effort. The Town has taken numerous steps over the past 15 years to address the growing problem. First, the Town identified and promoted voluntary abatement measures,[6] including:

- A minimum recommended helicopter cruise altitude of 2,500 feet above mean sea level (MSL), and recommended minimum altitudes at specific geographic reference locations;
- Discouragement of repetitive training operations during the busy summer season;
- A minimum recommended jet pattern altitude of 1,500 feet MSL (which is 500 feet above the federal standard);
- A voluntary nighttime curfew; and
- A variety of voluntary arrival and departure routes for helicopters.

Second, the Town commissioned several studies to analyze and understand the scope of the problem, beginning with a comprehensive noise measurement program instituted in 2003 to identify various characteristics of the noise caused by aircraft and helicopter operations at East Hampton Airport.[7] The 2005 update to the Town Comprehensive Plan recognized the need to update the Airport Master Plan with an emphasis on noise abatement.[8] In turn, the Town completed an updated Airport Master Plan in 2007[9] and the related Final Generic Environmental Impact Statement in 2010,[10] both of which examined and addressed noise issues. The Town also conducted additional noise analyses as part of Environmental Assessments in both 2000[11] and 2013.[12]

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[6] *See, e.g.*, East Hampton Helicopter Noise Abatement Procedures (2009 – 2014); Questions and Answers: East Hampton Airport Noise Issues (September 2014) at 5-8; HMMH, Potential Noise Abatement Benefits of the East Hampton Air Traffic Control Tower (July 16, 2012); Savik & Murray et al, East Hampton Airport Master Plan Report (April 24, 2007) at I-46; J. Brundige, History of Helicopter Noise Abatement Program (May, 2013); VHB Engineering, Surveying and Landscape Architecture, P.C., East Hampton Airport Seasonal Air Traffic Control Tower Final Environmental Assessment (June 2013) at 1-4 & G-13 (HMMH Noise Analysis); HMMH PowerPoint Presentation to Eastern Region Helicopter Council, Summary of East Hampton Airport's New Noise Abatement Program (May 5, 2004).

[7] *E.g.*, HMMH, East Hampton Airport Noise Mitigation Program, Preliminary Results, Phase I, June 25 – July 8 (Sept. 5, 2003); HMMH, East Hampton Airport Noise Mitigation Program, Preliminary Results, Phase II, August 21 - Sept. 2 2003 (Oct. 29, 2003); HMMH Powerpoint Presentation to East Hampton Noise Advisory Group, October 29, 2003; Kaplan Kirsch & Rockwell Powerpoint Presentation, Comprehensive Airport Management Plan for East Hampton Airport – Safety, Noise and Operations (December 1, 2011); Councilman Stanzione, Update on Comprehensive Management Plan for East Hampton Airport (March 6, 2012).

[8] Town of East Hampton, Comprehensive Plan (May 6, 2005) at 98.

[9] Savik & Murray et al, East Hampton Airport Master Plan Report (April 24, 2007).

[10] Young Environmental Sciences, Inc. et al, East Hampton Airport Final Generic Environmental Impact Statement (2010).

[11] TriState Planning and Engineering, P.C., in association with Freudenthal & Elkowitz Consulting Group, Inc. Environmental Assessment for East Hampton Airport (November 2000).

[12] VHB Engineering, Surveying and Landscape Architecture, P.C., East Hampton Airport Seasonal Air Traffic Control Tower Final Environmental Assessment (June 2013).

The Town has not been alone in these efforts. Throughout these years, the Town met frequently with airport stakeholders to keep them apprised of the Town's continuing efforts.[13] The Town also has engaged federal officials regarding federal measures that could affect the disruption experienced by East End residents from aircraft – particularly helicopter – traffic.[14] The Town has secured support for its efforts from the Congressional delegation and state legislators, in addition to many local elected officials. While this support has been important and, in some instances, has resulted in meaningful actions which have reduced the impact of aircraft noise, those actions have not been enough to provide the relief from aircraft noise the residents of the Town and surrounding areas demand.

By 2012, the Town recognized that the efforts to date had not resolved the "considerable community concern" and adopted a Resolution to obtain better data to support meaningful noise control measures.[15] The Town had already been using a state-of-the-art aircraft monitoring and tracking system known as AirScene to assist airport management in collecting tie-down, landing, and fuel flowage fees.[16] In August 2012, the Town concluded that it needed to collect better data regarding aircraft operations to better understand how visitors use the Airport and to help correlate specific aircraft operations to complaints and community concern.[17] To that end, the Town added a Vector camera system, which photographs the movement of aircraft and identifies them by aircraft type, runway used, and time of operation.[18] This technology improves the data integrity of AirScene's system, thus providing the Town with a substantial source of operations

[13] *E.g.*, HMMH Powerpoint Presentation to East Hampton Noise Advisory Group, October 29, 2003; HMMH PowerPoint Presentation to Eastern Region Helicopter Council, Summary of East Hampton Airport's New Noise Abatement Program (May 5, 2004); Town Resolution 2007-302 (March 2, 2007) (authorizing Airport Director Brundige to attend a meeting with the Eastern Region Helicopter Council); Letter to Eastern Region Helicopter Council re: midseason progress report on voluntary helicopter routes (August 27, 2007); Town Resolution 2011-116 (February 3, 2011) (regarding creation of a multi-town helicopter advisory committee).

[14] *E.g.* Letter from J. Brundige to U.S. Senator Schumer (March 17, 2010); Town of East Hampton comments on proposed North Shore Helicopter Route (June 21, 2010); Letter from U.S. Representative Bishop to FAA Administrator Babbitt re: North Shore Helicopter Route (June 24, 2010); Town of East Hampton comments on proposed rule establishing Class D and E airspace at East Hampton (April 2, 2012); 77 Fed. Reg. 39,911 (July 6, 2012) (Final Rule, New York North Shore Helicopter Route); U.S. Senator Schumer and U.S. Representative Bishop Press Release: Recent Federal Court Ruling Confirms FAA Authority to Regulate Over-The Water Routes that Curbs Low-Flying Helicopter Noise on Long Island – Call for FAA to Immediately Move Forward with South Shore & Expanded North Fork Routes (July 24, 2013); 79 Fed. Reg. 35,488 (June 23, 2014) (Final Rule, Extension of Expiration Date of New York North Shore Helicopter Route); Letter from U.S. Senator Schumer and U.S. Representative Bishop to FAA and DOT (July 15, 2014); FAA Powerpoint Presentation to Town of East Hampton, Process to Address Community Noise Impacts (August 27, 2014); Questions and Answers: East Hampton Airport Noise Issues (September 2014) at 5-8.

[15] *E.g.*, Town of East Hampton Resolution 2012-832 (Aug. 2, 2012).

[16] Savik & Murray et al, East Hampton Airport Master Plan Report (April 24, 2007) at I-68; *see also* Town Resolution 2012-278 (March 15, 2012).

[17] *E.g.*, Town of East Hampton Resolution 2012-832 (Aug. 2, 2012); see also HMMH, First Phase of HTO Use Restriction Justification Analysis – Identify General Scope of Available Data (Sept. 26, 2012); HMMH, Proposal for Second Phase of HTO Use Restriction Justification and Analysis (March 16, 2013).

[18] Town of East Hampton, Resolution 2012-279 (March 15, 2012).

information not typically available to general aviation airports.[19] In addition, to supplement its informal complaint logging system, the Town contracted with PlaneNoise to install and operate a noise complaint management service to better collect data related to aircraft noise complaints.[20] That system was installed in 2012 and has logged thousands of complaints. The combination of these systems gave the Town the technical ability to record aircraft operations and noise complaints in a manner comparable to that employed at the largest and most sophisticated airports in the world. The Town made the substantial investment in this technology because the Town recognized that it needed technically defensible data before it could say that it fully understood the local problem and could implement measures that are tailored to the Town's particular problem.[21]

The refined data shows that the noise problem is only increasing. Just five years ago, based on FAA forecasts, the Town anticipated that it would take more than 20 years for helicopter traffic to double.[22] However, between 2013 and 2014, helicopter traffic increased by 47 percent.[23] In addition, overall traffic increased during the same time period by 23 percent. Hundreds of East End residents have voiced their concern in informal comments, letters, or in verbal comments at Town Board meetings.[24] Thousands more have signed petitions to the same effect.[25] And the surrounding Towns and Villages have adopted resolutions requesting for the Town Board of the Town of East Hampton to "adopt a comprehensive aircraft noise limitation policy."[26]

In early 2014, the Town announced a renewed commitment to the Airport and to address noise concerns while also ensuring the ongoing safety at the Airport.[27] From the start, the Town has been committed to a professional and objective analysis of the relevant issues. The Town:

- Tasked the existing Budget and Financial Advisory Committee ("BFAC") with undertaking a financial analysis of the Airport including airport income and expenses, as

[19] VHB Engineering, Surveying and Landscape Architecture, P.C., East Hampton Airport Seasonal Air Traffic Control Tower Final Environmental Assessment (June 2013) at G-11.

[20] Town of East Hampton, Resolution 2012-276.

[21] *E.g.*, Resolution 2012-276 (March 15, 2015); Resolution 2012-278 (March 15, 2015); Resolution 2012-279 (March 15, 2015); Resolution 2012-832 (Aug. 2, 2012).

[22] Young Environmental Sciences, Inc. et al, East Hampton Airport Final Generic Environmental Impact Statement (2010) at viii.

[23] *Compare* Town of East Hampton Airport 2013 Annual Ops *with* Town of East Hampton Airport 2014 Annual Ops.

[24] *E.g.*, Town Meeting Minutes (Aug. 27, 2014); Town Meeting Minutes (Oct. 30, 2014); Town Meeting Minutes (Dec. 2, 2014).

[25] *See, e.g.*, http://petitions.moveon.org/sign/east-hampton-town-board-1 and https://www.change.org/p/north-fork-ban-helicopters-to-stop-noise.

[26] *E.g.*, Southampton Town Board Resolution 2014-897 (Aug. 14, 2014); *see also* Town of Southold Resolution 2013-422 (May 21, 2013); Shelter Island Resolution 360 (August 19, 2014); Town of Southold Resolution 2014-731 (Aug. 26, 2014); Village of North Haven Resolution (August 26, 2014); Village of East Hampton Resolution 32-2014 (Sept. 4, 2014); Village of Sag Harbor Resolution (September 9, 2014).

[27] Statement of Councilwoman Burke-Gonzalez (Feb. 4, 2014).

well as new revenue streams, which can serve as a baseline of agreed upon data for further discussions and policy decisions by the Board;[28]

- Created a new Airport Planning Committee with two subcommittees: the Noise Subcommittee, which was designed to address noise abatement, and the Aviation Subcommittee, which was designed to address airport operations, infrastructure, and capital financing, respectively;[29]

- Renewed contracts for data collection; and[30]

- Updated the voluntary helicopter abatement procedures.[31]

At the same time, the Town also issued a Request for Proposals ("RFP") for Phase I of a series of refined noise analyses, designed to: (1) quantify the current noise in a way that effectively captures the adverse effects experienced by residents and (2) quantify the reductions in noise that could plausibly be achieved by various airport access restrictions.[32] The Town has an existing noise ordinance containing standards for excessively intrusive noise. The RFP instructed the successful bidder to evaluate airport-related noise by application of the Town's noise standards and also by evaluating potential scenarios through application of the standard FAA DNL metric at the 65, 55, and 45 dB DNL levels.[33] The contract for Phase I was awarded to Henry Young of Young Environmental Sciences, in coordination with Les Blomberg of the Noise Pollution Clearinghouse.[34] Young and Blomberg conducted their analyses during the summer of 2014, using the prior season's (2013) data as the 2014 data were not yet available.

On August 27, 2014, the Town held a special meeting to discuss concerns about aircraft noise,[35] and on September 18, 2014, the Town announced its intent to conduct a formal, transparent process, involving data collection and analysis, as well as public meetings and opportunity for

[28] Resolution 2014-147 (February 6, 2014).

[29] Resolution 2014-144 (February 6, 2014); Resolution 2014-213 (Feb. 20, 2014).

[30] *E.g.*, Resolution 2014-151 (February 6, 2014); Resolution 2014-264 (March 6, 2014).

[31] 2014 Helicopter Abatement Procedures (April 30, 2014); 2014 Helicopter Abatement Procedures, Revision 1 (June 2, 2014); *see also* Town Powerpoint Presentation to Eastern Region Helicopter Council (April 30, 2014); Town Meeting Minutes (May 5, 2014).

[32] Request for Proposals, Noise Studies for Helicopter and Fixed-Wing Restrictions at East Hampton Airport (April 17, 2014) at 6; *see also* Resolution 2014-477 (April 17, 2014).

[33] Request for Proposals, Noise Studies for Helicopter and Fixed-Wing Restrictions at East Hampton Airport (April 17, 2014) at 6-7.

[34] Resolution 2014-842 (July 3, 2014); Professional Services Contract with Young Environmental Services re: Noise Study at East Hampton Airport (July 17, 2014).

[35] Town Board Special Meeting Minutes (Aug. 27, 2014); Special Meeting Register (Aug. 27, 2014); *see also* Councilwoman Burke-Gonzalez Opening Statement (Aug. 27, 2014).

public comment, in order to identify and adopt regulations to address noise and disturbance from operations at the Airport.[36]

On October 30, 2014, the Town devoted a substantial portion of its public meeting to the noise problems at the Airport,[37] including a presentation of the Phase I Noise Analysis by Messrs. Young and Blomberg.[38] In brief, they reported the following:[39]

- Helicopter noise is more annoying and generates heightened negative community response because of its unique characteristics (*e.g.*, low-frequency, noise-induced building vibration and rattle, impulsive characteristics, duration, low-altitude, and other non-acoustical factors);

- Compliance with the 2013 voluntary helicopter procedures was quite low (15.3%), when calculated assuming only a half-mile wide band (*i.e.*, a quarter-mile on either side of the precise track);[40]

- Flight data from 2013 depicted a broad array of altitudes for helicopters at a distance of four nautical miles from the Airport;

- Every 2013 operation at East Hampton Airport generates a maximum noise level (Lmax) that, at some point, exceeds the Town's noise standards at one or more properties within a ten-mile radius of the Airport;[41]

- Application of the FAA's traditional day/night average sound level (DNL) noise metric[42] proved to be an unhelpful basis for decision making by the Town because the DNL

[36] Resolution 2014-1180 (Sept. 18, 2014); see also Questions and Answers: East Hampton Airport Noise Issues (September 2014); Letter from Supervisor Cantwell to Federal and Local Officials (Sept. 19, 2014).

[37] Town Meeting Minutes (Oct 30, 2014).

[38] Young & Blomberg Powerpoint Presentation, East Hampton Airport Phase I Noise Analysis Interim Report (Oct. 30, 2014); *see also* Town Meeting Minutes (Oct. 30, 2014); see also H. Young, INM Case Echo Reports: Annual Average 2013, Annual Average Helicopter Only 2013, Busy Day 2013, & Busy Day Helicopters Only 2013; *see also*, L. Blomberg, Documentation of Elevation Selected to Model Helicopter Noise at HTO (October, 2014); H. Young, Technical Memorandum: INM Noise Contour Development for 2013 Input Data (January 5, 2015).

[39] *Id.*

[40] This analysis generated strong concerns. Two common themes were: (1) the fact that voluntary procedures had changed in 2014; and (2) the observation that the method of determining "compliance" used by Mr. Blomberg was imprecise.. In part in response to these concerns, the Town directed HMMH to analyze 2014 data in Phase II.

[41] The analysis of exceedances per tax parcel was prepared at the recommendation of the Noise Subcommittee in order to determine whether the noise problems were isolated geographically or by certain operations. The analysis generated significant concerns (*see, e.g.*, Memorandum to Town Board from Aviation Operations Subcommittee of the Town of East Hampton Airport Planning Committee (Feb. 1, 2015)). It proved to be far too crude a tool for analyzing noise impacts because, as comments revealed, the analysis did not account for vacant parcels, different land uses, and other characteristics that would affect the severity of the impact. By focusing rigidly on whether an overflight generated noise energy in excess of the Town's noise ordinance, the analysis did not ultimately prove helpful for the crafting of reasonable use restrictions.

metric averages noise data over 24 hours and does not reflect the peak noise events and specific times of day when East Hampton residents are more disturbed by noise;[43] and

- There are many ways to measure noise and impacts – including complaint data[44] – and the Town should evaluate which metrics might best capture the Town's noise problem.

Peter Wadsworth also presented a report on 2014 year-to-date complaint data at HTO that was collected through the PlaneNoise system.[45] He reported that the data showed that helicopters generated the majority of complaints and that complaints had distinct peaks during the summer (May through September), on the weekends (starting as early as Thursdays and ending on Mondays), and in response to nighttime operations.[46] At the same meeting, the Town's aviation counsel outlined the next steps in the Town's process for identifying reasonable and meaningful measures to address the recognized community disturbance from aircraft noise, including defining the "problem," identifying reasonable and practical alternatives tailored to address the problem, and next steps (*e.g.*, holding additional public hearings, thoroughly analyzing benefits and impacts of each alternative, etc.).[47]

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[42] The noise metric used in almost any significant environmental document produced for the FAA is the yearly Day/Night Average Sound Level (DNL). The DNL is an accumulation of the noise exposure that takes into account all of the aircraft operations that occur during an "average" 24-hour day, except that events occurring after 10:00 p.m. at night and before 7:00 a.m. the next morning are penalized as if they were louder than they actually are. The penalty, or weighting, on each nighttime operation is 10 decibels (dB), equivalent in terms of its effect on noise exposure to having 10 daytime operations of the same aircraft. *See,* VHB Engineering, Surveying and Landscape Architecture, P.C., East Hampton Airport Seasonal Air Traffic Control Tower Final Environmental Assessment (June 2013) at G-2 – G-3 (HMMH Noise Analysis); *see also* Young Environmental Sciences, Inc. et al, *East Hampton Airport Final Generic Environmental Impact Statement* (2010) at 30-32 & Appendix C.

[43] Although the FAA's regulatory standard assumes that residential uses are compatible up to a DNL level of 65 dB, adverse effects can occur far below that level. And because it is based on an average of daily noise events, the FAA's DNL metric and 65 dB DNL standard are insensitive to ambient noise levels in communities such as East Hampton, which are low (as low as 30- 40dB), resulting in aircraft noise having a much greater effect than in urban areas with higher ambient sound levels. *See, e.g.,* Young Environmental Sciences, Inc. et al, *East Hampton Airport Final Generic Environmental Impact Statement* (2010) at 32.

[44] Complaint data is an accepted way to determine community response to aircraft noise and to craft appropriate solutions. For example, a federal court of appeals, recently affirmed the appropriateness of relying primarily on complaint data to justify FAA-imposed flight paths for helicopters flying above Long Island. *Helicopter Ass'n Int'l v. Federal Aviation Admin.*, 722 F.3d 430 (DC Cir. 2013). As the FAA did in deciding to impose flight tracks for helicopters, the Town has received and analyzed many different sources of data: noise energy data (using the FAA's INM model and the DNL metric as well as other metrics such as SEL and L(max)), complaint data, informal community comment data, and self-reported data from aircraft users. The Town staff and consultants have not relied upon any single data package or metric.

[45] P. Wadsworth Powerpoint Presentation, Analysis of 2014 YTD Noise Complaints for East Hampton Airport (Oct. 30, 2014).

[46] Wadsworth, Powerpoint Presentation to the Town, Analysis of 2014 YTD Noise Complaints for East Hampton Airport (Oct. 30, 2014).

[47] Kaplan Kirsch & Rockwell, Powerpoint Presentation to the Town, Update on Disturbance From Operations at East Hampton Airport: Phase I Noise Analysis Interim Report (Oct 30, 2014); *see also* Town Handout, Preliminary draft Problem Definition (Oct. 30, 2014).

Following the October 30, 2014, Town Meeting, the Town heard concerns about several key issues: (1) the Phase I Noise Analysis, which had begun in July 2014, was based only on 2013 data, while the complaint analysis looked at 2014 data; (2) the analysis of "compliance" with 2013 voluntary helicopter procedures was misleading because the procedures were changed in 2014; (3) the analysis of individual "exceedances" of the Town's noise ordinance was inappropriate; and (4) complaint data should also include information about the number of times individuals filed complaints.[48]

REFINED NOISE ANALYSIS AND DEVELOPMENT OF REFINED ALTERNATIVES

Following receipt of the Phase I analysis and review of public comments on that analysis, the Town Board decided that more refined noise analysis was warranted before it could make a decision on whether to impose restrictions at the Airport and, if so, upon what basis to do so. The Town Board decided to commission a Phase II study and retained HMMH to analyze 2014 data, to identify a refined problem statement, and to prepare a tailored list of alternatives that offer the best promise for addressing the problem.[49] On December 2, 2014, HMMH presented a detailed breakdown of complaint data, including information about households that filed multiple complaints, as well as up-to-date operations data (November 1, 2013 - October 31, 2014) at HTO.[50] HMMH reported on key findings, including: (1) helicopter operations are "highly seasonal" and generate the most complaints; and (2) 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.[51]

Based on the Phase I noise analysis and its own findings, HMMH proposed the following problem definition for the Town Board's consideration:

> 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 and early morning hours.[52]

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[48] *E.g.*, L. Kirsch, Letter to L. Cantwell and K. Burke-Gonzalez re: Town of East Hampton's Noise Study (Nov. 5, 2014).

[49] Resolution 2014-1375 (Nov. 12, 2014); *see also*, HMMH Memorandum to Town, Assistance with Phase II of the East Hampton Airport Noise Study (Nov. 10, 2014); Town Press Release, HMMH Hired To Conduct Second Phase Noise Study (Nov. 12, 2014).

[50] HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, East Hampton Airport Phase II Noise Analysis (Dec. 2, 2014).

[51] *Id.*

[52] *Id.* at Slide 26; *see also* HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, Regulations to Address Noise and Disturbance From Operations at East Hampton Airport (Feb. 4, 2015) (correcting the problem statement by adding the missing reference to "early morning hours.").

HMMH and the Town's aviation counsel also presented a full array of potential alternatives, ranging from a full ban on specific aircraft types, to measures outside the Town's control, such as flight procedures that only the FAA can impose.[53] The consultants recommended that the Town Board reject the following three alternatives:

- **No action**. By taking no action, the Town would not be addressing the known disturbance from operations at East Hampton Airport.

- **Noise mitigation**. In some communities, noise mitigation measures, such as sound insulation or home buy-out programs, can be a viable option to address community disturbance. Those options are not an appropriate solution for this community where residents frequently keep windows open in the summer evenings and mornings and where land values are so high.

- **Fee-based restrictions**. Federal law limits rates and charges on aeronautical users of an airport to those that are reasonable and not unjustly discriminatory. To address the problem at East Hampton Airport, the fee would have to be high enough to change behavior, and such a high fee could be challenged as unreasonable under federal law. Further, 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.

HMMH and Kaplan Kirsch & Rockwell recommended further study of the following alternatives:

- **Ban on "Noisy" Aircraft**. An oft-stated goal among residents and Town officials is to eliminate "noisy" aircraft. This is a difficult goal to achieve, however. For example, although (as documented by the complaint data) people perceive helicopters to be the noisiest aircraft, metrics of noise energy using the decibel metric actually rate jets as louder than helicopters on a single event basis. It is thus apparent that, in the East End, community disturbance and annoyance is based upon factors other than noise energy as measured with the decibel metric. It has become clear, as reflected in the complaint data (and comments that the Town Board considered at its various public meetings) that residents and visitors respond to frequency and timing of operations as much or more than decibel level, aircraft type, or type of operation. Thus, any proposal for a ban would need to be carefully crafted based on a more detailed analysis of noise impacts using a basket of metrics to reflect the unique noise environment in and around East Hampton.

- **Voluntary Measures**. The data about compliance with voluntary helicopter procedures that was presented in October 2014 related to 2013 operations. Users had, however, significantly adjusted voluntary procedures for 2014 in cooperation with the Town. Therefore, the consultants recommended that the Town analyze the 2014 data and

[53] HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, East Hampton Airport Phase II Noise Analysis (Dec. 2, 2014) at Slides 27 -34.

coordinate with the operators to see if meaningful relief could be achieved with voluntary measures.[54]

- **Required routes or altitudes**. Required routes or altitudes might address the problem, but the Town has no authority to regulate aircraft in flight. However, the Town could encourage FAA to define and enforce optimal flight paths.

Finally, HMMH and Kaplan Kirsch & Rockwell recommended that it would be worthwhile to analyze, and for the Town Board to consider, the time of day/week/year restrictions and an air traffic flow management option that limited concentrated operations for any given time or day.

In the same timeframe, the Airport Noise Subcommittee presented its analysis on the scope of the problem, as well as viable alternatives.[55] The Noise Subcommittee reached many conclusions similar to those of the consultant team. The Noise Subcommittee concluded that:

> *The ultimate airport noise policy objective of the Town should be to eliminate this noisiest traffic entirely, by inducing airport users to employ existing quieter types, so that that all aircraft types using the Airport are similar in their noise impact to the aircraft flown by local pilot-owners for their own pleasure and transportation.*[56]

It also provided the following problem statement:[57]

> Aircraft noise events are disturbing and disruptive for 19 reasons:
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> (i) The frequency with which they occur, especially during peak periods;
>
> (ii) The duration of individual events;
>
> (iii) The absolute loudness of events;
>
> (iv) The relative loudness of events against the low background noise level;
>
> (v) The acoustic properties of the noise, especially impulsive and low frequency noise;
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> (vi) The startling effect of low altitude events;
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> (vii) The instinctive perception of approaching aircraft as looming or threatening;

[54] On January 21, 2015, the Town and HMMH met with helicopter operator representatives to discuss voluntary noise abatement routes and altitudes.

[55] *See*, Airport Planning Committee, Noise Subcommittee, Eighth Findings – Alternatives for Noise Control (Oct. 28, 2014); Airport Planning Committee, Noise Subcommittee, Ninth Findings – Aircraft Noise Problem Definition (Nov. 23, 2014); Airport Planning Committee, Noise Subcommittee, Tenth Findings – Proposed Noise Measures (Dec. 2, 2014).

[56] Airport Planning Committee, Noise Subcommittee, Twelfth Findings – Final Proposed Noise Measures (Dec. 20, 2014).

[57] Airport Planning Committee, Noise Subcommittee, Ninth Findings – Aircraft Noise Problem Definition (Nov. 23, 2014); *see also* Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015) at 1-4 & 18-34.

(viii) The resonant rattling of windows and other household objects;

(ix) The interruption of conversation;

(x) The disruption of sleep and the deleterious effects on health;

(xi) The perception of aircraft noise events as unwarranted and unwelcome intrusions upon, and interruptions of, privacy and home life, both indoors and outdoors;

(xii) The incompatibility of aircraft noise with what is otherwise a pastoral environment;

(xiii) The increase in noise, caused by aircraft, occurs at exactly those times of year, summer generally and especially summer weekends, when residents, both year-round and seasonal, most want to enjoy the peace and beauty of the unique environment that is the special bounty of the East End;

(xiv) Acute noise exposure activates the autonomic and hormonal systems, leading to temporary changes such as increased blood pressure, increased heart rate, and vasoconstriction;

(xv) Adverse effects of environmental noise on mental health include anxiety, emotional stress, nervous complaints, nausea, headaches, instability, argumentativeness, changes in mood, increase in social conflicts;

(xvi) Adverse social and behavioral effects of environmental noise include negative changes in overt everyday behavior patterns (e.g., closing windows, not using balconies, decks, and outdoor space, turning TV and radio to louder levels), adverse changes in social behavior (e.g., increased aggression, reduced helping behavior, unfriendliness, disengagement, non-participation), and negative changes in mood (e.g., less happy, more depressed);

(xvii) The designation of routes in order to reduce the number of affected homes grossly magnifies the adverse impact on homes under and along the designated routes;

(xviii) The designation of routes over the reflective surface of inland waters in order to reduce the number of affected homes amplifies the adverse impact on homes along the water and ruins the peaceful enjoyment of those who value their time spent on the water, fishing, boating, swimming, surfing, paddling, and observing nature in what should be a serene setting; and

(xix) Despite the Town's commitment to environmental preservation, the direction of aircraft preferentially over nature preserve areas, in order to spare residents from noise, disturbs the feeding, predation, predatory defenses, mating, nesting, reproduction, rearing, and migration of many species of wildlife and defeats one of the main purposes of the purchase of our open space, the ability of those who live and visit here to connect with nature and escape the urban environment.

The Noise Subcommittee conducted additional complaint analysis, concluding that helicopter noise is in fact nearly four times as objectionable to the community as jet aircraft noise, noise is not less of a problem off-season, and "noisy aircraft types" are a problem at all times.[58]

[58] Airport Planning Committee, Noise Subcommittee, Eleventh Findings – Complaint Analysis (Dec. 15, 2014).

Ultimately, the Noise Subcommittee recommended that the Town Board adopt a package of measures: (1) classification of operations into noise-based categories (*i.e.*, quiet, noisy and noisiest); (2) 5PM – 9AM curfew for "noisiest" aircraft and 7PM – 8AM curfew for "noisy" aircraft; (3) ban on noisiest helicopters; (4) "Noisiest" aircraft are limited to two operations per week; (5) seasonal weekend and holiday ban on "noisy" helicopters; (6) seasonal weekend and holiday noise pollution surcharge for "noisy" aircraft; and (7) seasonal weekend ban on touch-and-go operations.[59]

The Aviation Subcommittee disagreed with the Noise Subcommittee in several respects. It expressed concerns about various issues, including: (1) the use of complaint-driven studies and the potential for manipulation of complaint data; (2) the manner of tracking compliance with voluntary helicopter routes; (3) the examination (in Phase I of the noise analysis) of noise exceedances on a per tax parcel basis; (4) the Noise Subcommittee's three-tier noise ranking system for aircraft.[60] As noted above,[61] the Town heard similar complaints from other stakeholders and took appropriate steps, including, abandoning the review of exceedances on a per tax parcel basis;[62] directing its consultant to coordinate with Eastern Region Helicopter Council regarding voluntary measures;[63] and revising the noise ranking metric.[64]

In December 2014, the Town commissioned Phase III of the Noise Study to analyze the alternatives, or package of measures, identified by the consultant team as the most reasonable solution(s) to the problem.[65] On February 4, 2015, the Town's consultants presented findings on four proposed restrictions, each of which reflected policy recommendations integrating the findings of HMMH's operations and complaint analysis, data from Phase I of the Noise Study, the findings of the Noise Subcommittee, and input by affected stakeholders.[66]

1. **Prohibit all aircraft operations year-round from 11 pm – 7 am**.

The first proposed restriction was a full curfew on all nighttime operations between 11 PM and 7 AM.[67] This restriction is designed to address the problem of nighttime noise from aircraft at

[59] *See* Airport Planning Committee, Noise Subcommittee, Tenth Findings – Proposed Noise Measures (Dec. 2, 2014); Airport Planning Committee, Noise Subcommittee, Twelfth Findings – Final Proposed Noise Measures (Dec. 20, 2014); Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015).

[60] *E.g.*, Memorandum to Town Board from Aviation Operations Subcommittee of the Town of East Hampton Airport Planning Committee (Feb. 1, 2015).

[61] *See supra*, pp. 7-9.

[62] *See supra*, n. 41.

[63] *See supra* at p. 10 and n. 54.

[64] *See supra*, pp. 14-15 & 16-17.

[65] Resolution 2014-1471 (Dec. 18, 2014).

[66] Town Press Release: Town of East Hampton Proposed Four Restrictions on Use of Airport (Feb. 4, 2014); *see also* HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, Regulations to Address Noise and Disturbance From Operations at East Hampton Airport (Feb. 4, 2015).

[67] Draft Notice of Public Hearing to Consider a Local Law Amending Chapter 75 (Airport) of the Town Code Regulating Nighttime Operation of Aircraft at East Hampton Airport (Feb. 4, 2015).

HTO. The Town's voluntary curfew has not proven to be sufficiently effective at eliminating nighttime noise from aircraft; nighttime operations still generate a significant number of complaints.[68] Moreover, it is well-documented that nighttime aircraft noise is highly disturbing, that it can disrupt normal sleep patterns, and that it has a particularly serious adverse effect on people's lives.[69] The proposed curfew would adopt as mandatory the existing voluntary nighttime curfew.[70]

2. **Prohibit "noisy" aircraft year-round during 8 pm – 9 am evening, night, and early morning hours (extending the curfew into the "shoulder hours")**.

The second proposed restriction was an extended curfew for "noisy" aircraft.[71] The professional literature recognizes that disturbance by all types of aircraft is most significant in the evening and early morning hours, as well as the nighttime hours.[72] The data at HTO demonstrate that noise complaints are overwhelmingly attributable to helicopters and jets – the noisiest types of aircraft.[73] This restriction was designed to eliminate the noisiest aircraft during the "shoulder" times of the evening and early morning hours, when residents and visitors typically engage in quiet outdoor activities and therefore, are highly sensitive to disruption by loud aircraft.

The Town examined the effects of extending the curfew as early as 8 PM and as late as 10 AM, and elected to use the hours of 8 PM – 9 AM, as those hours correlate best with the times of day when residents have a heightened expectation of quiet.

Identifying the proper threshold and metric for defining "noisy" aircraft proved to be a complex problem requiring complex and detailed analysis by the consultant team and several expert members of the Noise Subcommittee. Among the challenges is that different aircraft are regulated using different metrics.[74] The initial proposal followed the Noise Subcommittee's

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[68] *E.g.*, Wadsworth, Powerpoint Presentation to the Town, Analysis of 2014 YTD Noise Complaints for East Hampton Airport (Oct. 30, 2014).

[69] *See, e.g.*, HMMH Memorandum, Review of Studies that Address Effects of Helicopter Noise, at Sec. 8 (References).

[70] HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, Regulations to Address Noise and Disturbance From Operations at East Hampton Airport (Feb. 4, 2015) at Slide 11.

[71] Draft Notice of Public Hearing to Consider a Local Law Amending Chapter 75 (Airport) of the Town Code Regulating Evening, Nighttime and Early Morning Operation of Noisy Aircraft at East Hampton Airport (Feb. 4, 2015).

[72] *See, e.g.*, HMMH Memorandum, Review of Studies that Address Effects of Helicopter Noise, (Feb. 3, 2015) at Sec. 8 (References).

[73] *E.g.*, Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015) at 3.

[74] Some background on how federal and international regulators classify "noisy" aircraft is necessary for understanding this issue. The Federal Aviation Administration (FAA) and international regulators use various metrics for rating the noisiness of individual aircraft. For turbojet and large transport category aircraft, FAA uses Effective Perceived Noise Level in decibels (EPNdB). EPNdB is a single number evaluator of the subjective effects of aircraft noise on human beings. EPNdB takes into account various factors beyond the sound level, such as duration of the event and pure tones, in order to quantify the relative annoyance of the sound. For the vast majority of other aircraft, *i.e.*, the lighter, propeller-driven aircraft, FAA uses a different metric, the so-called "Lmax" metric, which measures the maximum instantaneous sound levels using an A-weighted decibel scale. For a very small

recommendation for defining "noisy" using three different noise metrics (EPNdB, SEL, and Lmax) for different aircraft types.[75]

3. **Prohibit helicopter operations on weekends and holidays during the summer season (May 1 – September 30)**.

The third proposed restriction was a ban on helicopter operations on weekends and federal holidays during the summer season.[76] The professional literature,[77] and the specific data at HTO,[78] make clear that helicopters cause extreme disturbance and are particularly disturbing and annoying to residents and visitors in the East End. The data also demonstrate that the problem peaks during weekends and holidays in the summer season, when there are high traffic volumes, as people come to the Town and environs for the weekends.[79]

While the FAA implemented mandatory flight tracks in 2012,[80] data collected since imposition of the so-called North Shore Route have demonstrated that this mandatory route has not resolved the problem in East Hampton and in nearby communities.[81] The principal reason is that, while the North Shore Route designates a mandatory route off the north shore of Long Island, it does not mandate any route for helicopters as they transition from off-shore to their destination. As a result, operators are free to use any route they choose: some of those routes overfly heavily populated and noise sensitive areas and others do not. Data suggests that relatively few operators have elected to remain off-shore all the way to Orient Point and to remain overwater as long as possible.[82]

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number of aircraft, the FAA uses a third metric, Single Event Level or "SEL," that takes into account the sound level and duration (but not pure tones). *See* HMMH Memorandum, Review of Studies that Address Effects of Helicopter Noise, (Feb. 3, 2015); *see also* HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, Regulations to Address Noise and Disturbance From Operations at East Hampton Airport (Feb. 4, 2015) at Slide 10.

[75] Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015) at 36-42; *see also* HMMH and Kaplan Kirsch & Rockwell Powerpoint Presentation to the Town, Regulations to Address Noise and Disturbance From Operations at East Hampton Airport (Feb. 4, 2015) at Slide 10.

[76] Draft Notice of Public Hearing to Consider a Local Law Amending Chapter 75 (Airport) of the Town Code Regulating Operation of Helicopters at East Hampton Airport (Feb. 4, 2015).

[77] HMMH Memorandum, Review of Studies that Address Effects of Helicopter Noise, (Feb. 3, 2015).

[78] *E.g.*, Wadsworth, Powerpoint Presentation to the Town, Analysis of 2014 YTD Noise Complaints for East Hampton Airport (Oct. 30, 2014); Airport Planning Committee, Noise Subcommittee, Eleventh Findings – Complaint Analysis (Dec. 15, 2014); HMMH and KKR Presentation to the Town, Regulations to Address Noise and Disturbance From Operations at East Hampton Airport (Feb. 4, 2015) at Slide 16; *see also* https://www.change.org/p/north-fork-ban-helicopters-to-stop-noise and http://petitions.moveon.org/sign/east-hampton-town-board-1.

[79] *E.g.*, Wadsworth, Powerpoint Presentation to the Town, Analysis of 2014 YTD Noise Complaints for East Hampton Airport (Oct. 30, 2014).

[80] 77 Fed. Reg. 39,911 (July 6, 2012) (New York North Shore Helicopter Route, Final Rule).

[81] *E.g.*, Letter from U.S. Representative Zeldin to FAA Administrator Huerta (March 2, 2015).

[82] *Id*.

Voluntary transition routes have similarly proved ineffective because East Hampton is both the source and destination of the traffic. In addition, designated voluntary routes – even if operators do respect those routes – simply transfer and concentrate the noise on certain neighborhoods, or, alternatively, over preserved natural areas.[83]

This restriction was designed to address residents' and visitors' heightened desire for, and expectation of, quiet during the extended summer weekends. One of the common themes from community comment (reinforced by historical planning data) is that the East Hampton community is known for, and visitors select East Hampton for, the area's reputation for an unusually quiet and serene environment. A quiet environment is, furthermore, more than just a luxury for area residents and visitors: that environment is the brand that sells East Hampton as a place to live and visit. A loss of that reputation could have seriously deleterious effects not only on existing residents and visitors, but on the Town's ability to attract economic activity in the future. If potential visitors and prospective residents were to perceive that East Hampton has lost its unique appeal, the attractiveness of the Town would be lost. Therefore, preservation of the Town's reputation for quiet has importance far beyond the protection of the environment for the existing population. While the potential economic impacts of losing its reputation have not been quantified, the Town Board and civic leaders have been clear that the Town Board has an obligation to protect the Town's reputation for peace and quiet.

The Town considered a number of different variations on the definition of the "Season" and settled on the five month period (May – September). Most important to the Town was the fact that the data show that the clear "peak" for operations at HTO occurs in these five months.[84] The timeframe also coincides with the traditional concept of summer being between Memorial Day and Labor Day.

The Town also reviewed the daily peaking trends and concluded that the weekend is best defined as noon Thursday through noon Monday. Operations data show that there is a demonstrable peaking of operations beginning on Thursday afternoon and again on Monday mornings; complaint data matches these peaks. The Thursday to Monday definition also ensures that the "weekend" is defined broadly enough to avoid merely shifting peak times, resulting in extreme congestion and noise peaks immediately before the "weekend" commenced or immediately after it ended.

4. **Prohibit noisy aircraft from conducting more than one take-off and one landing in any calendar week during the summer season**.

The final proposed restriction was a limit on the number of operations by "noisy" aircraft.[85] The data indicate that the noisiest aircraft are a serious problem: jets operations generate complaints at nearly 2.5 times the rate of propeller-driven operations, and helicopters generate complaints at

[83] Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015) at 28-29.

[84] *E.g.*, HTO Operations data (2012, 2013, 2014).

[85] Draft Notice of Public Hearing to Consider a Local Law Amending Chapter 75 (Airport) of the Town Code Regulating Operation of Noisy Aircraft at East Hampton Airport (Feb. 4, 2015).

2.3 times the rate of jets, or 5.75 times the rate for propeller-driven operations.[86] This proposed restriction is designed to limit the noisiest aircraft during the summer season when residents and visitors have a heightened expectation that they can enjoy the outdoor environment in peace.

The Town considered, but rejected, an outright ban on all "noisy" aircraft. While the data demonstrate that "noisy" aircraft generate disproportionate amounts of complaints, the Town recognized that determining the appropriate restriction called for balancing and judgment calls. It would not be possible to address 100 percent of all of the noise-related complaints without closing the Airport and defeats the Town's goal of finding a balanced means of operating the Airport – which is an important Town asset – while still providing meaningful noise relief. A slightly-less draconian step would be to ban just "noisy" aircraft. A ban on "noisy" aircraft would undoubtedly reduce the number of complaints dramatically, but it also would have a similar reduction in the number of operations and the related revenue, which could put the financial viability of the Airport at risk. Ultimately, the Town determined that an outright ban on "noisy" aircraft would tip the scales too strongly against airport users. Thus, the Town elected to impose a stringent limit, rather than an outright ban, on these aircraft.

REFINING THE PROPOSED ACCESS RESTRICTIONS

1. Revised definition of "noisy"

On February 10, 2015, the Town noticed public hearings on all four proposed restrictions, with one change.[87] The change related to the definition of "noisy." The initial definition of "noisy" relied on three different noise metrics (EPNdB, Lmax, and SEL[88]) to classify different aircraft types as "noisy" or not. However, it became clear that this definition was too complicated to apply fairly and consistently.

As the Noise Subcommittee recognized, there is no precise correlation between the different metrics because they do not measure exactly the same things.[89] In addition, the published EPNdB values are established for a different location and mode of flight than the published values in terms of Lmax or SEL. For consistent measurement locations and modes of flight, an EPNdB measurement would *generally* be on the order of 10 to 15 decibels higher than Lmax, and slightly higher than SEL. Because of the absence of a consistent conversion from EPNdB to Lmax or SEL, however, any effort to set comparable noise thresholds in terms of all three metrics would necessarily create anomalies, such as situations where EPNdB-rated aircraft that would be exempt from the restrictions on "noisy" aircraft are actually noisier than aircraft considered "noisy" under the L-max or SEL ratings.[90]

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[86] Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015) at 22.

[87] *See* Resolution 2015-215, Resolution 2015-12, Resolution 2015-13, Resolution 2015-14 & Resolution 2015-15 (Feb. 10, 2015).

[88] *See infra*, n. 68.

[89] Airport Planning Committee, Noise Subcommittee, Final Report and Recommendations (Jan. 20, 2015) at 36-39.

[90] This precise problem is made clearer by reviewing FAA's Advisory Circular 36-3H ("Estimated Airplane Noise Levels in A-Weighted Decibels"). This Advisory Circular presents Lmax levels for aircraft that the FAA normally

The second problem identified by the consultant team and Town Board is a practical one. In order to ensure fairness and adequate advanced notice to potential operators, the Town Board wanted to have a single source of data upon which operators could rely to determine if their aircraft would be restricted at the Airport. Using three separate metrics from three separate governmental sources seemed to be too complicated to apply equitably in practice. The Town Board was concerned that that complexity would result in confusion, misunderstandings, and frustration by aircraft operators. In addition to being unfair, such complexity could also result in a lower compliance rate as users, notwithstanding their good faith, might not be certain as to whether the restrictions apply to their particular aircraft.

To avoid those issues, the Town revised the definition of "noisy" aircraft to rely solely on the EPNdB metric to define "noisy" aircraft.[91] It is the single metric used by federal and international regulators for certificating the aircraft that are expected to be noisier and it is a metric that, standing alone, can be applied fairly and consistently. A single metric also avoids the confusion caused by having multiple sources for noise data: with the EPNdB metric, users can look to a single (or at most two) sources to determine whether their aircraft is considered to be noisy.[92] Aircraft registered in the United States are required to provide that figure in the airplane or rotorcraft manual provided by the manufacturer. Therefore, even if users do not have access to published government databases showing EPNdB levels, owners and operators could always retrieve such data from their own manuals.

Ultimately, the Town elected to define "noisy" as "any airplane or rotorcraft for which there is a published EPNdB approach (AP) level of 91.0 or greater."[93] The choice of this threshold was based on several factors. First, the Town reviewed comparable restrictions at other airports such as Mineta San Jose International Airport (threshold of 89 EPNdB[94]) and Sacramento Executive Airport (threshold of 84 EPNdB[95]). Second, it also examined the particular fleet at HTO, and discussed the actual noise disturbance caused by actual aircraft operating out of HTO. Third, the

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certificates using EPNdB. These Lmax levels are for the same locations and flight modes as the EPNdB ratings, which permits direct comparisons between the two metrics. A quick review identifies the type of anomalies that would result by using the initially-proposed multi-metric definition of "noisy." For example, the Cessna 650 Citation III has an FAA-published EPNdB approach level of 90.8 (*i.e.*, not noisy) but an FAA-published Lmax approach level of 84.8 (*i.e.*, noisy). Similarly, a Dassault Falcon 20 has an FAA-published EPNdB approach level of 90.0 (*i.e.*, not noisy) but an FAA-published Lmax approach level of 90.3 (*i.e.*, noisy).

[91] *See*, How Do I Tell If My Aircraft Is Considered "Noisy"? (Feb. 24, 2015); List of Noisy Aircraft Types (March 3, 2015); HMMH, Memorandum re: Noisy Aircraft List (March 3, 2015).

[92] *See, e.g.*, How Do I Tell If My Aircraft Is Considered "Noisy"? (Feb. 24, 2015).

[93] *E.g.*, Resolution 2015-213; Resolution 2015-215; *see also* How Do I Tell If My Aircraft Is Considered "Noisy"? (Feb. 24, 2015); List of Noisy Aircraft Types (March 3, 2015); HMMH, Memorandum re: Noisy Aircraft List (March 3, 2015).

[94] City of San Jose Municipal Code § 24.03.300 ("If a jet aircraft is not listed on the schedule of authorized aircraft, then the aircraft will be allowed to operate during curfew hours only if the operator demonstrates in writing to the director that the FAA Part 36 manufacturer certificated noise level of such aircraft (using the arithmetic average of the takeoff, sideline, and approach noise levels) is equal to or less than 89.0 EPNdB.") *See also:* http://www.flysanjose.com/fl/environmental.php?page=curfew&subtitle=Noise+Abatement+|+Curfew.

[95] Sacramento City Code § 12.88.520. ("It is unlawful and a misdemeanor for a person to take off or land an aircraft at the airport if the noise level for the model of aircraft exceeds 84.0 EPNdB as said noise level is set forth in the advisory circular in the columns entitled "Meas EPNdB" or "M/Est EPNdB" as measured at take-off.").

Town's consultants determined that there is not just one single threshold that is generally accepted in the industry, and that, unless the Town intended to impose a de facto ban on certain aircraft, it should select a threshold which allows at least some helicopters, fixed-wing jets, and fixed-wing propeller aircraft to operate without the restriction.

The selected threshold allows many aircraft types to operate at the Airport without being subject to "noisy" aircraft restrictions, including:

- the most modern and some older, smaller helicopters;
- some of the latest generation corporate jet aircraft; and
- most of the small sport aviation aircraft used at the Airport.

Allowing these operations to be unaffected by the restrictions on "noisy" aircraft is consistent with trends in complaints and comments that the Town Board has received, *i.e.*, that operations by these types of aircraft are comparatively less intrusive than their noisier counterparts. The threshold also ensures that at least some operations by each broad category of operators (*e.g.*, helicopters, corporate jets, turbo prop aircraft, and small piston aircraft) can operate without restriction. The Town Board concluded that it was important to strike a delicate balance between the needs and desires of aircraft users and the community and that the 91 EPNdB threshold strikes the appropriate balance.

At the same time, the Town Board recognized, and the consultant team reiterated, that there is no perfect balance and there is no industry standard for that balance. The consultant team recommended that the Town consider the 2015 summer season to be a test of whether the Town has struck the correct balance. To that end, the consultant team recommended that the Town collect as much data as possible during the 2015 season to determine whether the restrictions achieve the Town's objectives and are only as restrictive as necessary to solve the problem. The data from actual user data and actual complaints in 2015 could help the Town Board determine whether modifications to the threshold are warranted.

2. Outreach and Public Comment

On March 12, 2015, the Town held a hearing on all four proposed restrictions.[96] At the hearing, the Town announced that it would accept comments until March 20, 2015.[97] As might be expected, the legislative proposals were subjected to intense public scrutiny by residents and visitors from throughout the East End; from industry associations and individual aircraft operators; from elected officials from throughout the East End; and from the FAA. The Town specifically reached out to senior FAA officials in Washington, DC. and to members of the New York Congressional Delegation for their comment to ensure that the Town received feedback from all affected components of the community. Town Board members also reviewed written comments submitted by mail and email.

The Town Board made a deliberate decision to engage with industry groups – both to ensure that they were fully apprised of the proposals and to receive comments on the effect of the proposals

[96] Town Meeting Minutes (Mar. 12, 2015).

[97] *Id*. at 8.

on their members. Town Board members traveled to Washington DC to meet with senior staff of the National Business Aviation Association, the Aircraft Owners and Pilots Association and the General Aviation Manufacturers Association. Town Board members also met with senior representatives of the Eastern Region Helicopter Council, which has, for years, been actively involved in the public debate about restrictions at the Airport. These meetings generated a productive dialogue and proved most instructive as they helped the Town Board understand the real world effects of the proposed restrictions on airport users.

After reviewing the comments from residents, elected officials and affected stakeholders, the Town Board determined that some modifications to the proposed restrictions were warranted. Specifically, the Town Board concluded that:

- Curfews on nighttime, evening and early morning operations are essential;

- The one-trip-per-week proposal, which limits the volume and frequency of airport use by noisy aircraft types during the summer season is also essential, as it limits the number of disruptions from the noisiest aircraft; and

- The proposed helicopter ban merits additional review before the Town Board should consider its enactment.[98]

The Town Board also wanted to reassure the public of its commitment to keep the Airport open and to operate it in a financial self-sustainable manner.

3. Deferring Consideration of Helicopter Ban

With regard to the seasonal weekend helicopter ban, the Town Board recognized that residents who are impacted by loud and disturbing helicopter noise deserve meaningful relief. However, the data suggest that the combination of the curfews and the one-trip-per-week limitation on noisy aircraft (including noisy helicopters) is well tailored to address the known problem without creating any risk of unintended diversion of helicopters.

The Town also received a number of comments expressing concern that a total ban could result in helicopters diverting to other airports in the vicinity.[99] In order to address that concern, the Town commissioned a study of helicopter diversions which was incorporated into the SEQRA analysis of the proposals. Preliminary analysis of potential diversions reinforced the concern that a total seasonal weekend ban might result in significant increases in helicopter activity at Montauk, Southampton and/or Grabeski. The Town Board's policy has always been that it will not adopt a 'beggar thy neighbor' restriction which could shift the noise problem from the East Hampton Airport to another regional facility. While the diversion study was only based upon predictions of people's behavior in response to a ban, the Town Board decided that the risk of significant diversions to other airports was unacceptable. In light of the benefits that could be

[98] Statement by K. Burke-Gonzalez (April 07, 2015).

[99] *E.g.*, Letter to Town Board from J. Samuelson, Exec. Director, Concerned Citizens of Montauk (Feb. 9, 2015); Letter to Town Board from J. Giglio, Councilperson, Town of Riverhead (March 18, 2015); E-mail to Town Board from M. Epley, Mayor, Village of Southampton (March 20, 2015).

derived from the other three restrictions, the Town Board decided that it was not necessary, as a policy matter, to expose other communities to that risk. Therefore, the Town Board decided to defer consideration of the proposed helicopter ban.

The data from HMMH suggests that the one trip limit for noisy aircraft, in conjunction with the two curfews, will affect 75% of helicopter operations and 73% of associated complaints on weekends and holidays during the summer season; it will also affect only 23% of all aircraft operations while addressing 60% of complaints on an annual basis. This will not resolve every comment and every concern, but it is a balanced approach and it will provide meaningful relief in the first season.

4. Commitment to revisit the use restrictions

The Town will also convene a public meeting after the 2015 season to review the effect on noise and complaints, the diversion of traffic to other airports, the effects of the restrictions on aircraft operators, and the financial impacts of the three restrictions. Data from operations during the 2015 season will be enormously helpful in terms of understanding people's reactions and changes in behavior as a result of the other three restrictions. If it becomes apparent that additional restrictions are warranted after analyzing data from the 2015 season, the Town Board will consider changes – including possibly reconsidering the helicopter ban – at that time.[100]

TECHNICAL DOCUMENTATION

HMMH has documented its role in the process that led to proposed legislation. The documentation includes four major elements: (1) summary documentation; (2) complaint and operations data files; (3) aircraft certification data files; and (4) analysis spreadsheets. Much of this information is highly technical and was reviewed verbally with Town Board members to ensure that they understood the information.

HMMH has prepared a technical memorandum for the Town Board that summarizes the data sources, data analyses, analytical assumptions, alternatives analyses, data file structures, analysis spreadsheet structures, work products, and other inputs and steps the firm took in assisting the Town Board to prepare the legislative proposals. The memorandum also identifies the background information that the firm considered at the outset of its assistance. The relevant information was discussed in Town Board presentations (both in public and, where appropriate because of litigation, in closed session), presented in data files; most of the underlying data was posted on either the Town's website[101] or on a project-specific website.[102] In a few instances, because of confidentiality of data containing personal identifying information, the data was redacted before presentation. The HMMH assumptions, conclusions, recommendations, and analyses were discussed with the Town Board, with individual Town Board members, and, in

[100] *Id*.

[101] *See* www.town.east-hampton.ny.us/htmlpages/airportinterimnoiseanalysis.html.

[102] *See* www.htoplanning.com.

some instances, with various Town advisory committees and appropriate Town staff and consultants.[103]

Before enacting any restrictions, the Town will complete the documentation and complete the process required under the New York State Environmental Quality Review ("SEQR") Act. One component of the SEQR analysis was the preparation of a study on potential diversion of air traffic to other airports. Peter Stumpp, an international expert on the subject, prepared this report for the Town Board.[104]

[103] HMMH based its detailed technical analyses of complaints and operations on data presented in two data files:

(a) Complaint data from the HTO PlaneNoise system for the November 1, 2013 – October 31, 2014 analysis period. Each row of the data file contains a single complaint record. HMMH enhanced the data file to incorporate the latitude and longitude of each complainant's address, using processes described in the Summary Documentation. HMMH also added summary annotation describing the contents of each column.

(b) Aircraft operations data from the HTO Vector system for the November 1, 2013 – October 31, 2014 analysis period. Each row of the data file contains a single operations record. HMMH enhanced the data file by identifying which Cessna 208 aircraft operating at the airport were seaplanes, using online research processes described in the Summary Documentation. HMMH also added summary annotation describing the contents of each column.

HMMH identified aircraft classified as "noisy" types in the legislation using data from 12 online Federal Aviation Administration (FAA) and European Aviation Safety Agency (EASA) data files (the Summary Documentation describes the processes that were applied to these files to identify the noisy aircraft types): FAA Advisory Circular 36-1H (Change 1), *Noise Levels for U.S. Certificated and Foreign Aircraft*" 05/25/2012 data files, *downloaded February 23, 2015*; and EASA *Noise Type Certificates - Approved noise levels* data files, *downloaded February 18, 2015*.

HMMH undertook detailed analyses through processes embodied in six spreadsheets. The spreadsheets include summary annotation to summarize their structure and have been made available to the Town Board.

[104] Memorandum to Town Board from P. Stummp, Potential Traffic Diversion from Proposed Restrictions at HTO (April 2015).