

Summary of East Hampton Airport's New Noise Abatement Program

**Eastern Region Helicopter Council Meeting
May 5, 2004**

Bob Miller

HARRIS MILLER MILLER & HANSON INC.



Who are we?

HMMH Specializes in Aviation Noise

<http://www.hmmh.com/>



Why Were We Hired at East Hampton?

<http://www.hmmh.com/>

- Q Town has been under increasing pressure from community groups to address noise from jets and helicopters**
 - Q Committee to Stop Airport Expansion filed lawsuit
 - Q Citizens for a Quieter Airport got 1,500 residents within 7½ miles of Airport to sign petition for less noise; maintains active web site – www.quieterairport.org
- Q HMMH was hired to solve the issue...quickly**
- Q A major factor in our selection was our experience with noise rules at Naples, FL**

Project Tasks

<http://www.hmmh.com/>

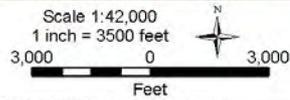
- Q Initial measurements for 2 weeks last July**
- Q Identify airport operational levels (aircraft types, numbers of operations, flight paths, night activity)**
- Q Follow-up measurements for 2 weeks last August/September**
- Q Evaluate noise exposure**
- Q Develop a noise mitigation program**
- Q Meet regularly with a Noise Study Advisory Group**

Measurement Sites

<http://www.hmmh.com/>



Source: NY State Department of Environmental Conservation, 1994, 1999



East Hampton Airport



HARRIS MILLER MILLER & HANSON INC.

NYGISUSARV109600_East_HamptonAirport.mxd

Daily DNL Values from Measured Noise Events: 21 August to 2 September 2003

<http://www.hmmh.com/>

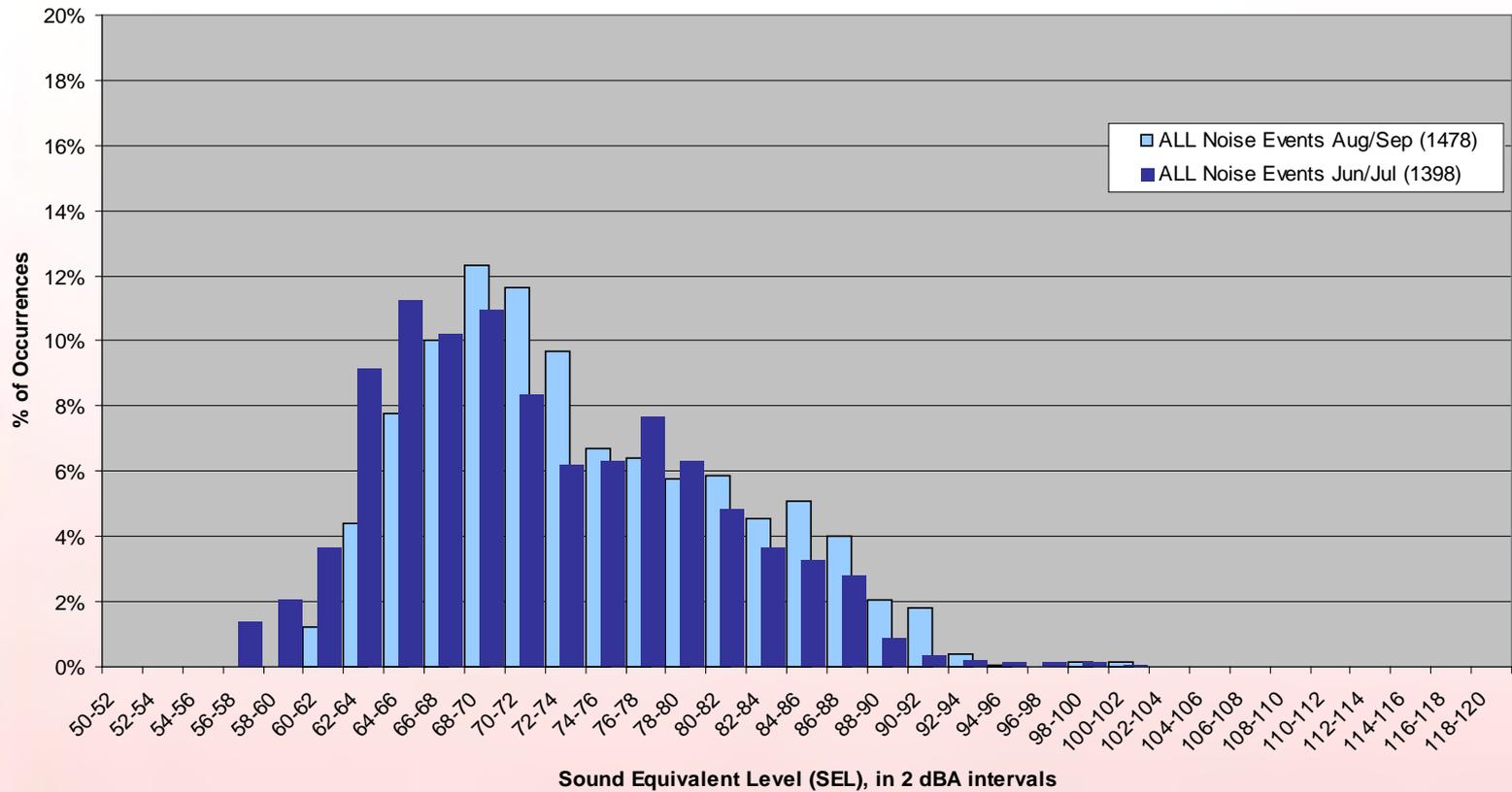
SITE #	ALL MEASURED NOISE EVENTS Daily DNL (dBA)													Avg. DNL (dBA)
	Thu. 8/21	Fri. 8/22	Sat. 8/23	Sun. 8/24	Mon. 8/25	Tue. 8/26	Wed. 8/27	Thu. 8/28	Fri. 8/29	Sat. 8/30	Sun. 8/31	Mon. 9/1	Tue. 9/2	
1	50	55	52	54	57	53	54	52	-	-	-	-	-	54
2	60	60	62	56	59	60	53	-	-	-	-	-	-	59
3	55	60	59	56	59	58	55	55	51	52	49	51	50	56
4	59	59	61	51	50	48	47	-	-	-	-	-	-	57
5	-	58	58	57	57	55	56	52	57	58	56	57	55	57
6	-	-	-	-	52	48	49	-	-	-	-	-	-	50
7	-	-	-	-	-	-	40	48	50	45	45	40	51	47
8	-	-	-	-	-	-	57	67	66	63	60	63	-	64
9	-	-	-	-	-	-	49	54	56	55	50	56	-	54
10	-	-	-	-	-	-	-	51	53	53	48	49	51	51

Comparisons of Individual Noise Events at Site 3 Near Power Lines

<http://www.hmmh.com/>

East Hampton Noise Abatement Study: Site 3

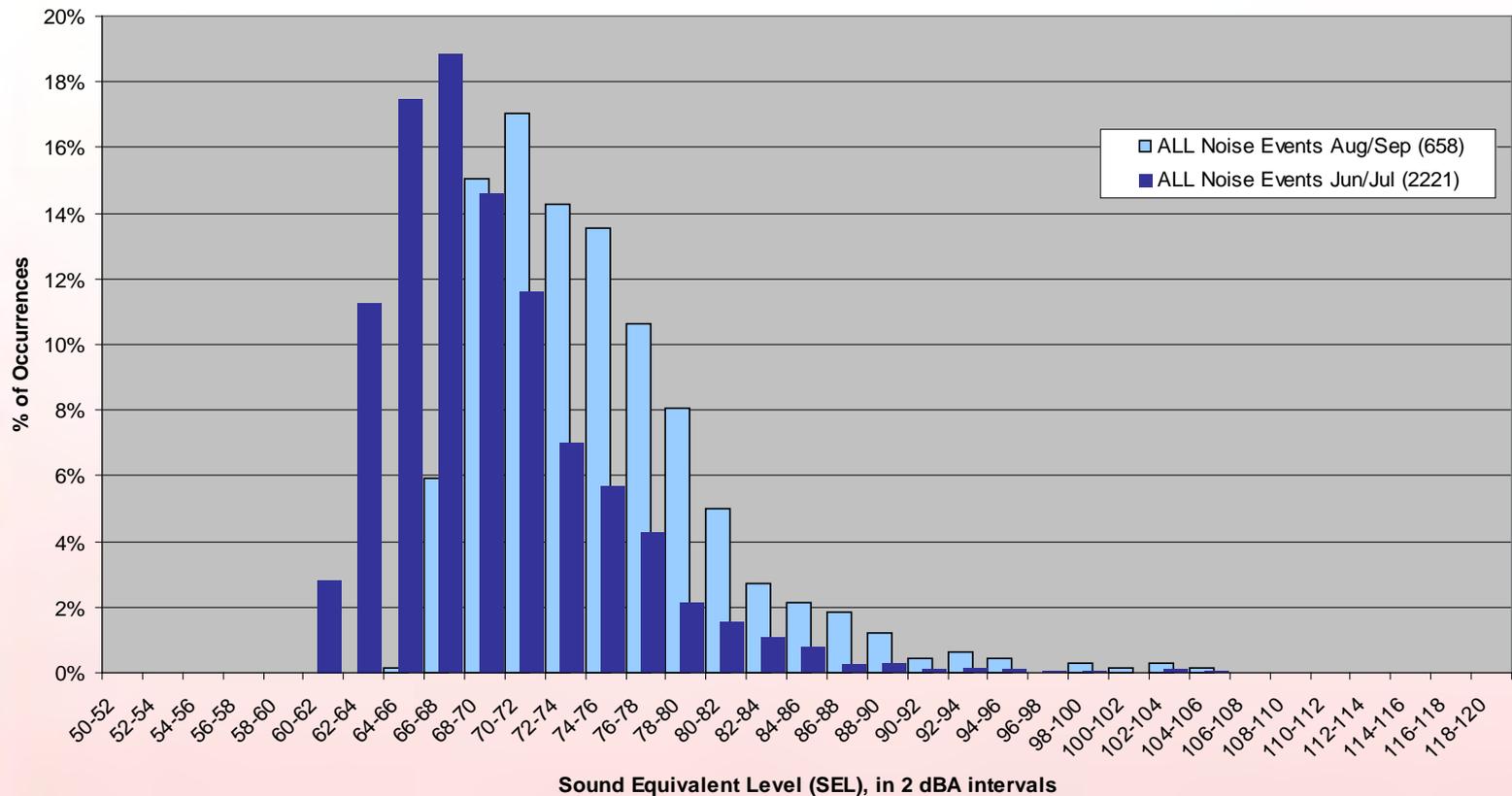
Distribution of SELs for ALL Measured Noise Events for August/September 2003 and June/July 2003



Comparisons of Individual Noise Events from June/July to August/September

East Hampton Noise Abatement Study: Site 4

Distribution of SELs for ALL Measured Noise Events for August/September 2003 and June/July 2003



Observed v. Logged Activity Levels

<http://www.hmmh.com/>

Comparison of HMMH and HTO Aircraft Operation Logs				
Period	Operation	Logged by HTO	Logged by HMMH	Δ%
Both HMMH and HTO Attended	Arrival/Departure Noise Events*	333	425	+27.6%
	Touch and Go Movements*	3	30	+900.0%
Adjusted Operations for Summer 2003 (based on Attended Log Periods, generally 7am to 8pm)				
Period	Operation	Logged by HTO	Adjusted Monthly Total**	Adjusted Daily Total**
May	Arrival/Departure Movements*	1,610	2,054	66.3
June	Arrival/Departure Movements*	2,754	3,514	117.1
July	Arrival/Departure Movements*	5,156	6,579	212.2
August	Arrival/Departure Movements*	4,820	6,150	198.4
Total (Summer)	Arrival/Departure Movements*	14,340	18,298	148.8
“ “	Touch and Go Movements*	-	2,583	21.0
Estimated Operations for Unattended Periods				
Period	Operation		Monthly	Daily
Unattended Day Periods (generally 8pm to 10pm)	Average Number of Events*		365	12
Unattended Night Period (10pm to 7am)	Average Number of Events*		335	11
* Each noise event is correlated with and assumed to represent one operation. Each movement represents two operations.				
**Movements are adjusted upward by Δ%=27.6% based on comparison of HMMH and EHA logs.				

From Which We Noted:

<http://www.hmmh.com/>

- **We logged approximately 28% more operations than HTO staff during attended periods**
- **An additional 46 operations per day occurred during unattended periods, approximately 22 of which occur between 10:00 pm and 7:00 am**
- **July and August are the busiest months; ~490 operations per day**

What does this mean in terms of noise exposure?

<http://www.hmmh.com/>



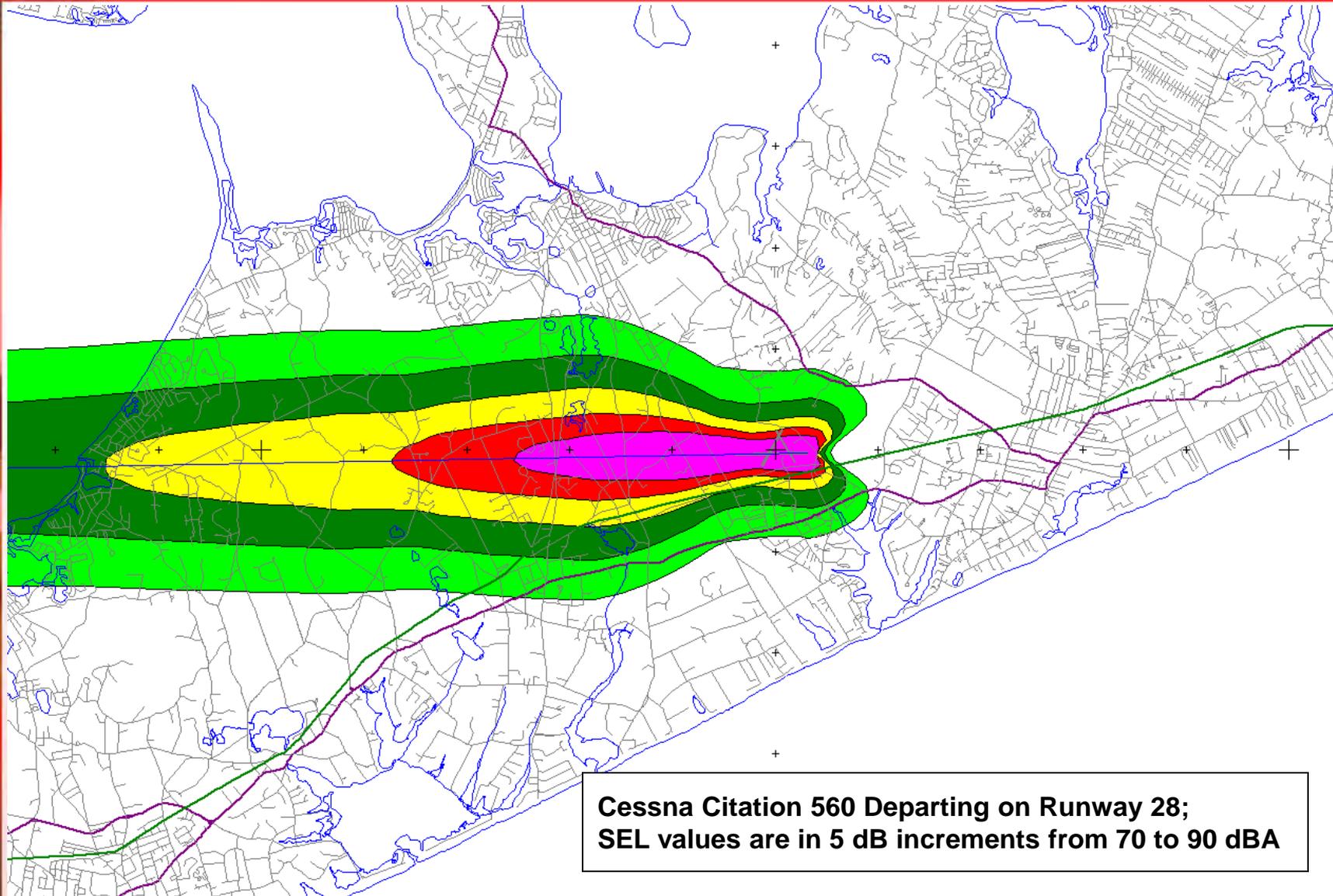
General Comparison to Measured DNL Values

<http://www.hmmh.com/>

- **Excellent agreement (0 to 2 dB differences) at Sites 1, 2a, 3, 4, 7, and 9**
- **Predicted levels are conservatively higher than measured at Sites 5, 6, and 10 by 4 to 6 dB. Differences are mostly due to higher numbers of departures from Runway 10 than occurred during measurement periods**

SEL Contours for a Common Business Jet Departing on Runway 28

<http://www.hmmh.com/>

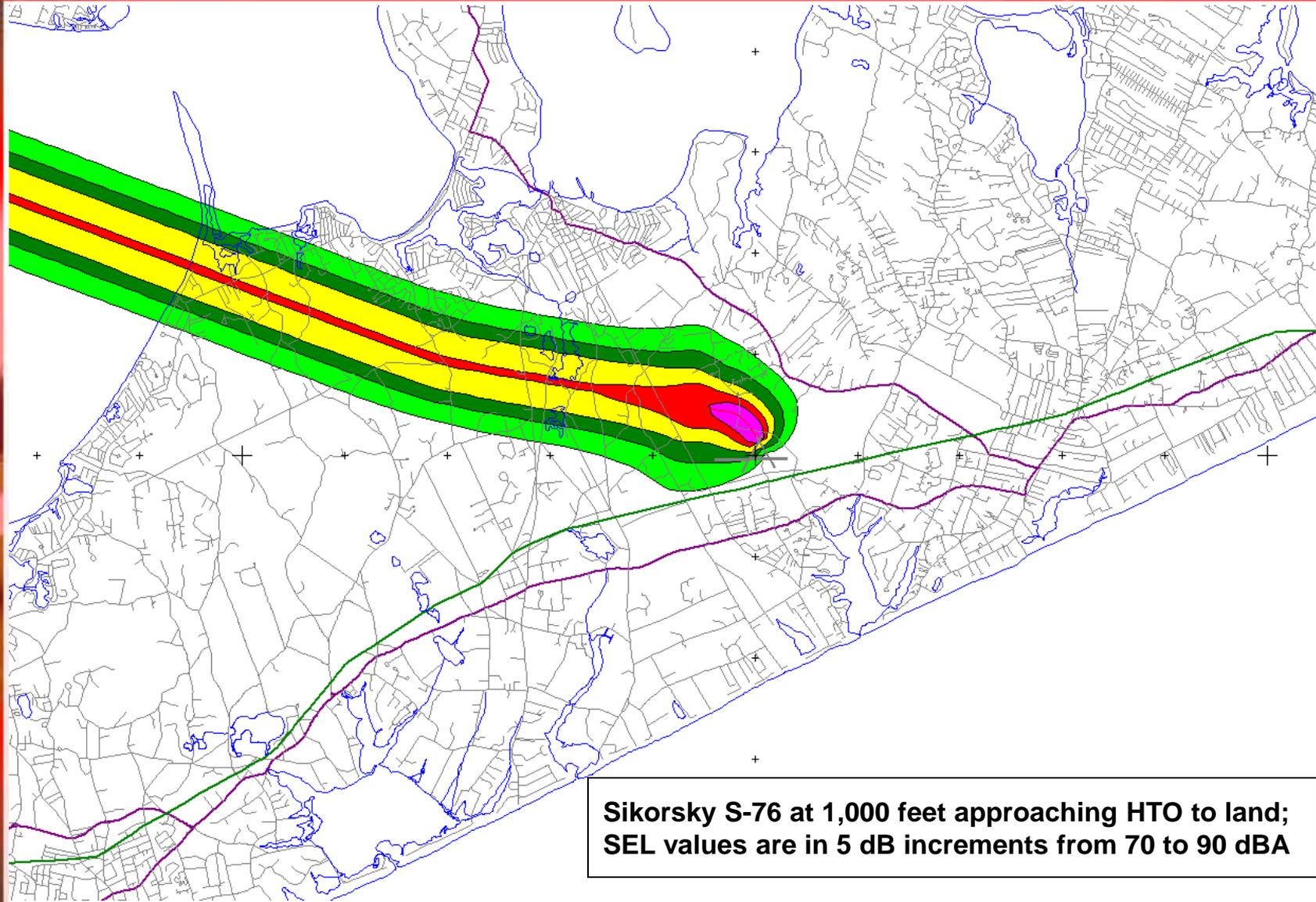


Cessna Citation 560 Departing on Runway 28;
SEL values are in 5 dB increments from 70 to 90 dBA



SEL Contours for a Common Helicopter Following Power Lines at 1,000 feet

<http://www.hmmh.com/>

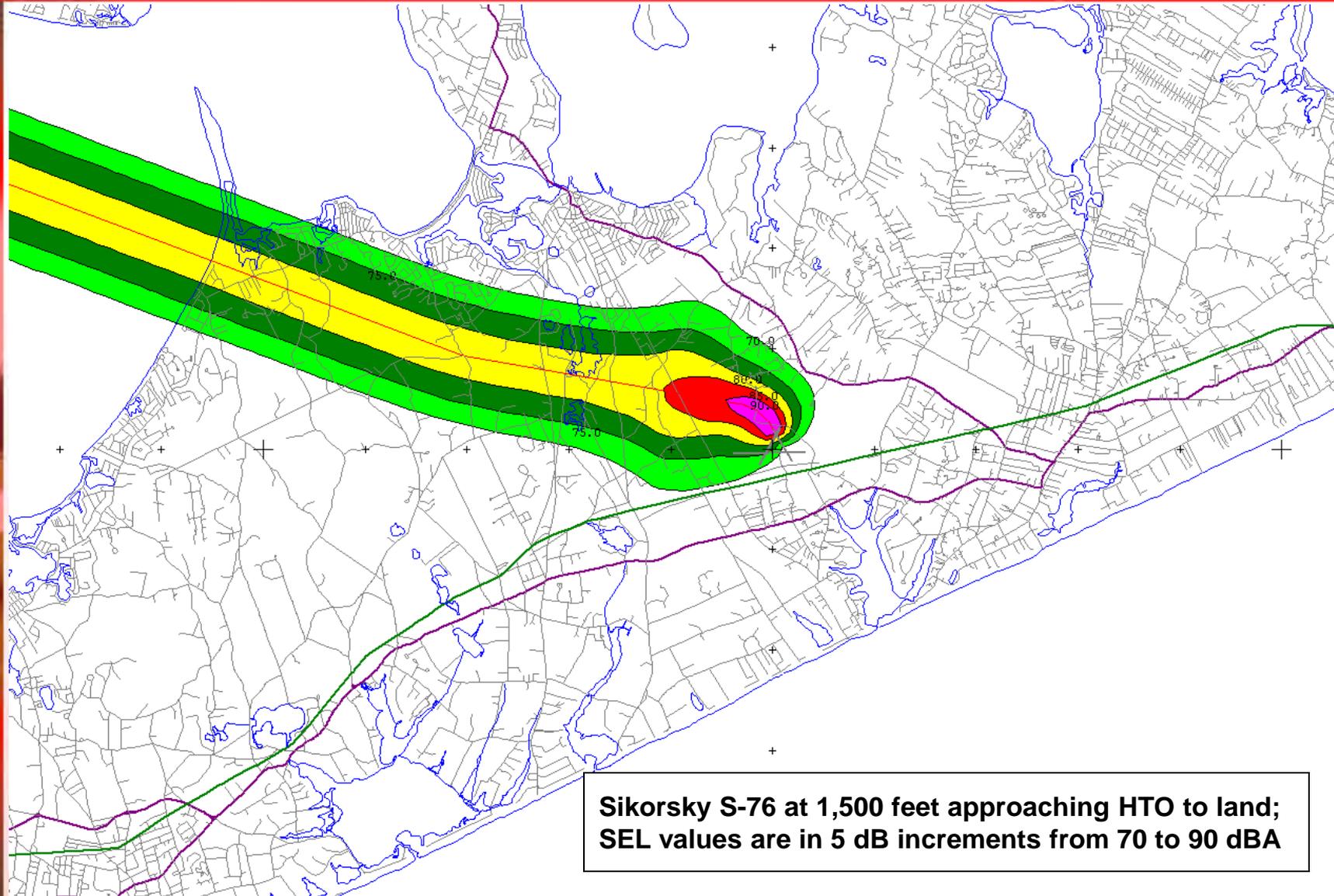


Sikorsky S-76 at 1,000 feet approaching HTO to land;
SEL values are in 5 dB increments from 70 to 90 dBA



SEL Contours for a Common Helicopter Following Power Lines at 1,500 feet

<http://www.hmmh.com/>

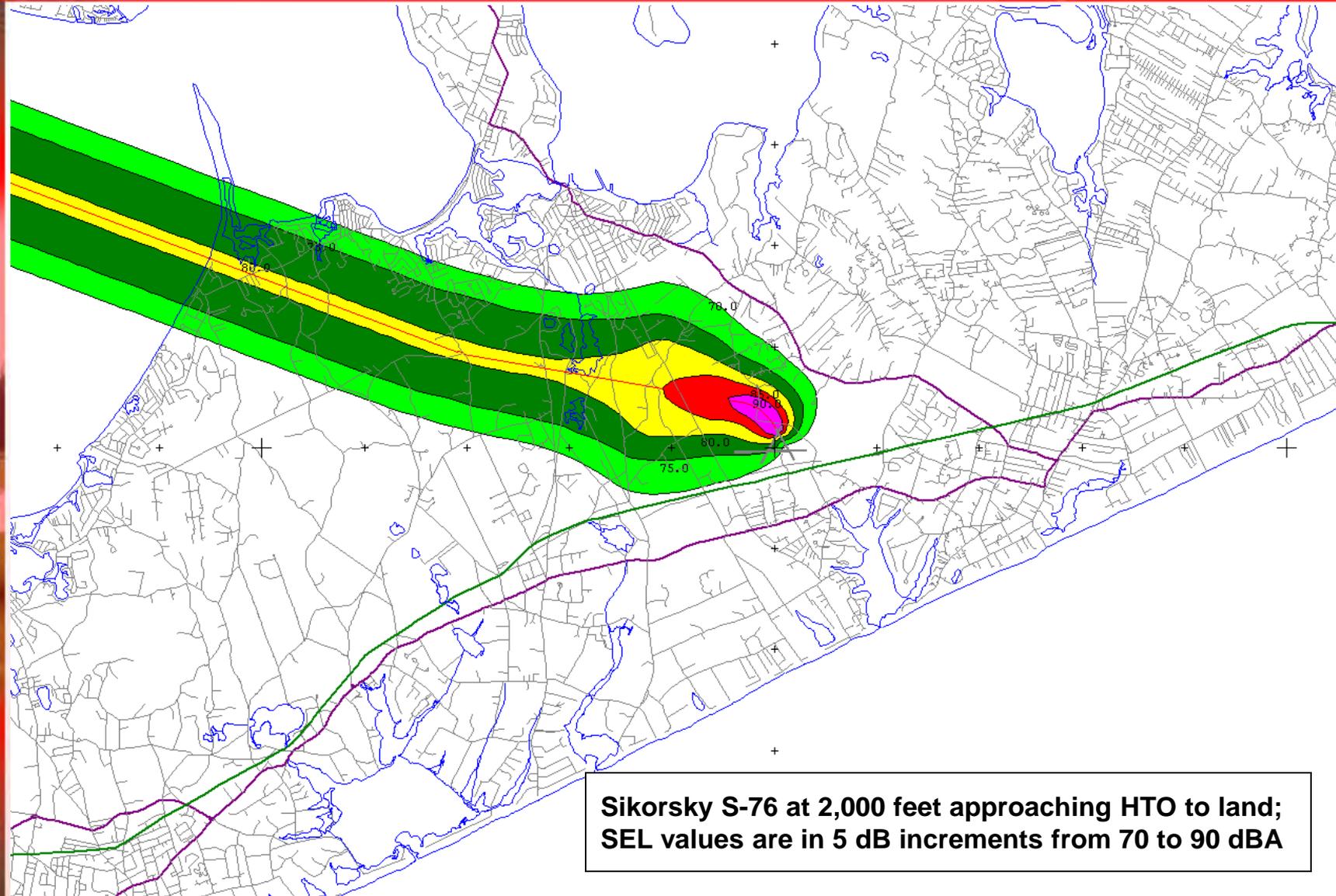


Sikorsky S-76 at 1,500 feet approaching HTO to land;
SEL values are in 5 dB increments from 70 to 90 dBA



SEL Contours for a Common Helicopter Following Power Lines at 2,000 feet

<http://www.hmmh.com/>



Sikorsky S-76 at 2,000 feet approaching HTO to land;
SEL values are in 5 dB increments from 70 to 90 dBA



Proposed Mitigation Measures

<http://www.hmmh.com/>

1. Improve operations monitoring:

- Obtain 24 hour coverage
- Investigate alternatives to FAA radar
- Consider flight track monitoring as well as aircraft identification
- Major vendors are Rannoch, BAe Systems, Lochard, and Bruel & Kjaer

2. Raise helicopter flight paths to at least 1,500 ft AGL along power lines; 1,800 to 2,000 ft AGL is desirable

3. Produce new Jeppesen insert; plot noise-sensitive areas, publish new abatement measures, distribute copies at flight ops, to FBOs, and to based users

Proposed Mitigation Measures, continued

<http://www.hmmh.com/>

- 4. Encourage business jet operators to fly NBAA close-in departure procedure**
- 5. Encourage voluntary no-flight program from 11:00 p.m. to 7:00 a.m. for all aircraft types**
- 6. Encourage voluntary limit on touch-and-gos from 10:00 p.m. to 7:00 a.m.**
- 7. Publish sound insulation guidelines for interested residents; no funding would be available**
- 8. Continue periodic meetings with Noise Advisory Group**

9. Hire a trained Noise Officer; responsibilities would include:

- Q Answering noise complaints
- Q Following up with phone calls or letters to operators who do not follow abatement measures
- Q Summarizing operations for landing fee collection
- Q Distributing a newsletter
- Q Meeting with the Noise Advisory Group
- Q Undertaking special studies

10. Others?

What now?

<http://www.hmmh.com/>

- **Serious implementation of all suggested measures**
- **Town wants as many as possible in place by this summer; they will begin checking**
 - Monitoring system bids will be out by early June, installation to begin by late summer
 - Currently writing job description for noise officer
- **We believe the program can work on a cooperative, voluntary basis**
- **To do that, the effort has to be mutual; the town would like to enlist your support**



Comments/Questions?