

Final Report and Recommendations

of the

Airport Planning Committee, Noise Sub-committee

to the

East Hampton Town Board

January 20, 2015

I. THE PROBLEM.

The East Hampton Town noise ordinance, Town Code, Chapter 185, defines “noise pollution” to be, among other definitions:

“The presence of an amount of acoustic energy for that amount of time necessary to . . . [i]nterfere with the comfortable enjoyment of life and property or the conduct of business.”

The noise ordinance then states an objective definition of noise pollution as sound projected across a residential boundary exceeding 65 dBA (A-weighted decibels) between 7 am and 7 pm or exceeding 50 dBA at night, between 7 pm and 7 am.

Aircraft noise caused by East Hampton Airport, both in immediate proximity to and distant from the airport, is noise pollution as long defined by this community. As stated in the October 31, 2014 presentation of results of the Phase I noise study, at some point in its flight, every aircraft using East Hampton Airport exceeds the permitted noise level.

Airport noise interferes with the ordinary activities of East End residents at all times of the day and night, especially during the warm season when enjoyment of the outdoors is integral to the quality of life on the East End. It has been a problem for the community, and the subject of civic discord, at least since 1980. There are not many among us who can remember whether airport noise was a problem before then.

Noise caused by properly equipped aircraft is excepted from the East Hampton noise ordinance, not because it is not noise pollution, but because: (i) under federal law the Town cannot regulate aircraft in flight for any reason or to any extent and (ii) while subject to FAA grant assurances, the Town has been without practical authority to regulate the use of its own airport to protect the community from aircraft noise. As a

result of these limitations upon local authority, no bounds have ever been placed upon the scope and effects of the aircraft noise exception to the local East Hampton noise ordinance.

In the absence of any limits on the scope of the aircraft noise exception to the local noise ordinance, aircraft using East Hampton Airport are overwhelmingly the largest source of noise pollution in East Hampton and on the East End, far exceeding noise pollution due to other exceptions to the noise ordinance, church bells, parades, authorized public gatherings, construction, the use of home equipment. The Phase I noise study, by Young Environmental Sciences and the Noise Pollution Clearing House, discloses 30 million exceedances per year, events in which noise projected by aircraft using East Hampton Airport onto a residence exceeds the limits set by the East Hampton Town noise ordinance and hence meets its definition of noise pollution. These are overwhelmingly due to helicopters and jets, the noisiest types of aircraft using East Hampton Airport.

Of 24,000 airport noise complaints logged last year, the Phase II noise study, by Harris Miller Miller and Hanson (HMMH), discloses that they are overwhelmingly attributable to helicopters and jets, the noisiest types. HMMH reports that noise complaints at East Hampton Airport far exceed the level of complaints at major airports around the country. This is surely due, not least, to the incongruity of jet and helicopter noise in what is otherwise a very quiet, exurban and rural environment.

After December 31, 2014, the relevant grant assurances will no longer be enforced by the FAA against East Hampton. Under the judicially and congressionally recognized “proprietor’s exception” to what is otherwise federal preemption of local

authority over aviation, this affords the Town its first practical opportunity since prior to 1980 to set appropriate limits to the scope and effects of the aircraft noise exception to the Town's local noise ordinance, achieving relief for the community long-promised but never implemented.

II. ROLE OF THE AIRPORT IN THE COMMUNITY.

The people of East Hampton have repeatedly made clear that they support the airport in its traditional role and for the benefit of neighbors who are interested in and benefit from local aviation. But they do not want it to be a commercial airport. After the proposed 1980 Airport Master Plan, to reconstruct the airport as a facility designed for business jets, was rejected, the Town Board undertook a lengthy planning process, overseen by then Town Councilman Pat Trunzo. The conclusion, stated in the 1989 Airport Master Plan, was that an airport designed for business jets “would be incompatible with the character of the community.” The 1989 plan called for a curfew for existing jet traffic and a ban on summer weekend touch and gos to mitigate the noise that was already at that time a community problem. Helicopter operations were so few in 1989 that they were not even mentioned.

The aircraft adopted as the Critical Design Aircraft by the 1989 Airport Master Plan, the type that establishes standards for the design of the airport, was the de Havilland DHC-6 Twin Otter, a 12,300-pound maximum landing weight (MLW) twin turboprop aircraft in Airport Reference Category (ARC) A-II. This is the slowest, least demanding approach category. The Twin Otter, then used by Long Island Airlines for service to East Hampton, was a quiet, short take off and landing (STOL) aircraft. Business jets, in contrast, are generally classified as Category C or D aircraft, a more demanding type, and heavy aircraft are defined as those weighing more than 12,500 pounds.

In the Town’s 2005 Comprehensive Plan, adopted after several years of study and discussion, with broad community participation, Recommendation 72 calls upon the

Town to, “develop an updated Airport Master Plan acceptable both to aviation interests and the local community with an emphasis on safety and noise abatement.”

The 2007 Airport Master Plan Report that then became the basis for the adopted 2010 Airport Master Plan states, at II-73:

The East Hampton Airport is owned, maintained and operated for the benefit of the Town and its residents. The airport continues to be classified as a General Aviation Airport under federal criteria. Its primary role is the accommodation of light aircraft traffic. Aircraft operating at greater weights will be accommodated on condition [sic] without unjust discrimination. The airport is also managed with the objective of providing emergency access and facilitation of all other public and community responsibilities. The size and operation of the airport takes into consideration the needs of East Hampton and Southampton residents for protection from excessive noise disturbance and adverse environmental impacts.

* * *

Control of noise and adverse environmental impacts at the airport is consistent with current Town goals for improved quality of life and land and water conservation. These goals recognize that protecting the environment is essential for improving the Town’s seasonal and year round economy. These controls are achieved through reasonable, non arbitrary and non discriminatory management practices. These may limit the maximum size of aircraft to be accommodated, regulate excessive peak demand during the summer season and otherwise adjust use patterns such as for helicopter access to minimize community disturbances.

The aircraft adopted as the Critical Design Aircraft in the 2010 Airport Master Plan is the Beechcraft Baron, a light, 5,400-pound MLW twin piston-engine aircraft in Airport Reference Code B-II. It is lighter than the Twin Otter, but with a higher landing speed. Under the Noise Sub-committee’s proposed rules, the Baron would be classified in the Noisy, but not Noisiest, category, and therefore subject only to a curfew.*

* The de Havilland Twin Otter, the Critical Design Aircraft for the 1989 Airport Master Plan, is larger but two decibels quieter than the Beech Baron. Although no longer used at East Hampton, the Twin Otter too would be classified as Noisy, but not Noisiest, under the proposed rules.

Notwithstanding the consistently stated role and planning goals for the airport, there have been many missteps. The 1989 Airport Master Plan contained a specific prohibition against widening the main runway without first amending the plan, which would have required a new Environmental Impact Statement. Nevertheless, in 1998 the main runway was widened to Category C and D business jet standards, although the 1989 plan was neither amended nor superseded until 2010. In 2003, a parking apron was upgraded to Category C and D load-bearing standards.

At the same time, neither the noise mitigation called for in the 1989 plan, nor any of the measures described in the 2007 Airport Master Plan Report for “control of noise,” were ever implemented, other than the establishment of voluntary helicopter routes that have proven to be a complete failure. Indeed, the GEIS for the 2010 Airport Master Plan expressly declined to consider noise control measures on the grounds that they were “preempted” by federal law, that FAA grant assurances effectively gave the FAA control over the airport.*

The grant assurances are contractual undertakings with a 20-year term entered into in exchange for federal airport improvement grants. They were invoked by the FAA in 1990 to prevent implementation of the modest noise control measures provided in the

* FAA policy is that the airport should be open 24 hours a day 365 days a year to all aircraft types, that is, that there should be no airport access controls imposed to limit noise. At least until the 2013 North Shore helicopter route case, upholding the route over the Sound from the City to East Hampton, the FAA policy was also that only noise within the “65 DNL contour” required any mitigation. This is the area in which average annual noise exceeds the instantaneous limit set by East Hampton’s noise ordinance, 65 dBA. Aircraft noise at a residence could exceed the local limit 24 hours a day, 364 days a year and still not exceed the FAA’s standard. At East Hampton, the 65 DNL contour is entirely within the airport boundary. For this reason, by application of FAA policy, the GEIS concluded that there was “no significant noise” outside the airport itself, despite thousands of annual noise complaints and millions of annual exceedances, events in which airport noise projected onto a residence exceeded the standard of the East Hampton noise ordinance.

1989 plan and have since been the major obstacle to the adoption of airport access restrictions to control noise. Thus, the recommendation in the Comprehensive Plan for an airport master plan designed for safety *and* noise abatement was likewise never implemented.⁺

Despite the longstanding and repeatedly expressed community consensus that the airport should not be a commercial facility, that is exactly what it has become -- because the Town, subject to FAA grant assurances due to FAA subsidies accepted in the past, has been powerless to do anything about it. Jet traffic has grown and helicopter traffic, which was beneath notice in 1989, has grown to be the single largest problem.

The relevant grant assurances are no longer in force as of January 1, 2015. In the absence of grant assurances, the airport proprietor has clear authority to adopt airport access restrictions to protect the community from noise.

It cannot be determined with precision what portion of traffic at East Hampton Airport is commercial, for-hire traffic. But analysis of operations by owner for the 12-month period of November 2013 to October 2014 for which we have operations data provided by the Vector billing system allows a pretty close estimate based on high frequency usage of the airport versus low frequency usage by private aviation.

Of 12,719 landing operations during the period (not including a small number of government aircraft operations), it appears that 8,565, or 67%, fully two-thirds, were commercial operations. There were only approximately 165 commercial operators out of

⁺ Airports around the country have had little success in overcoming FAA resistance to access controls while grant assurances are in effect. In just the past few days, the FAA rejected the application of LAX for airport access restrictions. Since it can be assumed that the City of Los Angeles has both competent aviation counsel and noise experts, it is clear that the FAA remains adamantly opposed to airport access restrictions to address noise.

1,226 distinct aircraft owners who landed their aircraft at East Hampton. The top 25 commercial operators accounted for 78% of the commercial traffic and 53% of total traffic. A single commercial operator accounts for 879 landing operations, 7% of total annual operations and 10% of total commercial operations.

Of 6,995 operations that the rules proposed by the Noise Sub-committee would classify as “Noisiest,” 6,299, 90%, were operations conducted by commercial operators. The cause of the airport noise about which the community has been complaining for decades -- noise that generated 24,000 complaints last year -- is overwhelming the unintended, unplanned, and unsought conversion of the airport to a predominantly commercial facility without the consent or control of the local community.

Of 91 owners who base their aircraft at East Hampton (“based aircraft”), we estimate that 14 are commercial operators, including owners leasing out their aircraft for short-term use. Based commercial operations account for half of the 2,726 landing operations conducted by based aircraft. In 2014, private, non-commercial operations conducted by local pilots account for only 11% of total airport operations.

Non-commercial itinerant aircraft, of which there were 1,468, accounted for 2,773 landing operations, an average of less than two per aircraft, as would be expected. The largest number of annual landing operations conducted by an itinerant aircraft was 36. Only about 50 out of the 1,468 had 10 or more.

Of the 77 non-commercial based aircraft, 36 had 10 or fewer landings over the course of the year. Of the 41 remaining based aircraft that accounted for the bulk of non-commercial based aircraft operations, half belonged to residents of East Hampton and half to residents of neighboring towns.

East Hampton is a small, rural airport with 4,000 private landing operations per year, serving roughly 20 East Hampton pilot-owners and 20 pilot-owners from surrounding towns, married, by FAA shotgun, to a commercial airport serving business jets, helicopters, and seaplanes carrying passengers for hire. Under FAA control for more than three decades, East Hampton Airport has become the very commercial airport that the residents of East Hampton have repeatedly rejected.

The Noise Sub-committee and the general community support maintaining East Hampton airport to serve recreational aviation by local pilots and a like number of itinerant, recreational aircraft operations. To the extent that commercial aircraft operations are not noisier or more disturbing to the public than the light, pilot-owned aircraft that the community wishes to serve, they can be welcomed as well for the convenience of residents who want direct air access to East Hampton.

The definition of Noisiest aircraft, those most subject to the access restrictions proposed by the Noise Sub-committee, is designed to separate the incompatible noisier aircraft types from the pilot-owned types that are the traditional and intended users of the airport (and comparably quiet types).

The Noise Sub-committee believes that defined Noisiest types, those noisier than the light, recreational aircraft for that are the traditional users, should ultimately be excluded from East Hampton Airport entirely and that this should be the Town Board's policy objective. However, this cannot be achieved all at once without destabilizing airport finances and inconveniencing residents that own such noisy aircraft or have come to rely on them. The Noise Sub-committee not only accepts this, but recommends its

rules on the basis that: (1) they will achieve immediate, substantial noise relief for residents while (2) maintaining a financially self-sustaining airport, (3) providing incentive to airport users to transition to quieter types in order to avoid more stringent regulation, and (4) affecting only very lightly recreational aviation, traditional use of the airport for which it was designed and intended. These are the four objectives of the proposed rules, and we believe, on the basis of careful analysis of airport operations, that the proposed rules achieve all of them.

There are many types of jets, helicopters, and turboprops that are sufficiently quiet not to be in the Noisiest category. The committee's proposed rules not only afford to residents immediate and substantial relief from airport noise, they provide an incentive to aircraft owners to shift to acceptably quieter types in order to minimize the restrictions to which they are subject. It is hoped that, over time, this will result in the elimination of defined Noisiest types of aircraft so that airport users can enjoy the benefits of aviation without discomfort to their neighbors on the ground.

III. LEGAL FRAMEWORK.

The specific rules proposed by the Noise Sub-committee, including the noise metrics employed therein, are an integrated response to several sources:

1. The federal appellate cases, *National Helicopter Corp. of America v. City of New York*, 137 F.3d 81 (2d Cir. 1998), and *SeaAir NY, Inc. v. City of New York*, 250 F.3d 183 (2d Cir. 2001), setting out the views of the Second Circuit Court of Appeals, the controlling federal court in East Hampton, as to the scope of the airport proprietor's exception.

2. The analyses of East Hampton Airport noise complaint data, as performed by both HMMH, Peter Wadsworth, and Jim Matthews, showing that the greatest community sensitivity, and hence disturbance and complaint response, is related to the type of aircraft, the time of day, and the volume of traffic.

3. The professional literature on analysis of aircraft noise and human response to that noise.

The basic legal framework, as laid out by the Second Circuit, is that the municipal proprietor may restrict access to its airport to reduce the cumulative burden of aircraft noise in the community. The extent of the noise reduction sought, that is, where to draw the line in light of the other social and economic benefits of aviation, is fundamentally a

political judgment to be made by a local legislative or regulatory body, not to be re-determined by a court of law substituting its judgment for that of the local legislature.

Thus, the Second Circuit approved New York City's policy goal of reducing cumulative noise by 47%, noting that any numerical goal would appear equally arbitrary and that this is not a bar to setting such a goal. The court said,

Moreover, we find it difficult to imagine how whatever percentage that is chosen—whether it is 15, 25, or 47 percent—would not be considered arbitrary. Thus, we believe the EIS adequately supports the conclusion that a 47 percent reduction in operations will improve the environmental quality of the Heliport's surrounding areas, however that may be determined. For example, it may be pursuant to a curfew, a per hour limit, or a curtailment of operations, and so long as the mandated reduction is nonarbitrary and sufficiently reasonable a court may uphold the City's power to enforce such restriction. See *Global Int'l Airways Corp.*, 727 F.2d at 251 (affirming a restriction targeting cumulative noise level based on the “reasonable prospect of a beneficial effect”).

The objective of reducing cumulative noise by any particular amount is therefore necessarily “nonarbitrary,” as that term is used by the court itself in the definition of the scope of the proprietor's exception. In striking down a rule based on aircraft weight for having too tenuous a relationship to noisiness, the court made clear, that “arbitrary,” and hence prohibited, in this context means not sufficiently closely related as a matter of fact to the reduction of noise.

In this case, the City placed restrictions on certain aircraft because of their size—not the noise they make—despite evidence that larger helicopters are not necessarily noisier than smaller ones. A regulation purporting to reduce noise cannot bar an aircraft on any other basis.

Within the sanctioned goal of reducing cumulative noise by any amount that the municipal proprietor determines, in its discretion, to be necessary and appropriate, the proprietor can preferentially allocate reductions in traffic to problems that it properly regards as acute, such as night time operations or operations on week-ends when there is both a community expectation of quiet and repose and less ambient noise.

Both subjective criteria -- community expectations of quiet and consequent annoyance from aircraft noise -- and objective criteria -- the noise output of particular aircraft types, may be considered in allocating to particular aviation operations the overall reduction in noise to be achieved by airport access restriction. Thus, in the *National Helicopter* case, the Second Circuit sanctioned imposition of a curfew, weekend closure, limitation on the number of operations in a given time period, the targeting of noisier types of aircraft, and the use of such disparate measures in combination, within the overall goal of a cumulative reduction of noise by 47%. The court recognized that distinct, acute problems require or permit distinct solutions. There is clearly no judicial requirement that, in crafting solutions, one size, a single rule, must fit all. Quite to the contrary.

In the *SeaAir NY* case, the City was permitted to reduce the overall level of seaplane operations while allocating the full burden of the reduction to “sightseeing” operations without reducing “transportation” operations. The specific City rule at issue was:

5. To further minimize noise impacts on the general public, commercial air tour operations shall not be permitted at any time. The term “commercial air tour” means any flight conducted for compensation or hire in a powered aircraft where a purpose of the flight is sightseeing.

The court reasoned that reduction in the number of operations alone had a clear and obvious relationship to the reduction of noise. But the City rule at issue went further, placing the entire burden of reduction on commercial sightseeing flights. In upholding the City's rule, the court said,

Although we do not rely upon it today, our holding in Nat'l Helicopter indicates that the City's noise-related regulation of sightseeing flights from the seaplane base would fall comfortably within the proprietor exception. As discussed below, the City's decisions to reduce the number of flights at the seaplane base and to prioritize transportation over tourism were a reasonable means of achieving noise reduction. It seems evident, therefore, that the City's actions comported with their proprietary rights under §41713(b)(3).

Turning to the due process and equal protection claims before us, we find SeaAir's arguments in support of them to be unavailing. In order to state a valid claim for violation of substantive due process, SeaAir must show that the City's regulation was an “exercise of power without any reasonable justification in the service of a legitimate governmental objective [.]” *County of Sacramento v. Lewis*, 523 U.S. 833, 846, 118 S.Ct. 1708, 140 L.Ed.2d 1043 (1998). As the district court stated, we have held that to meet that standard, the City's action must be “arbitrary, conscience-shocking, or oppressive in a constitutional sense[.]” *Kaluczky v. City of White Plains*, 57 F.3d 202, 211 (2d Cir.1995).

There is nothing in this record to convince us that the City's restriction of sightseeing flights was unreasonable or arbitrary. *The City made the determination that in order to reduce the noise impact on the community, it needed to cut the number of flights from the seaplane base, and of those flights, and sightseeing tours were not as beneficial to the City as commercial flights.* [Emphasis added.] SeaAir acknowledges that noise reduction is a legitimate governmental objective, but claims that the City has no evidence that eliminating air tours will achieve it. It is reasonable, however, to assume that a reduction in flights will result in a corresponding reduction of noise. See *Nat'l Helicopter*, 137 F.3d at 90 (holding that eliminating a portion of helicopter operations was a reasonable response to excessive noise). Accordingly, the City's restriction did not violate SeaAir's due process rights.

The holding is clearly not that transportation is in general more important than sightseeing. Rather, the case stands for the principle that, in allocating reductions of operations by airport access restrictions, the municipality may also take into account its own judgment about the social and economic benefit to the community of different aviation activities. Such judgments are reasonable and neither arbitrary nor discriminatory within the meaning of the scope of the proprietor's exception, as defined by the Second Circuit.

New York City is the primary commercial hub of the United States. The City judged transportation to be more important to it than sightseeing, a judgment that the court found to be within the discretion of the municipality. East Hampton is just the opposite, not a hub of commerce, but a resort destination principally for New York City and its immediate environs. East Hampton could appropriately make the opposite judgment, that recreational flight is more important to it, along with its other recreational amenities, its beaches, hiking and biking paths, athletic facilities, and rural quiet, than transportation, particularly in light of the many other means of access available from the City and vicinity.

In its 9th Findings, *Problem Definition*, the Noise Sub-committee prioritized aviation activities in East Hampton. The committee proposed that recreational flying, the use of the airport by the traditional owner-operated aircraft for which the airport was designed and intended, be accorded the highest priority, that access by travelers from afar by long-range aircraft, such as jets, be accorded the second priority, and that, in light of the multiple alternative means of access to the East End from New York City and environs, commuter flights, chiefly by helicopter and seaplane, be accorded the lowest

priority. Under the *SeaAir NY* case, the East Hampton Town Board can take account of the social value of particular aviation operations in crafting airport access rules.

The specific access restrictions proposed by the Noise Sub-committee reflect these priorities along with the analyses of the acute sources of noise disturbance. Happily, the pilot-owned and operated aircraft are predominantly the quieter types. Thus, in directing the bulk of the impact of proposed restrictions toward operations by the noisiest and most disturbing types of aircraft operations, both objectives, the maximum noise relief for the community and preservation of the airport as a facility for the recreation and enjoyment of pilots, are served.

IV. ACUTE PROBLEMS.

All of the complaint analyses make clear that, within the overall burden of airport noise, there is a constellation of three acute problems. These are reflected in higher, indeed, much higher, rates of complaint. They are:

1. Evening, night, and early morning operations;
2. High frequency and concentration of volume of noisy jet and helicopter operations; and
3. Helicopter operations generally.

All of these problems are especially acute during weekends and holidays in the summer season, which is the economic lifeblood of the community. Precisely because the East End is a summer resort, the aircraft traffic is greatest when both year-round and seasonal residents are enjoying the outdoors, have their homes open to the outdoors, and have a heightened expectation of quiet and rest.

As the court recognized in *National Helicopter* -- that residents of the City have a justified, heightened expectation of quiet during non-working hours, evenings, nights, and week-ends -- both year-round and seasonal residents of East Hampton and the East End have a justified, heightened expectation of quiet, yet suffer greater exposure to disturbance from aircraft noise, during the very periods when the East End is sought as a destination for repose and relief from urban ills. That is the reason why the huge influx of seasonal residents and visitors comes, ironically, including those who choose to travel by air. It is the reason why year-round residents struggle to stay in East Hampton despite the difficulty of earning a living in a limited economy on the end of a long, narrow

peninsula on the tip of a long island. Peace, quiet, repose, outdoor recreation, sea, air, a beautiful and unique natural environment, these are the primary social and economic goods that East Hampton and the East End as a whole have to offer.

We take note that, in approving the FAA's mandate of a northern helicopter route over Long Island Sound for travel by helicopter from the City and environs to East Hampton Airport itself, the D.C. Circuit Court of Appeals approved of the use of noise complaint data, even in the absence of supporting DNL analysis, both to determine the existence of a noise problem and as a basis for the imposition of a regulatory solution. *Helicopter Ass'n International, Inc. v. FAA*, 370 F.3d 1174 (D.C. Cir. 2013). The court said,

In promulgating the Final Rule, the FAA relied on a host of externally generated complaints from elected officials and commercial and private residents of Long Island. It found that over one third of commenters complained of helicopter noise. The FAA explicitly referred in the preamble to the Final Rule to the commenters' complaints that "the helicopter noise interferes with sleep, conversation, and outdoor activities." HAI offers no evidence that the complaints were not based on actual experience or were otherwise falsified. Although HAI refers to the comment by the Eastern Region Helicopter Council ("Council") that 85% of the complaints to its hotline came from only ten individuals, the FAA pointed out that this "cannot demonstrate these individuals are the only ones disturbed by the existing noise levels." [Citations omitted.]

Each of the three acute problems identified by complaint analysis is amenable to specific solution under the standard of *National Helicopter*. The municipality can set time of day restrictions to reflect community expectations of quiet outside of working hours, as clearly identified by local complaint data. The municipality can target reductions in operations to the noisier helicopter and jet operations that local complaint data have clearly identified as an acute problem. The municipality can adopt restrictions

that limit the number of operations of aircraft in a given time period and can apply those restrictions both to noisier types of aircraft and, in accordance with the rule of *SeaAir NY*, to operations that are deemed socially less valuable, in the judgment of the municipality.

In the case of East Hampton, the social value is inversely related to noise level, simplifying the problem: The most frequent noisiest operations are also the least socially valuable to the community and vice versa. Accordingly, the Noise Sub-committee has proposed three sets of restrictions, one addressed to each acute problem, employing in each case distinctions based on the noise level of the particular aircraft types, as permitted by *National Helicopter*.

In proposing these rules, the Noise Sub-committee is keenly aware that restrictions cannot be so extensive as to compromise the financial stability of the airport. The ability of the Town to control airport access depends on foregoing FAA subsidies. That in turn depends on the airport being financially self-sustaining. Thus, the need to control noise must be balanced against not only the social benefits of aviation, but against the financial needs of the airport. Too sharp a reduction in traffic would not be sustainable.

In every case, there exist much quieter types of helicopters, jets, turboprops, and piston aircraft that could be employed at East Hampton so that the aviation community can enjoy airport access while the community is little burdened by the airport. This represents an ideal outcome. However, at present, there is little incentive for airport users to use the best available technology. A key principle of the Noise Sub-committee in its design of proposed restrictions is that restrictions should allow for the substitution of quieter technology that would relieve noise and thus afford the airport user less

restriction or no restriction at all. This provides the necessary incentive to substitute quieter technology.

The Noise Sub-committee also recognizes that the problem of airport noise grew unbidden and uncontrolled during a time when the Town was precluded by FAA grant assurances from effectively exercising its proprietary authority to control noise. Airport users have therefore developed reliance on the airport and an interest in their continued use that would likely not now exist had the Town been able to do so. It is therefore equitable that restrictions to eliminate all but the best available technology not be imposed all at once in order to allow time for the aviation community to adapt. As that occurs, restrictions can be tightened so that, ultimately, only the quietest available aircraft technology is in use at East Hampton Airport. Over time, it is hoped that this will induce a quieter airport at a traffic level that can easily support the necessary capital infrastructure, allowing those residents and guests who wish to do so to travel by air with minimal disturbance to the community.

1. Nights, Evenings, Early Mornings.

The Wadsworth, HMMH, and Matthews noise analyses all reach the same conclusion, that community noise sensitivity is heightened at night. Of the three, the Matthews analysis, contained in the Noise Sub-committee's 11th Findings, *Complaint Analysis*, is the most refined. As set forth on page 4 of the Matthews analysis, setting a limit of one complaint per hour would justify a curfew from 5 pm to 9 am. Setting a limit of 1.5 complaints per hour would justify a curfew of 8 pm to 8 am.

In order to achieve the maximum reduction in community disturbance with the least impact on aviation uses, the Noise Sub-committee therefore proposes a split curfew, from 5 pm to 9 am for defined noisiest types of aircraft (Appendix A, Sec. B(1)(a)), from 7 pm to 8 am for somewhat less noisy aircraft (Appendix A, Sec. B(1)(b)) , and no curfew for defined quiet types of aircraft. This responds to the complaint data, graduates the restrictions based on aircraft noise level, and offers the necessary incentive for the adoption of the best available technology.

2. Frequency of Operations; Jets and Helicopters.

The airport was never intended to be nor planned to be a jetport or a heliport. Indeed, the 1989 Airport Master Plan, the first for the airport, specifically rejected the development or improvement of the airport to accommodate business jets. While it is possible that the community might today consent to an airport designed and limited to recreational aircraft for local residents, it is inconceivable that a heliport or jetport would be allowed today in Wainscott. Rather, the jetport, and then heliport, were unplanned and unsought. They grew unbidden in response to market demand in the face of the inability of the Town to regulate airport access while subject to the FAA grant assurances.

Noise exceedance analysis and complaint analyses clearly demonstrate that helicopters, and to a lesser extent jets, are an acute problem. The Matthews analysis, on page 3, shows that jets operations generate complaints at nearly 2.5 times the rate of propeller-driven operations, and that helicopters generate complaints at 2.3 times the rate of jets, or 5.75 times the rate for propeller-driven operations.

To reduce the overall, cumulative volume of noisy operations by jets and distribute the reduction equitably on a non-discriminatory basis, the Noise Sub-committee proposes that the noisiest aircraft types be restricted to one arrival and one departure per week (Appendix A, Sec. B(2)(a)).

This reflects, again, the Matthews complaint analysis that shows that the reduction in the numbers of complaints per aircraft operation during the off-season is due entirely to the lower population -- fewer people affected. The year-round population is, if anything, even more sensitive to aircraft noise. Per person, the rate of complaints per aircraft operation is even higher than in the summer. It does not make sense in our view that the year-round population should only be entitled to protection from noise when seasonal residents are present. The noise is largely the result of aviation demand by seasonal and part-time residents, as year-round residents are not commuting, and not by jet and helicopter, in any but trivial numbers. Year-round residents are as entitled to protection as seasonal residents. This rule likewise affords the necessary incentive to airport users to adopt quieter technology and thus enjoy access free of the restrictions.

On a seasonal basis, the Noise Sub-committee proposes that the Town Board be empowered to adopt by resolution noise pollution surcharges, or congestion pricing, that would apply to reduce traffic to a targeted level during the periods when both aviation demand and the community expectation of quiet are at their highest, weekends and holidays (Appendix A, Sec. B(2)(b)). *National Helicopter* effectively sanctions the use of a "slot" system to limit operations in a defined time period. As East Hampton does not serve scheduled commercial traffic, but is an "on demand" airport, here a slot system limiting the number of operations is impracticable. It is difficult to administer in the

absence of regular schedules and airport users cannot determine their needs sufficiently far in advance to acquire landing rights. The Noise Sub-committee proposes to achieve the same result as a slot system using congestion pricing, as has been sanctioned by the federal courts.

The federal appellate case most directly relevant to the imposition of a fee to reduce noise congestion is the D.C. Circuit Court of Appeals decision, *Air Transport Association of America, Inc. v. Dep't of Transportation*, 613 F.3d 206 (D.C. Cir. 2010), in a dispute between air carriers and the FAA concerning the FAA's *Policy on Rates and Charges*.

In that case, the FAA was defending the legitimacy of its revised *Policy* of allowing prices to be used to relieve defined airport congestion by discouraging operations during congested periods and encouraging the use of larger aircraft (or what would in our case be quieter aircraft) during those periods to serve the aviation demand with fewer operations (or in our case quieter operations).

The only difference between congestion pricing and the proposed noise pollution surcharge is that the congestion pricing that the FAA encourages is designed to relieve the excess of market demand over physical, operational capacity, using price to allocate the available resource -- airport capacity -- efficiently. In the case of East Hampton, the operational limit is not physical, but would, by hypothesis, be imposed by the Town in the exercise of its proprietary authority to reduce noise by limiting permitted operations. If we accept that the Town has the authority to achieve a substantial reduction in operations by noisiest aircraft, then the use of price to limit permitted operations and allocate the legitimately limited capacity to demand is indistinguishable in the two cases.

The FAA *Policy* of congestion pricing, ultimately upheld in the case, says this:

3.2 A properly structured peak pricing system that allocates limited resources using price during periods of congestion will not be considered to be unjustly discriminatory. An airport proprietor may, consistent with the policies expressed in this policy statement, establish fees that enhance the efficient utilization of the airport.

In East Hampton, the limitation of the resource, and hence the creation of excess demand, would be the result of the decision of the Town to limit operations to reduce noise rather than of the physical capacity of the airport. Congestion pricing, in the form of a noise pollution surcharge, would be used to discourage operations by the noisiest aircraft during the most noise-sensitive periods, which are also those of the greatest air traffic volume, and to encourage the use of quieter aircraft during those periods in order to serve the aviation demand with less impact on the peace and quiet of the community, thereby likewise “to enhance the efficient utilization of the airport.”

In upholding congestion pricing, the DC Circuit said this, directly relevant to pricing to reduce noise (footnotes omitted):

1. Excess Demand

Excess demand arises when demand for a good or service at the prevailing price exceeds the supply, which results in would-be buyers having to queue. In the air transportation system, the buyers are airlines, the service is allowing an aircraft to land at a particular airport, and the price is the landing fee the airport charges the airline for landing. The delays in landing are manifestations of there being a queue.

In an ordinary market, supply and price adjust to eliminate excess demand, but this is no ordinary market. Airports cannot readily increase the supply of landing slots because building more runways takes years and at some airports is not feasible at all. See *Policy Regarding Airport Rates and Charges*, 73 Fed. Reg. 3310, 3312/3 (proposed Jan. 17, 2008). Nor may airports freely increase the price as demand increases; the amount an airport may charge as a landing fee is constrained by the oversight of the DOT and by several federal statutory restrictions.

Adding to the difficulty of managing congestion, the volume of air traffic varies significantly both throughout the day and from one airport to another. Not all airports suffer from significant congestion, even at the most desirable times (or “rush hours”). Addressing this variation in the demand for landings requires giving airports some flexibility in rate setting.

2. Possible Solutions

There are two ways in which an airport might increase its landing fee to the market-clearing level — that is, to the price just high enough to eliminate the excess demand and hence the queue at peak times. The first is to sell at auction the right to land an aircraft at a particular airport at a particular time; that right is called a “landing slot.” In an auction an airport would first determine the number of landings it can accommodate during a given period of time, such as an hour, and then allow airlines to bid for each slot in an auction; the winning bid would determine the price of the landing slot. *The alternative is “congestion pricing,” which entails the airport itself increasing the price (landing fee) until it elicits demand for only as many landings as it can accommodate, thereby eliminating queuing and delay. Both a slot auction and congestion pricing will converge upon the same price and the same quantity [emphasis added].*

In principle neither system is preferable to the other. See Martin L. Weitzman, *Prices vs. Quantities*, 41 *Rev. Econ. Stud.* 477 (1974). Many commentators, however, have advocated slot auctions rather than congestion pricing because an airport operator knows how many landings the airport can safely accommodate per hour but can learn only by trial and error what fee will yield that many landings. [Economics citations omitted.] The regulations under review represent the DOT’s attempt to implement a system of congestion pricing.

It is the consensus of opinion of aviation counsel and attorneys participating in the noise control planning process that a slot system is clearly sanctioned by *National Helicopter*. The DC Circuit Court of Appeals has recognized that, “Both a slot auction and congestion pricing will converge upon the same price and the same quantity.” It

follows that, if a slot system to limit noise is permitted, congestion pricing to achieve the identical outcome is also permitted.

Congestion pricing, in addition to solving the administrative and operational problems of a slot system, also enables the Town Board to respond to changes in demand and to market adaptation to the rules, affording an added and necessary measure of flexibility.

3. Helicopters.

Helicopters generate far and away the most complaints, and the most complaints per operation, for good reason. They are first of all in absolute terms among the noisiest types of aircraft operating at East Hampton Airport. They also have specific sound characteristics, beyond sheer decibel level, that exacerbate the disturbance they cause: (a) they have a unique percussive sound that is especially disturbing, felt not just heard; (b) the duration of helicopter noise is longer than with other comparably noisy types because of lower speed and relatively lower and more constant altitude on approach and departure; (c) their aural signature includes a higher proportion of low frequencies that, for reasons of physics, are heard at a much longer distance than other sounds and despite intervening obstacles, thereby aggravating the disturbance by causing significant periods during which those on the ground focus on and anticipate the loud noise to come and afterwards are reminded of the noise they have just endured; (d) as noted by Henry Young in the public presentation of the Phase I Noise Analysis last October, helicopter noise, when it occurs, dominates the aural environment drawing the listener's attention even when not extremely loud. In his words, "Helicopters are so distinctive and intrusive

that their presence and frequency of occurrence are objectionable [to those of the community affected] regardless of peak noise level or local ambient.”

The professional literature amply supports the conclusion that helicopter noise has all these peculiar characteristics that render it fundamentally incompatible with a quiet, exurban and semi-rural environment such as that of the East End. The noise is tolerable for emergency and public purposes, such as medical evacuation. Fortunately, such needs are rare. But, as a steady diet, during the very times when the community is most eager to enjoy the peace and beauty of the environment that is the special bounty of the East End, helicopter din is unacceptable.

In its Final Rule mandating the North Shore route for helicopter traffic between East Hampton Airport and NYC, the FAA itself said this in support of its decision:

[T]he residents along the north shore of Long Island emphatically agreed that helicopter overflights during the summer months are unbearable and negatively impact their quality of life. They opposed any route over communities, even sparsely settled areas, and suggested the route go over the ocean. One commenter noted he had counted over 25 helicopter operations in a 2-hour period. He also said the flights started early in the morning and continued to early evening. Other commenters noted that the helicopter noise interferes with sleep, conversation, and outdoor activities. Still others complained that the helicopters fly so low that their walls vibrated. 77 Fed. Reg. 39911-39921, July 6, 2012.

These complaints are identical to those of our own East Hampton residents and of our neighbors in Southampton, Shelter Island, and Southold. But we, and they, derive no benefit from the northern route, because East Hampton is the source and destination of the traffic. Helicopters on the northern route, or the southern route, must still transition to and from those routes over our communities to arrive at or depart from East Hampton Airport.

That helicopters serve the convenience of a very few is not adequate reason to afflict thousands of residents on the entire East End for miles surrounding the airport, both those proximate to the airport and at considerable distance, 10 or more miles away, none of whom derives any benefit, direct or indirect, from the travel by the few to and from East Hampton Airport. It is the responsibility of local government to establish the boundaries between the convenience of the few and the quiet enjoyment of the many of their homes, gardens, and the surrounding public lands.

Helicopters, uniquely amongst the aircraft using East Hampton Airport, have generated community strife in which each neighborhood attempts to have helicopter traffic directed elsewhere. The creation of voluntary, designated routes for helicopters has somewhat reduced the numbers of homes affected by helicopters at the cost of inflicting an unrelenting din on those under the routes, resulting in rising levels of anger and despair both in East Hampton and in neighboring and nearby communities extending to the North Fork. Beggar thy neighbor is not a solution to this problem. Rather, it is a formula for endless civil discord.

Not least, helicopter noise adversely affects wildlife on land that has been preserved in part for the express purpose of protecting habitat. The drive of neighborhoods to divert helicopter noise elsewhere has resulted in as much of the helicopter noise as possible being dumped over preserved natural habitat that represents the core value of our environmentally sensitive community and geography. This is perverse, to say the least, but almost inevitable as neighborhoods vie to get out of the line of fire. Wildlife cannot do so and are thus the victims of last resort.

The 2014 season, in which the Eastern Regional Helicopter Council sought to

showcase the benefits of voluntary routes, has instead seen a substantial, more than 40%, increase in helicopter traffic and an even greater increase in helicopter noise complaints. Public officials from other Towns have demanded that East Hampton Town, the airport proprietor, afford their residents relief. Although it is surely not their purpose to do so, helicopter users, seeking to escape the city at high speed in order to reach the calm and quiet of the East End, have brought the din of the city with them and thereby deny to their neighbors that which they themselves are seeking.

Contrary to the suggestions of some lurid journalism concerning the East Hampton Airport, the principle that the quiet enjoyment of the many must take precedence over the convenience of a very few is not a matter of class envy. Rather, it is an expression of one of the deepest and oldest values of the East Hampton community, that the commons belong equally to all and may not be appropriated by individuals for their private gain or enjoyment. In East Hampton, this principle extends to beach access, to navigation of waterways without interference by private docks, to the exclusion of private armoring of the beach or beach groins, and to the limitations that the Town imposes on building and development, on mass gatherings, and, indeed, on the noise that is permitted to be projected across a property boundary. The local noise ordinance is the accepted local standard for noise as to which every aircraft operation at the airport is violation and therefore an exception.

This community has for centuries zealously defended its commons against private exploitation and appropriation. Almost uniquely in New York, we maintain to this day the system of public trusteeship of beaches and bottomlands to that end. The quiet of the community is our common patrimony, as are our beaches and our permanently

undeveloped public lands. It must not be appropriated by a few for their own convenience in the process denying it to the community as a whole. Now that the Town has recovered the authority to regulate access to its own airport to control noise, it must exercise that power for the common good.

Not everything that is of value somewhere is of value or appropriate everywhere. East Hampton has long since prohibited high-rise hotels on its beaches, although there are many who would like the convenience and economy of staying there to enjoy our beaches, and, of course, hotel operators who would like to make money by hosting them. But we have long understood that the convenience and economy of high-rise hotels would destroy for all of us the very rare beauty of our beaches that visitors themselves seek. The same is true of helicopter noise, imposed on the many so that the few can arrive more quickly to enjoy the quality of life in East Hampton that they thereby deny to others. Like high-rise buildings, helicopter noise is a piece of urban life that does not belong in East Hampton. It is incompatible with the character of the community.

The Noise Sub-committee proposes two levels of restrictions specifically directed at the acute problem of the helicopter noise that the committee regards as fundamentally incompatible with what is supposed to be a quiet, exurban and rural community. The restrictions will provide incentive to helicopter operators to avoid them by adopting the best available technology.

We propose that at all times helicopters classified amongst the Noisiest types of aircraft be excluded from East Hampton Airport (Appendix A, Sec. B(3)(a)). During the summer season, we propose that the exclusion be extended to all helicopters defined as Noisy types on weekends and holidays and that all such defined Noisy types be restricted

to one landing and one take-off per calendar week, the latter restriction being that which applies to all Noisiest types of aircraft year-round (Appendix A, Sec. B(3)(b)).*

4. Touch and Gos.

Under the category of operations causing noise disturbance due to their frequency and concentration, the committee identifies a fourth problem, weekend and holiday touch and gos. Although not as burdensome as the three problems discussed above, these operations have long been identified as a noise problem and would have been prohibited under the Town's 1989 Airport Master Plan but for FAA objections under grant assurances no longer relevant. Now that the relevant grant assurances are no longer enforceable, the committee believes that this prohibition should finally be implemented as promised to the community more than two decades ago.

The committee recognizes that the problem has been greatly reduced due to the airport manager's request that pilots refrain from this activity. However, when such operations occur, they are still highly annoying due to their repetitive nature, repeatedly flying over the same homes at low altitude at intervals of two to four minutes. Although these are necessary training operations, they need not be conducted at East Hampton during the peak summer season. There are many airports within a short distance at which to practice and pilots necessarily have the most experience landing at their home airport.

* The proposal for a one trip per week restriction for Noisy helicopter types during the season is a modification of the proposal made in the committee's 12th Findings. It comes in response to noise metric and ratings information provided to the committee by Ted Baldwin of HMMH. In the original proposal, the definition of Noisiest helicopters was set at SEL 80 dBA and above. In order to harmonize the noise classifications for all aircraft types, this was raised in the committee's proposal to 84 dBA, reducing the numbers of helicopter types and operations subject to the one per week restriction. Therefore, it is now proposed to extend this restriction to all Noisy helicopter types in season.

Thus, while these flights serve a purpose, the purpose can be served elsewhere during the peak traffic periods.

We do not believe that compliance with the rule should depend on the suasion of the airport manager. The very same argument, that voluntary compliance has already solved the problem, was made in the *Helicopter Ass'n* case in which the D.C. Circuit upheld the northern helicopter route to East Hampton. The court said this,

Even assuming voluntary usage of the route was high and noise levels relatively low, the rule was designed to ensure that use of the route continues and that the noise levels do not increase, thereby aggravating the problem identified by commenters. [Citations omitted.]

The court also noted that, to the extent there was already high compliance with the voluntary policy, helicopter operators would be little affected by making the policy mandatory. The same is true in East Hampton. Pilots would be little affected by making the extant, voluntary policy against summer weekend touch and gos mandatory. There are in any case other days of the week, other times of the year, and many other airports within a short distance at which local pilots can practice touch and gos during summer weekends and holidays.

In *Santa Monica Airport Ass'n v. City of Santa Monica*, 481 F.Supp. 927 (C.D.Cal. 1979), the federal court considered and upheld a ban on touch and gos, saying:

I leave the night curfew [upheld] and move to the second ordinance, Section 10111C, the weekend and holiday ban on touch and go, stop-and-go and low approach operations.

I reject the challenges to this ordinance and find it valid in all respects. I find this ordinance, as concerns the equal protection challenge, to be rationally related to a legitimate state interest. That interest is the control and prevention of noise at the airport during the hours when most of the

population in the residential area surrounding that airport are at home for the weekend and either at leisure or at rest.

The evidence convinces me that the existence of this ordinance, as it was designed to do, does result in materially cutting down the frequency and noise production of training operations from the level they would attain if the ordinance were not in effect. Touch-and-go particularly involves frequent and repetitive operations because the subsequent takeoff immediately follows the landing.

This ordinance cannot be called sham noise control in any respect. It is true that the type of planes usually used in training are among the least noisy of the aircraft permitted to use the airport. It is also true that touch-and-go, stop-and-go and low approach training have great value in the training of new pilots and in preserving the continued proficiency of those already licensed. But those values do not detract from the basic finding I have made that the ordinance is a noise control ordinance rationally related to a legitimate state interest.

There can be little doubt that a summer weekend and holiday ban on touch and gos would be upheld by a federal court.

V. SUMMARY OF PROPOSED RULES; DRAFT LEGISLATION.

The Noise Sub-committee's proposed rules are summarized below. Appendix A is draft legislation embodying these rules.

Noisiest types:

Curfew 5 pm to 9 am (Appendix A, Sec. B(1)(a)),

Limited to one trip per week year round (Appendix A, Sec. B(2)(a)),

Subject to noise pollution surcharge summer weekends and holidays (Appendix A, Sec. B(2)(b)),

Noisiest helicopters excluded at all times (Appendix A, Sec. B(3)(a));

Noisy types:

Curfew 7 pm to 8 am (Appendix A, Sec. B(1)(b)),

Noisy helicopters during the summer:

- excluded on weekends and holidays (Appendix A, Sec. B(3)(b)(i)),
- limited to one trip per week (Appendix A, Sec. B(3)(b)(ii));

Quiet types:

No curfew or other restriction;

All types:

Summer weekend touch and gos prohibited (Appendix A, Sec. B(4));

Government, emergency services, aircraft in distress:

Exempt from all restrictions (Appendix A, Sec. A(1)).

VI. NOISE METRIC.

In its opinion in *National Helicopter*, the Second Circuit explicitly permits municipal airport proprietors to regulate airport access based on how noisy particular types are:

In this case, the City placed restrictions [exclusion] on certain aircraft because of their size—not the noise they make—despite evidence that larger helicopters are not necessarily noisier than smaller ones. A regulation purporting to reduce noise cannot bar an aircraft on any other basis.

But if aircraft access is to be regulated based on how noisy particular aircraft are, there must be a basis for comparing them, a noise metric. Fortunately, such metrics exist.

Both the FAA and its EU counterpart, the European Aviation Safety Administration (EASA), rate the noisiness of aircraft for purposes of certification of aircraft types as airworthy in compliance with extant statutory and regulatory limitations on aircraft noise output. As increasingly tight rules are drawn around the world for the noise standards that aircraft must meet -- driving source noise reduction technology forward -- these ratings are the basis for determining whether aircraft qualify to fly under whatever the current regime of aircraft noise rules.

Noise ratings are specific to the model and type of propulsion of the aircraft. The ratings systems promulgated by the aviation regulators for certification of aircraft as compliant with noise source limits afford metrics for comparing the noisiness of aircraft types, for establishing aircraft noise classifications for purposes of local rules, and for determining which aircraft belong to which classes. None of the existing metrics is

perfect, because noise is a complex phenomenon, but the aircraft type noise ratings published by aviation regulators are the most authoritative.

It has been suggested that in fashioning solutions to the identified acute problems of noise at particular times of the day, week, and season, frequency and concentration of noisy events, and particularly disturbing aircraft types, the Town ought to apply a single metric of airport noise. While such a unified metric might be desirable, that is neither the industry standard nor the practice adopted by aviation regulators, both the FAA and the EASA. They employ different metrics based on the type and propulsion of aircraft. The metrics we propose to employ are precisely those used by aviation regulators to determine airworthiness in compliance with statutory and regulatory standards for permitted aircraft noise output.

It surely cannot be incumbent on the Town of East Hampton to reinvent the field of aviation noise management in order to exercise its authority as airport proprietor. Moreover, the use of any metric other than those employed by both the regulators and the aviation noise management industry, even if scientifically justified, would increase the burden on the Town to demonstrate the justification for its idiosyncratic choice. This is an unnecessary burden. We can achieve a perfectly acceptable outcome relying exclusively on the noise metrics created and employed by the authoritative organs of aviation regulation. The Noise Sub-committee proposes that we do just that.

The metric in longest use, not limited to aircraft noise, is dBA. The fundamental physical unit of sound is the decibel, or dB, a logarithmic scale that measures sound as energy impinging per unit of time, a power rating. The A-weighted decibel scale weights frequencies, or tones, according to the ability of the human ear to hear them, so that given

frequencies have the same dBA rating when they are perceived by people as having the same loudness. dBA is the fundamental metric for most schemes of aircraft noise measurement, although there are alternatives, such as C-weighting and Z-weighting.

Most light, propeller-driven aircraft are noise rated according to an L-max dBA metric. This is the maximum instantaneous sound level, under defined conditions, on the dBA scale.

Under a later innovation, the dBA scale evolved toward a different metric, SEL, Single Exposure Level, that was designed to take into account the duration of the sound as well as its intensity. This is achieved by “integrating” or adding up the total impinging energy over a defined time and in defined conditions, given the dBA intensity or power level that may not be constant. The SEL measure would thus be in units of energy rather than of power, energy per unit of time, but is divided by one second to return it to a scale, power, commensurable with dBA. This is sometimes described as “compressing” all the sound into a single second, and would be the level if the same quantity of sound energy were impinging in a single second.

It should be clear that if the same aircraft were rated on the dBA scale and then on the SEL dBA scale, the SEL rating will almost invariably be higher, as it includes in a single second all the energy impinging over an extended period. (The opposite would be the case for an event shorter than one second deemed to occur over the longer span of a second, but this cannot occur with aircraft noise.) Unless there are extreme time variations in the sound level, the constructed single-second power will be higher than the instantaneous measured power. Light helicopters are still for the most part noise rated based on SEL dBA level.

A further refinement of SEL was created for jets and helicopters and is also used for heavy propeller-driven aircraft: EPNdB. This stands for Effective Perceived Noise level in Decibels. Like the SEL metric, it takes duration into account. However, it further refines the SEL metric in order to correct not only for human perception of loudness, but for human experience of annoyance (“effective perceived noise level”) by also taking into account variations in the sound level across the frequency spectrum or pitch. If two aircraft have the same SEL rating under defined conditions and one of the two has high concentrations of sound in small sections of the frequency spectrum, such as profound low or high tones, it will typically have a higher EPNdB rating. As described in the glossary of terms published by Massport (the Massachusetts equivalent of our Port Authority of NY & NJ):

The Effective Perceived Noise Level (EPNdB) is another unit of measure for aircraft noise. It is based on how people judge the annoyance of sounds they hear with corrections for the duration of the event and for pure tones.

This scale was devised to capture subjective aspects of the response to aircraft noise and represents the current state of the art for measurement of noise from jets, heavy helicopters, and large propeller-driven aircraft used by aviation regulators worldwide. The EPNdB metric is used as the basis for airport access restrictions at various airports, from Heathrow and Gatwick in London, to Sacramento, California, to Porto, Portugal.

The regulators, both in the US and the EU, have not thought it necessary to rate light aircraft by applying the EPNdB metric. Thus, they are still generally rated on the L-max dBA scale for light aircraft and the SEL dBA scale for light helicopters.

As described above, helicopters and jets are the types that are the cause of the most acute problems at East Hampton Airport. The Noise Sub-committee therefore

recommends that the EPNdB metric, used by aviation regulators worldwide as the primary noise metric for these aircraft types, be the reference for classification of aircraft into three groups, Noisiest, Noisy but not Noisiest, and Quiet.

The Noise Sub-committee proposes that aircraft with an EPNdB rating of 91 or above be classified as Noisiest and that those with an EPNdB rating below 91 be classified as Noisy (but not Noisiest).

The professional literature discloses that an aircraft with an EPNdb rating would generally have a dBA rating, if it had one, 10 to 15 decibels lower. By definition there cannot be an exact correspondence, such as the rate of conversion between Fahrenheit and Celsius, because the different metrics do not measure quite the same thing. Hence, the correlation, not a linear conversion, between dBA and EPNdB ratings covers a range from 10 to 15 decibels.

For aircraft with only an L-max dBA rating, the committee proposes that those with a rating 80 or above be considered Noisiest types.* Aircraft with an L-max dBA rating below 75 would be classified as Quiet types.

The FAA has in recent years been haphazard in compiling noise ratings for publication. The EASA has been more thorough, applying, however, the same technical standards as the FAA in the interests of a unified aviation standard. As a result, EASA

* There is, by definition, no definitive conversion rate for EPNdB to L-max dBA, and there are no extant EPNdB ratings for light aircraft. The choice of a level of L-max 80 dBA and above for such aircraft, a difference of 11 dB from the proposed EPNdB standard of 91, near the low end of the 10-15 decibel range of correlation between the two metrics, is therefore a modest nod in the direction of the policy of preserving airport access for the owner-operated aircraft that are the traditional and intended users of the airport. If the reduction from the EPNdB to the L-max dBA metric were at the rate of 15 decibels, at the high end of the correlation range, this dividing line on the L-max dBA scale would be only 76 decibels which would therefore represent a more stringent standard.

publications currently provide a more exhaustive rating of aircraft noise. Of helicopters with an EPNdB rating published by the EASA, 151, or 86%, would be classified as Noisiest types under the Noise Sub-committee's proposed standard of 91 EPNdB and above. Twenty-four, or 14%, would be classified as Noisy (but not Noisiest).

SEL dBA is also not convertible directly to either L-max dBA or EPNdB, but would normally lie in between the latter two if aircraft were rated on all three scales. Accordingly, for aircraft, typically light helicopters, with an SEL dBA rating but no EPNdB rating (and in general no L-max dBA rating), we propose that the line defining Noisiest types be set at SEL 84 dBA, between the definitions of Noisiest on the EPNdB and the L-max dBA scales. On this basis, an additional 15 helicopter types would be rated Noisiest and an additional 54 would be rated as Noisy (but not Noisiest).

Therefore, 166 out of 244 rated helicopters types, or 68%, would be classified as Noisiest and 78, or 32%, as Noisy (but not Noisiest). There are a significant number of quieter types available for use by the helicopter industry.

Of approximately 535 jet aircraft types light enough plausibly to land at East Hampton, 435, or 81%, would be classified as Noisiest, and 19% would be classified as Noisy (but not Noisiest) based on their EPNdB rating. For jets as well as helicopters, quieter alternatives exist.

For the current fleet using East Hampton Airport, both based and itinerant, as determined by Vector reports for the rolling 12 months of November 2013 through October 2014, the breakdown of noise classifications by type, both in absolute numbers and percentages, is:

	Types Helicopter	Jet	Turbo	Piston	Total
Noisiest	15	29	4	4	52
Noisy	6	17	16	79	118
Quiet			4	22	26
Total	21	46	24	105	196

	Helicopter	Jet	Turbo	Piston	Total
Noisiest	71%	63%	17%	4%	27%
Noisy	29%	37%	67%	75%	60%
Quiet			17%	21%	13%
Total	100%	100%	100%	100%	100%

Annual landing operations by noise classification is:

	Landings Helicopter	Jet	Turbo	Piston	Total
Noisiest	4094	1358	1001	488	6941
Noisy	132	515	706	2982	4335
Quiet			329	1253	1582
Total	4226	1873	2036	4723	12858

	Helicopter	Jet	Turbo	Piston	Total
Noisiest	97%	73%	49%	10%	54%
Noisy	3%	27%	35%	63%	34%
Quiet			16%	27%	12%
Total	100%	100%	100%	100%	100%

VII. CONCLUSION.

The recommendations herein contained are the result of a full year of study by the Airport Planning Committee, Noise Sub-committee, as charged by the East Hampton Town Board. Meeting bi-weekly, we have studied comprehensively, with the aid of professionals and the Business and Finance Advisory Committee, Airport finance sub-committee, airport noise, airport safety needs, noise complaints, technical literature on aircraft noise, aviation law, the airport history, airport finances, airport capital needs, economic impacts of the airport and of access restrictions, local aviation demand, noise metrics, and the noise produced by aircraft types using the airport.

We have made interim findings that are reported in 12 sets of Findings statements submitted separately to the Town Board. These are incorporated herein by reference as are the Phase I and Phase II noise studies performed by Henry Young of Young Environmental Sciences, Les Blomberg of the Noise Pollution Clearinghouse, and Ted Baldwin and his associates at Harris Miller Miller & Hanson.

In making these recommendations, we have endeavored to be faithful both to residents afflicted by airport noise and to the undertaking to local pilots that we support the airport as an asset to the community and seek to make their continued use safe, convenient, and cost effective. We believe our proposed rules achieve this. We commend them to the East Hampton Town Board on that basis.

The committee wishes to express its particular thanks to several people: to Arthur Malman for his outstanding service as chair of the BFAC Airport finance sub-committee, where his commitment to consensus has been invaluable in achieving a result that we believe can satisfy both airport neighbors and our local pilots; to Peter Wadsworth for his

tireless efforts as a financial and data analyst on the BFAC sub-committee; and above all to Councilwoman Kathee Burke-Gonzalez, the committee's Town Board liaison, without whose extraordinary energy, patience, and commitment to community well-being our efforts would not have borne fruit.

Finally, we wish to remember with gratitude Tom Twomey. Over the decades-long struggle over the airport, several members of our committee have had public disagreements with Tom, at times angry on both sides. In the course of his service on the BFAC sub-committee, along with several of our committee members, he showed himself to be a consummate statesman and community advocate. Without his willingness to set aside past disputes, to start afresh with open eyes, and to extend his hand and his humor across the aisle, we would not now be standing on the verge of solving a problem that has vexed East Hampton for more than three decades.

Apart from the outcome, we are grateful for the reminder by our joint effort with Tom and his aviation colleagues that everyone in East Hampton loves the community, wishes only the best for its residents, and understands that we are all stewards of a precious heritage on behalf of future generations.

Respectfully submitted,

Airport Planning Committee,
Noise Sub-committee

PROPOSED AIRPORT NOISE LEGISLATION

A. General Provisions:

1. Anything that follows to the contrary notwithstanding, restrictions below shall not apply to: (i) operations by government aircraft of any jurisdiction of or within the United States, including police, fire, and emergency services, (ii) any emergency services or evacuation operations, whether public or private, or (iii) any operation by any aircraft in an emergency. The airport will be open to all such operations at all times without limitation, charge, surcharge, or penalty.

2. If any of the provisions hereof shall be unenforceable, whether temporarily or permanently, due to any controlling law or any order or judgment of a court of law or administrative agency, the other provisions shall continue to apply as written. If at any time more than one provision of Section B applies to the same aircraft operation, the most restrictive shall be deemed to be applicable and control.

3. (a) Certain definitions:

(i) "Operations" means departure (take-off) and arrival (landing) operations, but does not include repositioning of aircraft within the airport.

(ii) “Touch and go operation” is defined as any arrival operation after which the aircraft does not arrive at an aircraft parking ramp and come to a full stop before departing again.

(iii) “Published noise rating” shall mean an aircraft noise rating on any of the EPNdB, SEL dBA, or dBA scales as published by either the Federal Aviation Administration (FAA) or the European Aviation Safety Administration (EASA). In the case of conflict between a rating published by the FAA and a rating published by the EASA (which shall not include the absence of a rating), the lower rating shall apply unless the Town’s designated sound and aviation engineers shall determine the higher rating to be more accurate.

(iv) “Quiet types” are defined as aircraft of whatever type and propulsion, jet, turbo-prop, or piston engined, fixed wing or rotary, having a published noise rating (on each of the four measures, AP, TO, FO, and SL, that may apply) below 75 on the dBA scale; provided, that a defined “Noisiest type” may not be classified as a “Quiet type.”

(v) “Noisy types” are defined as aircraft of whatever type and propulsion, jet, turbo-prop, or piston engined, fixed wing or rotary, that are not affirmatively classified as “Quiet types.” “Noisy types” includes “Noisiest types.”

(vi) “Noisiest types” are defined as aircraft having a published noise rating (on any of the measures, AP, TO, FO, and SL, that may apply) of:

(A) 91 EPNdB or above in the case of either jet propelled, rotary or large fixed-wing aircraft that are EPNdB rated; or

(B) SEL 84 dbA or above in the case of rotary aircraft that are SEL dBA rated but not EPNdB rated; or

(C) L-max 80 dbA or above in the case of propeller-driven fixed wing aircraft, whether turbo-prop or piston engine, that are L-max dBA rated but not EPNdB rated.

(b) The Town will publish, by NOTAM, schedules of Noisiest types, as so defined, and Quiet types, as so defined, and other information for airport users regarding the provisions hereof including hours of operations and applicable noise pollution surcharges. All aircraft not affirmatively so classified by the Town as Noisiest types or Quiet types shall be deemed Noisy types, but not Noisiest types, for all purposes hereof. As to any aircraft type that has had at least six arrival operations during the prior 12 calendar months and has not previously been affirmatively classified by the Town, the Town shall promptly make an affirmative determination whether either the Noisiest type or Quiet type classifications applies and, if necessary, adjust its published lists accordingly.

(c) Aircraft types that do not have a published noise rating conforming to the definitions above, *i.e.*: (i) without a published noise rating on the EPNdB scale in the case of jet aircraft, (ii) without a published noise rating on either the EPNdB or SEL dbA scale in the case of rotary aircraft, (iii) without a dBA rating in all other cases, shall be presumed to be in the “Noisiest type” category and so classified. However, an owner of an aircraft of any such type may apply for a determination whether it is properly classified as a Noisiest type or not or as a Quiet type or not. The determination shall be based on the opinion of the Town’s designated sound and aviation engineers, costs to be reimbursed by the applicant. The Town may, in its discretion and at its own expense, initiate determinations by the Town’s designated sound and aviation engineers of the proper classification of types without a published noise rating as above. In each case, the Town’s published schedules will be adjusted, as necessary, according to the results.

(d) The application of all airport noise restrictions set forth in Section B hereof shall be based solely on the schedules of Noisiest types and Quiet types, and thence the residual category of Noisy types: (i) as published by the Town to the relevant date or (ii) upon ten days notice by certified mail to an aircraft owner of the noise classification of such owner’s particular aircraft not yet classified in a published list that such aircraft is classified as either a Noisiest type or a Quiet type. Such particular notice to an aircraft owner shall be deemed for all purposes hereof the equivalent of adjustment to the published list with respect to the particular aircraft, but only with respect to such aircraft, until such time as the Town’s published list shall be brought up to date.

B. Airport Noise Restrictions:

1. Curfew:

(a) Operations at East Hampton Airport by aircraft classified as Noisiest types are prohibited from 5 pm to 9 am all days.

(b) Operations at East Hampton Airport by aircraft classified as Noisy types are prohibited from 7 pm to 8 am all days.

2. Frequency:

(a) Each aircraft (based on registration number) classified as a Noisiest type is prohibited from conducting more than two operations, one arrival operation and one departure operation, or vice versa, at East Hampton Airport during any single calendar week, defined as the period Sunday through Saturday, throughout the year.

(b) Seasonally, from May 1 through October 31, each arrival and each departure operation at East Hampton Airport by an aircraft classified as a Noisiest type occurring between noon each Thursday and noon the following Monday, on any Federal holiday, or on the day preceding or immediately following any Federal holiday shall be subject to a noise pollution surcharge to be determined by the Town Board from time to time by resolution. Such noise pollution surcharge shall apply without regard to whether such aircraft is based at East Hampton Airport and thus exempted from landing fees. The

purpose of the noise pollution surcharge shall be to reduce the market demand for operations by Noisiest types: (i) to not more than 240 during any such period of 96 consecutive hours and (ii) to not more than 180 during any such period of 72 consecutive hours.

3. Helicopters:

(a) Operations at East Hampton Airport by helicopters classified as Noisiest types are prohibited at all times on all days.

(b) Seasonally, from May 1 through September October 31, helicopters classified as Noisy types are prohibited from: (i) conducting any operations at East Hampton Airport from noon each Thursday until noon the following Monday, on all Federal holidays, and on the day preceding and the day immediately following any Federal holiday; and (ii) conducting more than two operations, one arrival operation and one departure operation, or vice versa, at East Hampton Airport during any single calendar week, defined as the period Sunday through Saturday, or any portion of a calendar week that falls within such seasonal period.

4. Touch and go operations:

Seasonally, from May 1 through October 31, touch and go operations at East Hampton Airport are prohibited from noon each Thursday until noon the following Monday, on all Federal holidays, and on the day preceding and the day immediately following any Federal holiday. All touch and go operations shall be subject to landing fees during the period May 1 through October 31.