

East Hampton Airport Noise Study Advisory Group

October 29, 2003

Robert Miller

HARRIS MILLER MILLER & HANSON INC.



Agenda

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

- **Summary of 2nd measurement trip**
- **Airport activity levels**
- **Some noise modeling results**
- **Potential mitigation measures**



Measurement Sites

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



- Additional monitoring sites 21 Aug-2 Sept
- Monitoring sites 25 Jun-8 Jul and 21 Aug-2 Sept

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

Scale 1:42,000
1 inch = 3500 feet
3,000 0 3,000
Feet

East Hampton Airport



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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



Comparison of DNL Values From June/July to August/September

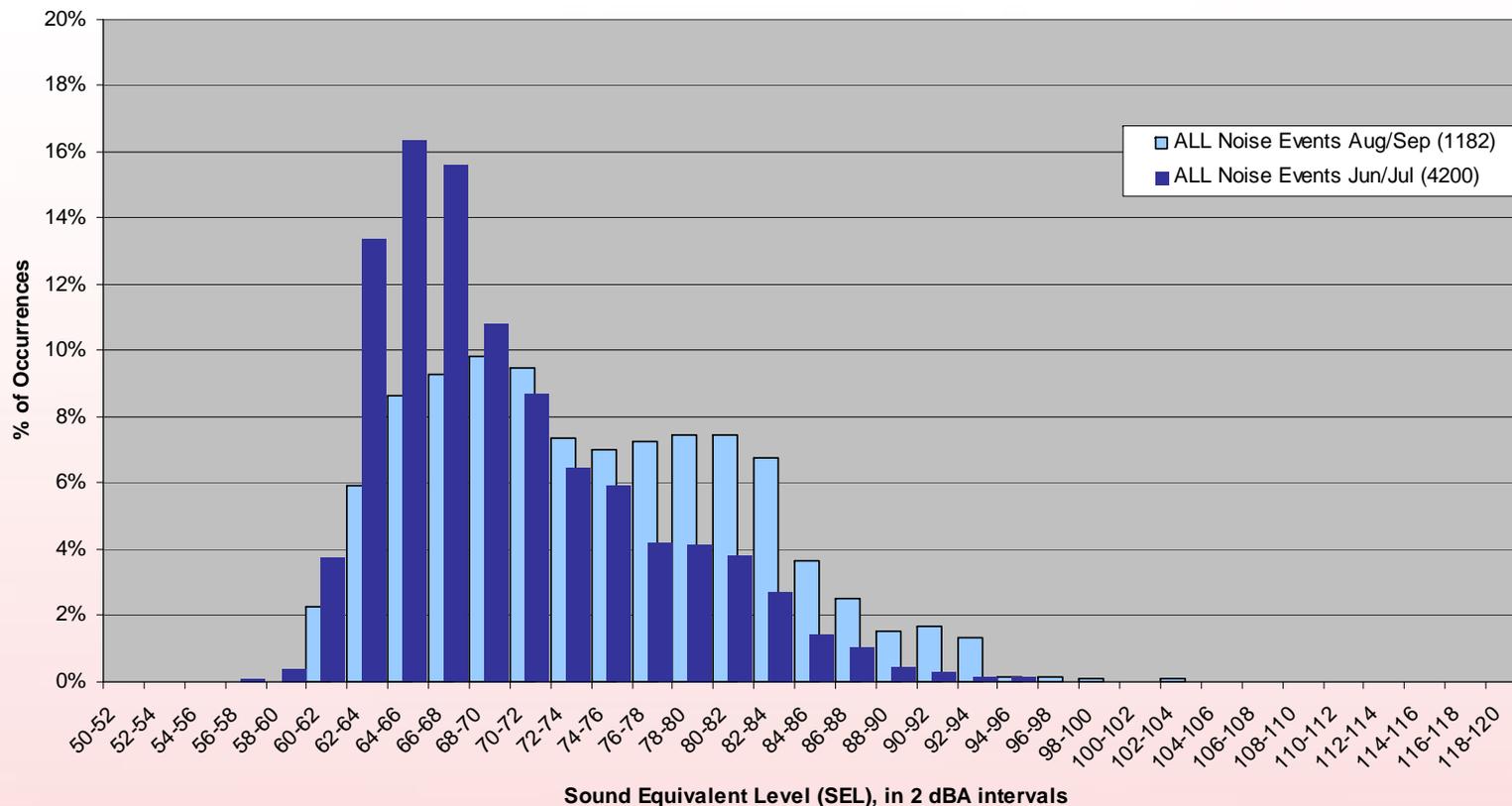
<http://www.hmmh.com/>

SITE #	Location	Avg. DNL Jun/Jul	Avg. DNL Aug/Sep	Change in Avg. DNL from Jun/Jul to Aug/Sep (dBA)
1	11 Highview Dr., Wainscott	52	54	2
2a	93 Merchants Path, Bridgehampton	55	59	4
3	244 Widow Gravitts, Bridgehampton	51	56	5
4	75 West Gate, Wainscott	51	57	5
5	Georgica Estates Tennis Courts, E. Hampton	57	57	0
6	Ross School Athletic Fields, Wainscott	50	50	0
7	136 Main St., E. Hampton Village	55	47	-7

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

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

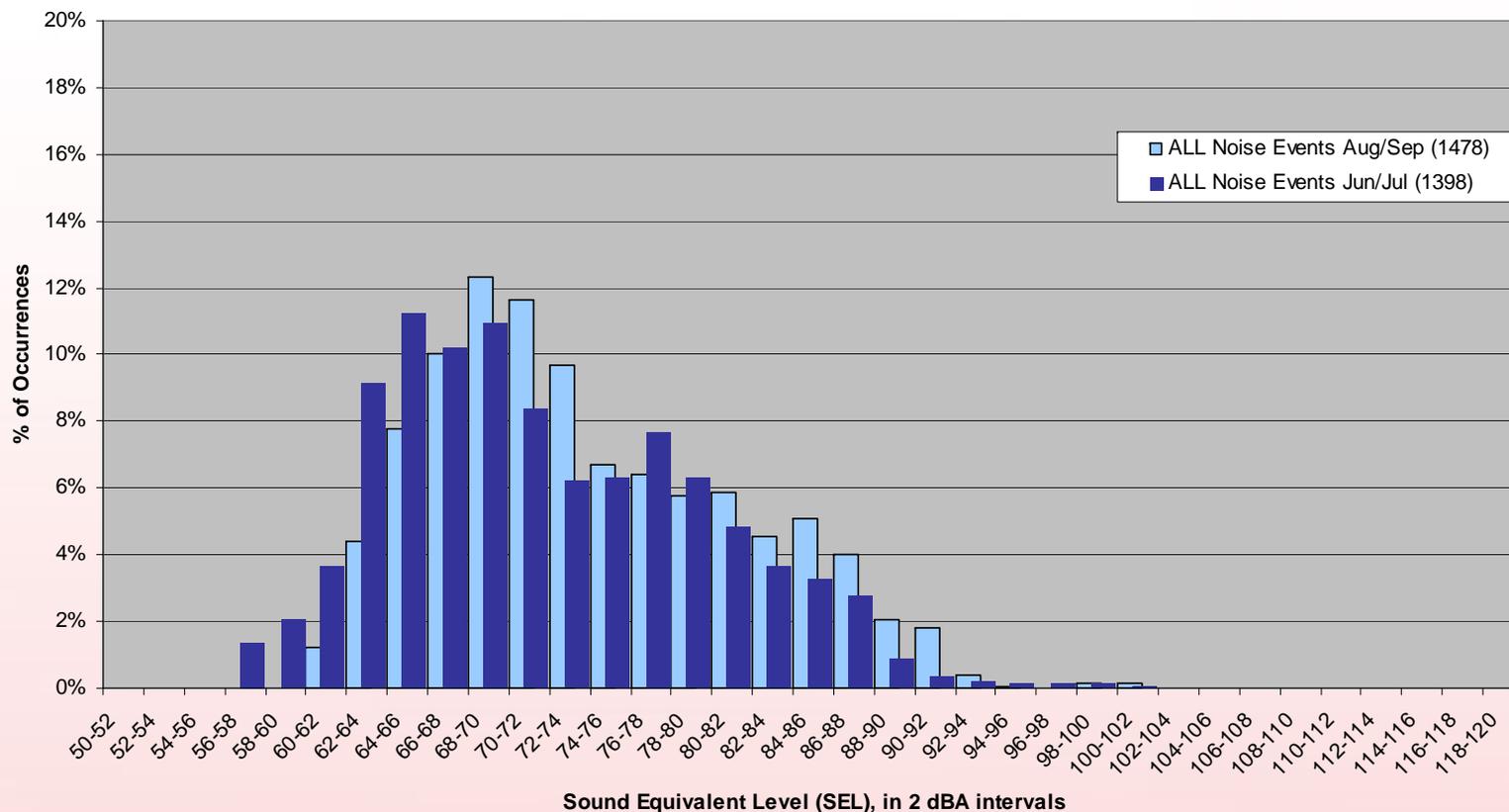
East Hampton Noise Abatement Study: Site 2a
 Distribution of SELs for ALL Measured Noise Events for August/September 2003 and June/July 2003



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

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

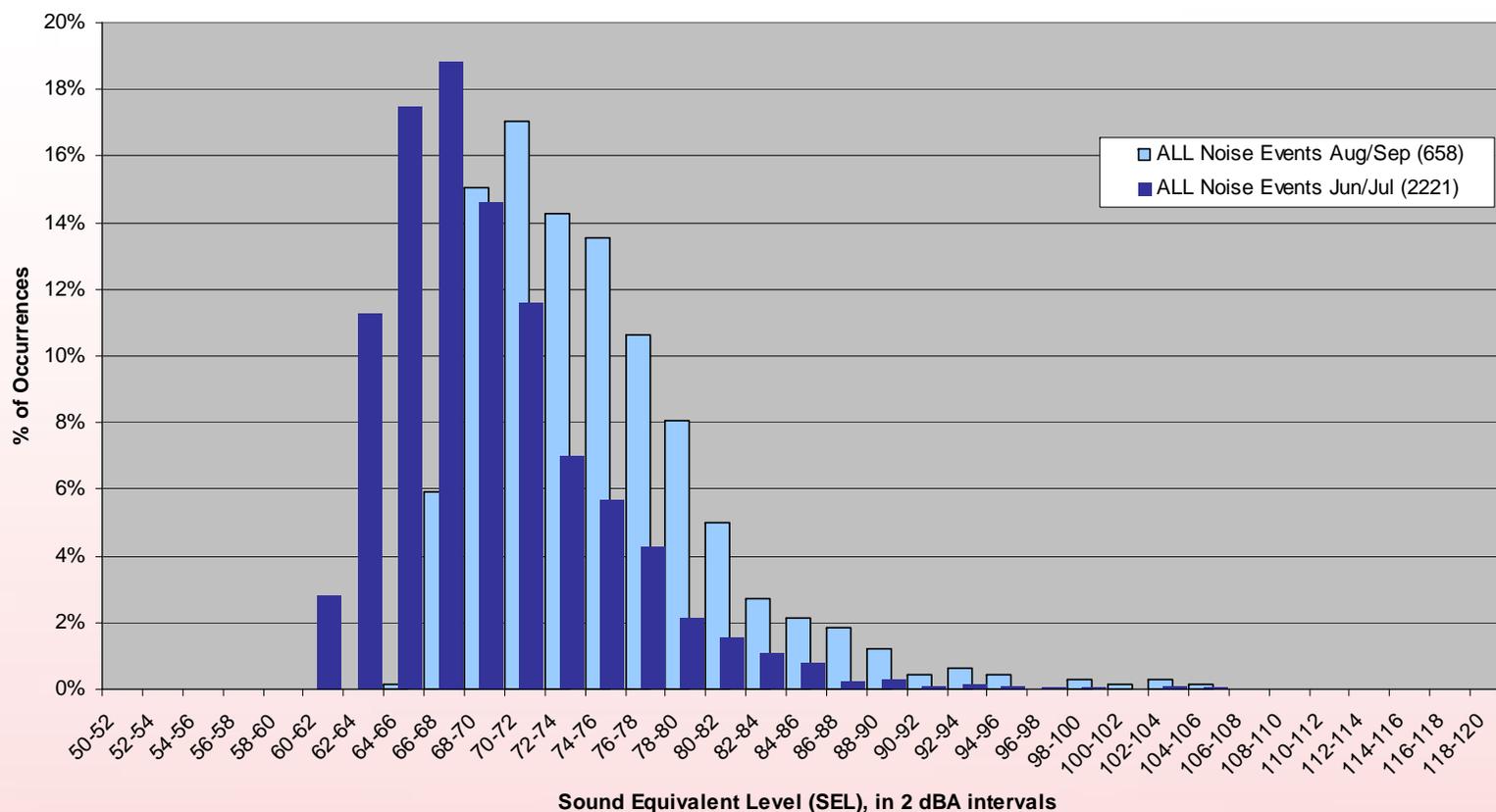
East Hampton Noise Abatement Study: Site 3
Distribution of SELs for ALL Measured Noise Events for August/September 2003 and June/July 2003



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

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

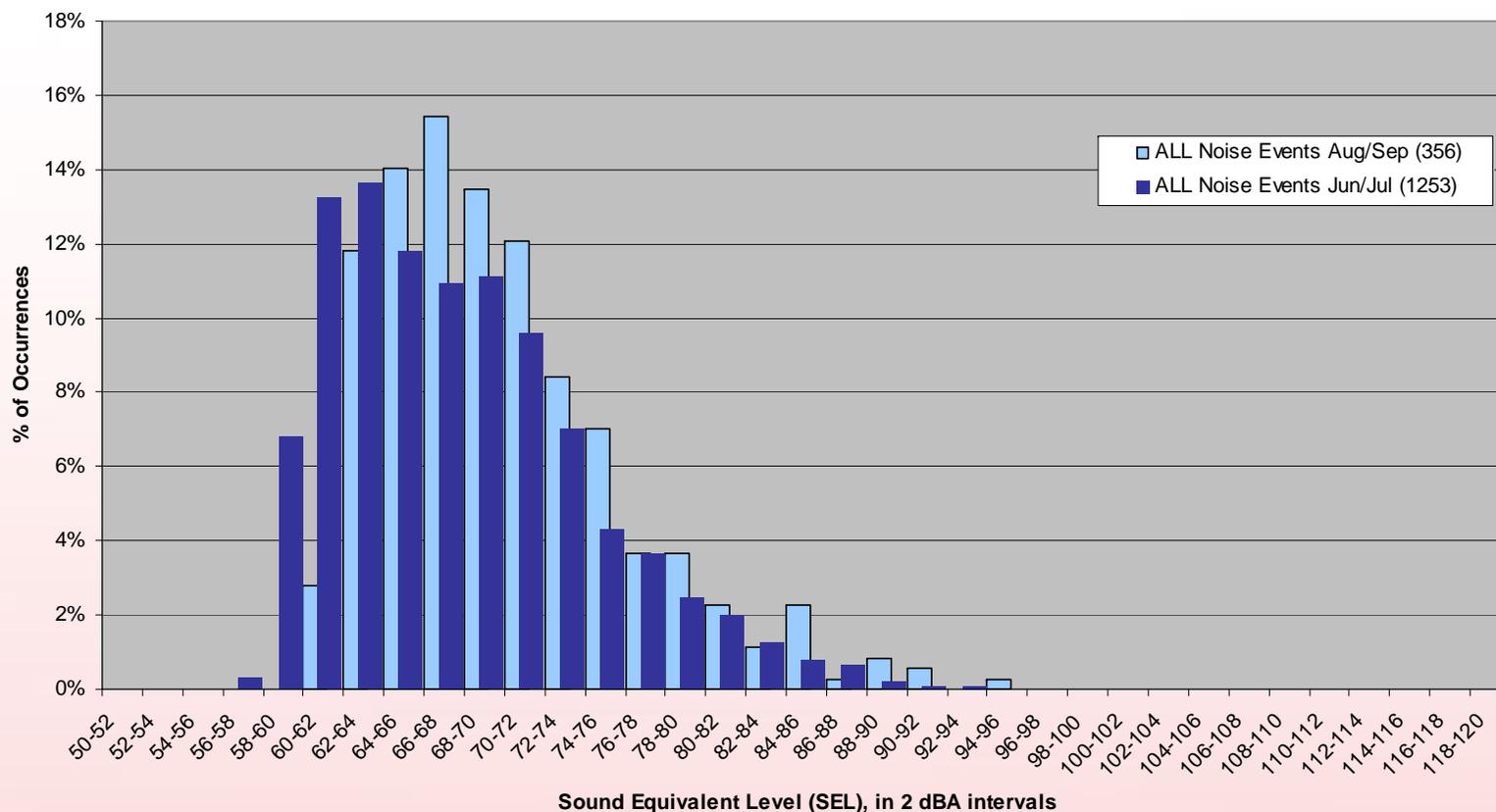
East Hampton Noise Abatement Study: Site 4
 Distribution of SELs for ALL Measured Noise Events for August/September 2003 and June/July 2003



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

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

East Hampton Noise Abatement Study: Site 6
 Distribution of SELs for ALL Measured Noise Events for August/September 2003 and June/July 2003



Summary of Differences

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

- **Significant increases in DNL of 4 to 5 decibels at Sites 2a, 3, and 4, to southwest and west**
 - ✓ Supported by consistently higher SELs
- **Little to no change in DNL at Sites 1, 5, and 6 north and east of the Airport**
 - ✓ Similar mix of SELs during each period
- **Significantly lower DNL**
 - ✓ More weekend arrivals over July 4th weekend



Activity Levels

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

- **Used Site 8 (Town Line Rd.) at end of Runway 28 to log and record noise events of all operations to west**
- **Compared our log to HTO logs for the same time periods**
- **Identified differences in traffic counts during common attended periods**
- **Used measured noise events to determine activity levels during unattended periods (esp. late evening and night)**



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 Note:

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

- **Over 6-days, HMMH logged approximately 28% more operations than HTO staff during attended periods**
- **An additional 46 operations per day occur during unattended periods, of which an average of 22 occur at night between 10:00 pm and 7:00 am**
- **July and August are the busiest months; average daily movements during those times total ~246 (or about 490 operations)**
- **Average daily movements for May through August drop to about 180 (~360 operations)**



What does this mean in terms of noise exposure?

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



Scale 1:66,000
1 inch = 5500 feet
5,500 0 5,500
Feet

East Hampton Airport

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General Comparison to Measured DNL Values

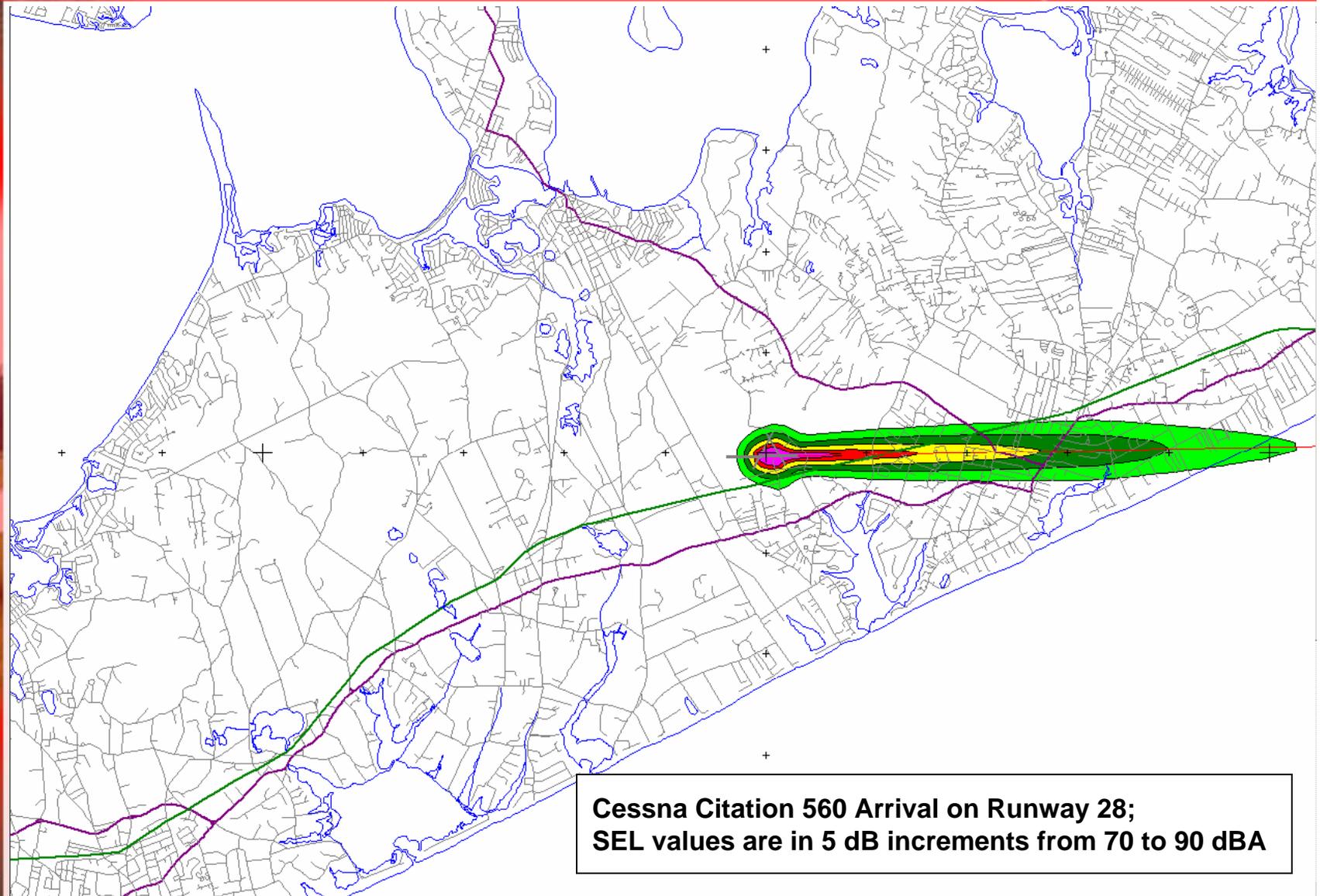
<http://www.hmmh.com/>

- **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**



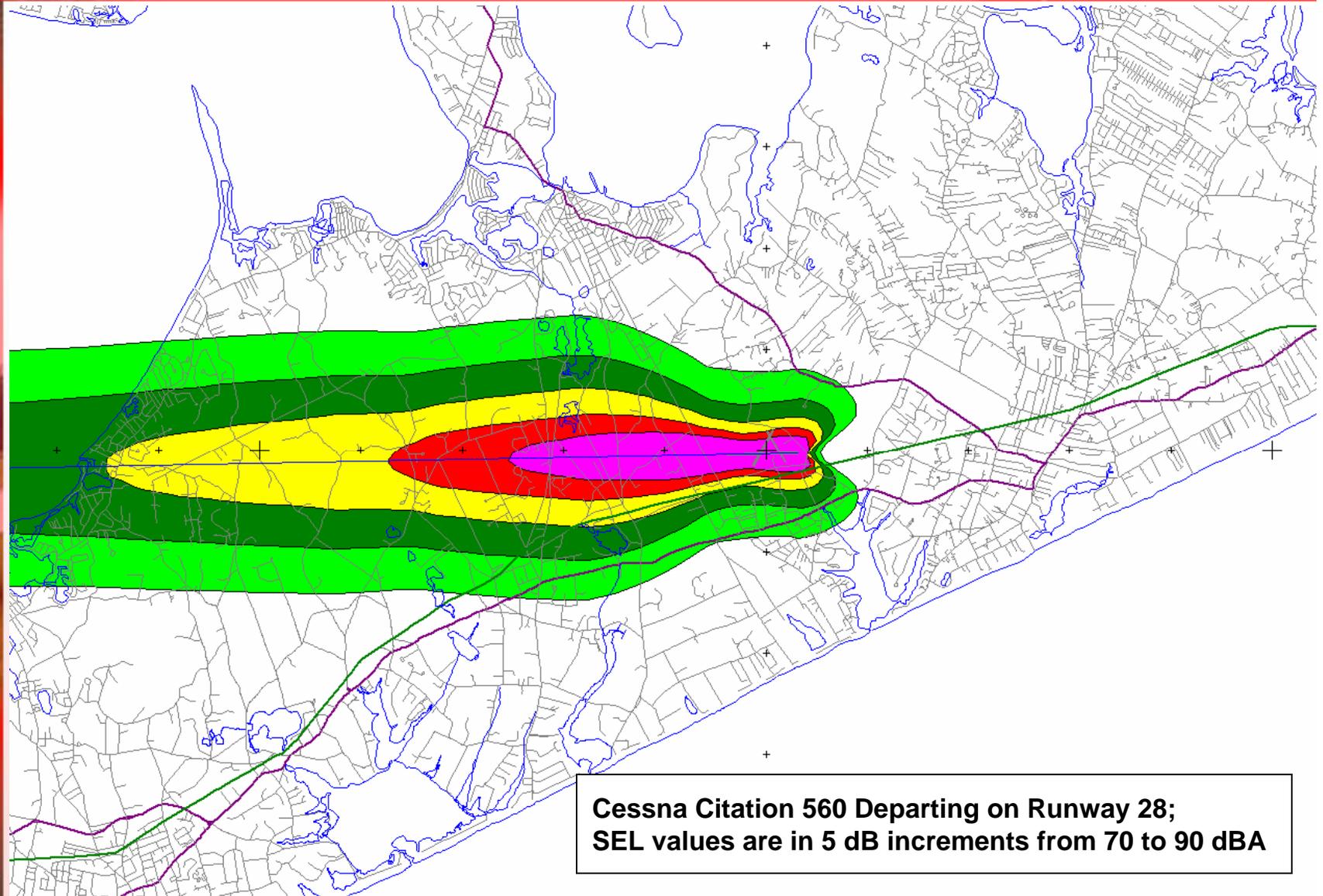
SEL Contours for a Common Business Jet Arriving on Runway 28

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



SEL Contours for a Common Business Jet Departing on Runway 28

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

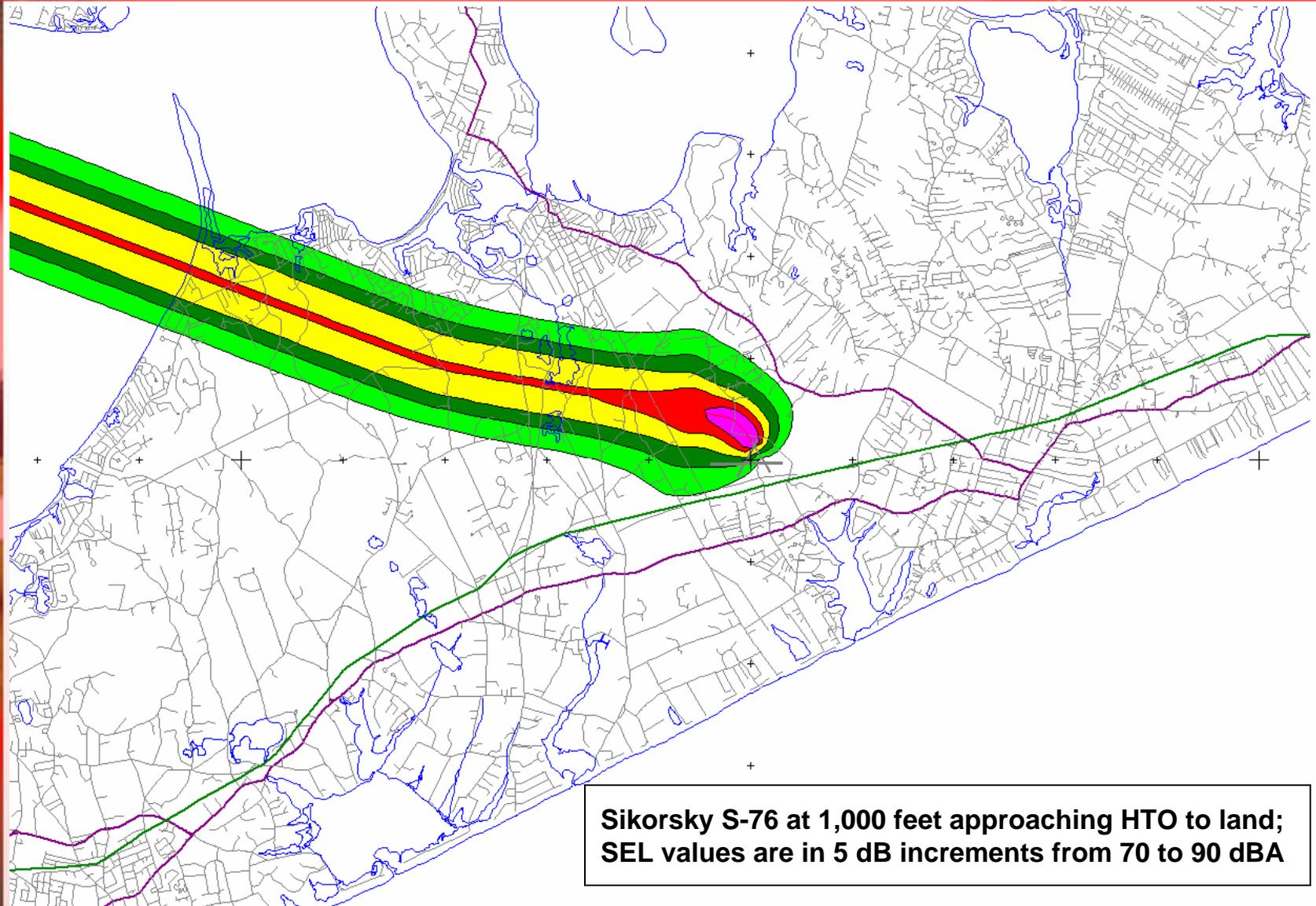


**Cessna Citation 560 Departing on Runway 28;
SEL values are in 5 dB increments from 70 to 90 dBA**



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

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

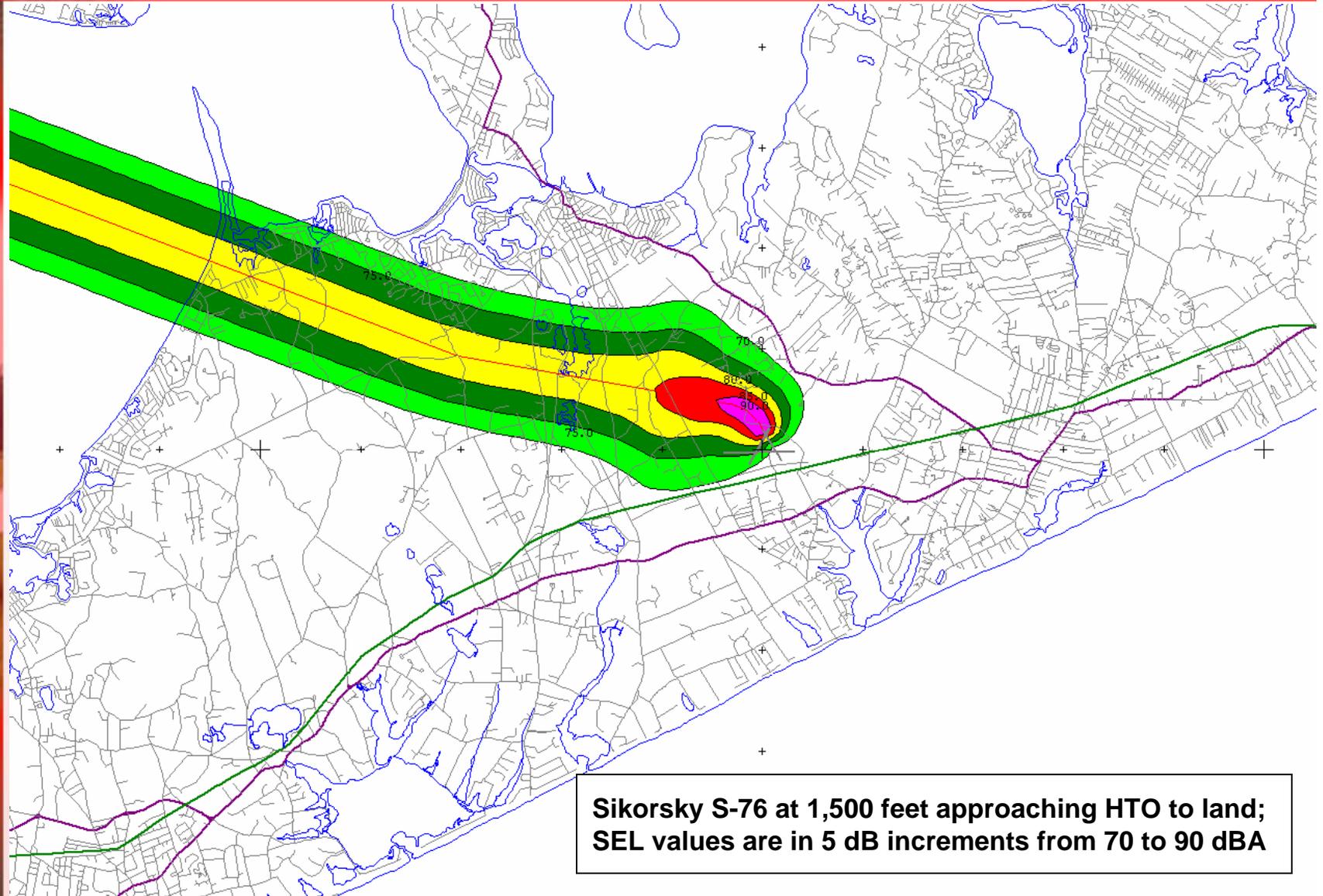


**Sikorsky S-76 at 1,000 feet approaching HTO to land;
SEL values are in 5 dB increments from 70 to 90 dBA**



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

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

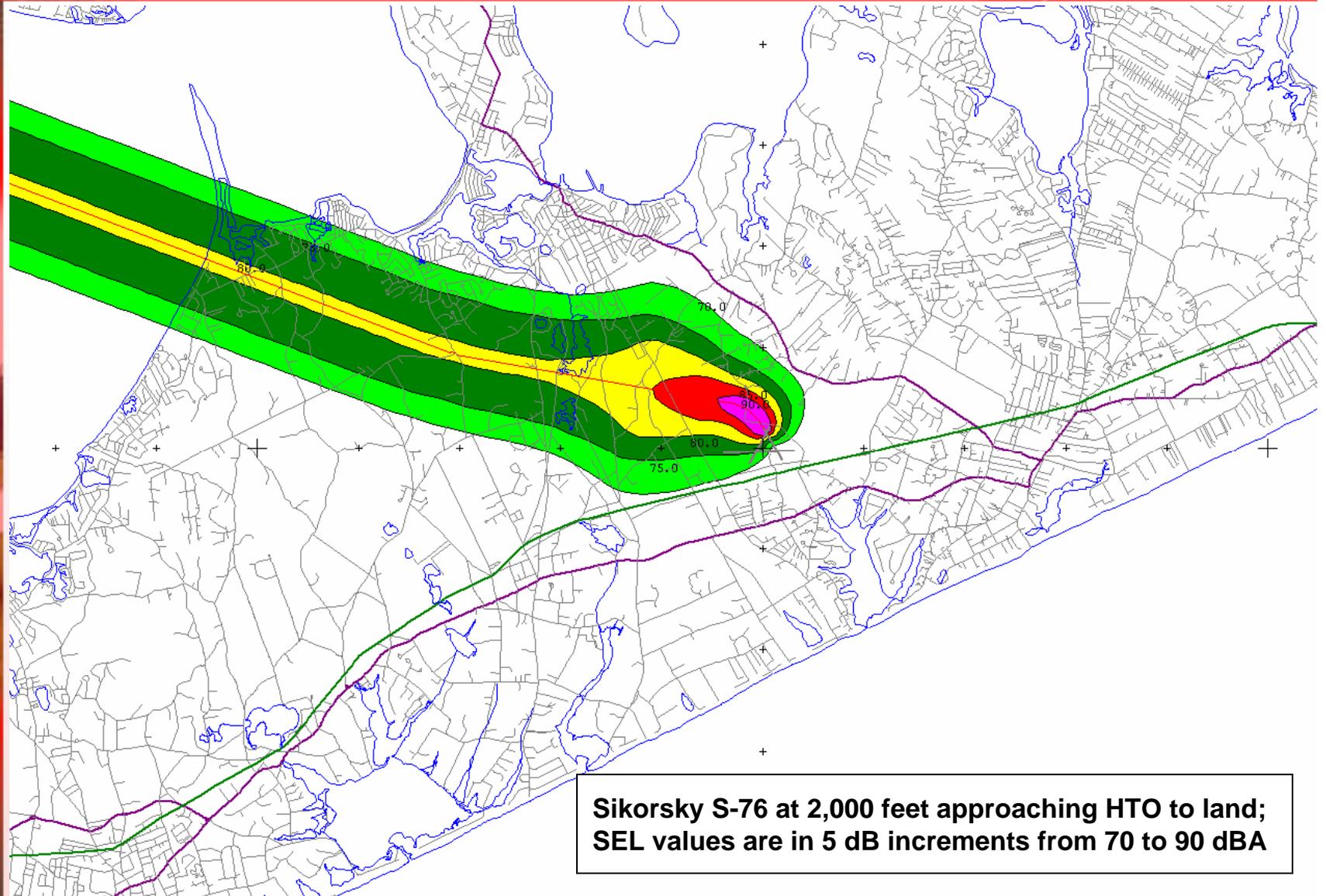


Sikorsky S-76 at 1,500 feet approaching HTO to land;
SEL values are in 5 dB increments from 70 to 90 dBA



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



Suggested 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**



Suggested 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**

Suggested Mitigation Measures, continued

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

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

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

10. Others?

