



Lehigh Valley International Airport 14 CFR Part 150 Noise Compatibility Study Update

A 14 CFR Part 150 Aircraft Noise Compatibility Study identifies incompatible land use around airports and recommends measures to (a) mitigate existing problems and (b) prevent future ones. LVIA is conducting its second update to its original Noise Compatibility Study which originated in 1991. The last Study update occurred in 2004. Two critical elements will be developed as part of the Study update:

- **Noise Exposure Maps (NEM)** to show where aircraft noise exposure occurs. The map(s) will include:
 - Aircraft DNL (Day-Night-Level) contours of 65, 70, and 75 dB for base year 2014 and a 5-year forecast;
 - Non-compatible land uses within 65 dB DNL contour.
- **Noise Compatibility Program (NCP)** includes measures/recommendations proposed to reduce noise exposure in the community

For more information on this project, please attend:

Community Informational Workshop #1

Thursday, November 20, 2014, 6:00 p.m.

Catasauqua Middle School Auditorium

850 Pine Street, Catasauqua, PA 18032

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Process and Timeline

April 2014

Project Initiation

- Kickoff Meeting
- Develop Scope of Work

June 2014 - Ongoing

Public Participation

- Form Technical Advisory Committee
- Form Community Advisory Committee
- Advisory Committee Meeting #1
- **Community Information Workshops #1** ← We are here
- Ongoing through the duration of the study

April – Dec 2014

Operation Data Collection

- Airport facilities, operation levels, fixed-base operator, noise complaint, engine maintenance run-up, and airspace structure
- Current airspace use
- Most recent master plan

Land Use Data Collection

- GIS Data Collection
- Land Use Planning and Potential Future Growth Trend

5-Year Forecast

- Develop 5 year future aircraft operations forecast
- Prepare technical memo including assumptions and resulting forecast

Noise Measurement

- Noise measurement
- 'Snapshot' of existing environment

Nov 2014 - March 2015

Noise Exposure Map

- Existing Condition – Use obtained data and modeling through FAA Integrated Noise Model (INM)
- Forecast condition – Consistent with assumptions in 5-year forecast
- **Advisory Committee Meeting #2**
- Submit draft NEM to FAA after review and approval by LVIA

March 2015

Supplemental Noise Analysis

- Grid Point analysis
- DNL Color Mapping

March – June 2015

Alternatives Analysis

- Review of existing noise abatement procedures and operational restrictions
- Potential noise abatement alternatives
- Noise mitigation alternatives
- Land use management alternatives
- Program management alternatives

June 2015 - April 2016

Draft Part 150 Documents

- Draft Part 150 Documentation
- **Advisory Committee Meeting #3**
- Community Information Workshop #2 / Public Hearing
- FAA review and approval (6 months)
- Submit grant applications as necessary for implementation of approved measures



What is DNL?

Day-Night Average Sound Level (DNL)

- Federally-mandated noise metric for long-term aircraft noise exposure
 - Total noise exposure over an average 24-hour period
- Adds 10-decibel “penalty” to nighttime noise levels (from 10:00 PM to 7:00 AM)

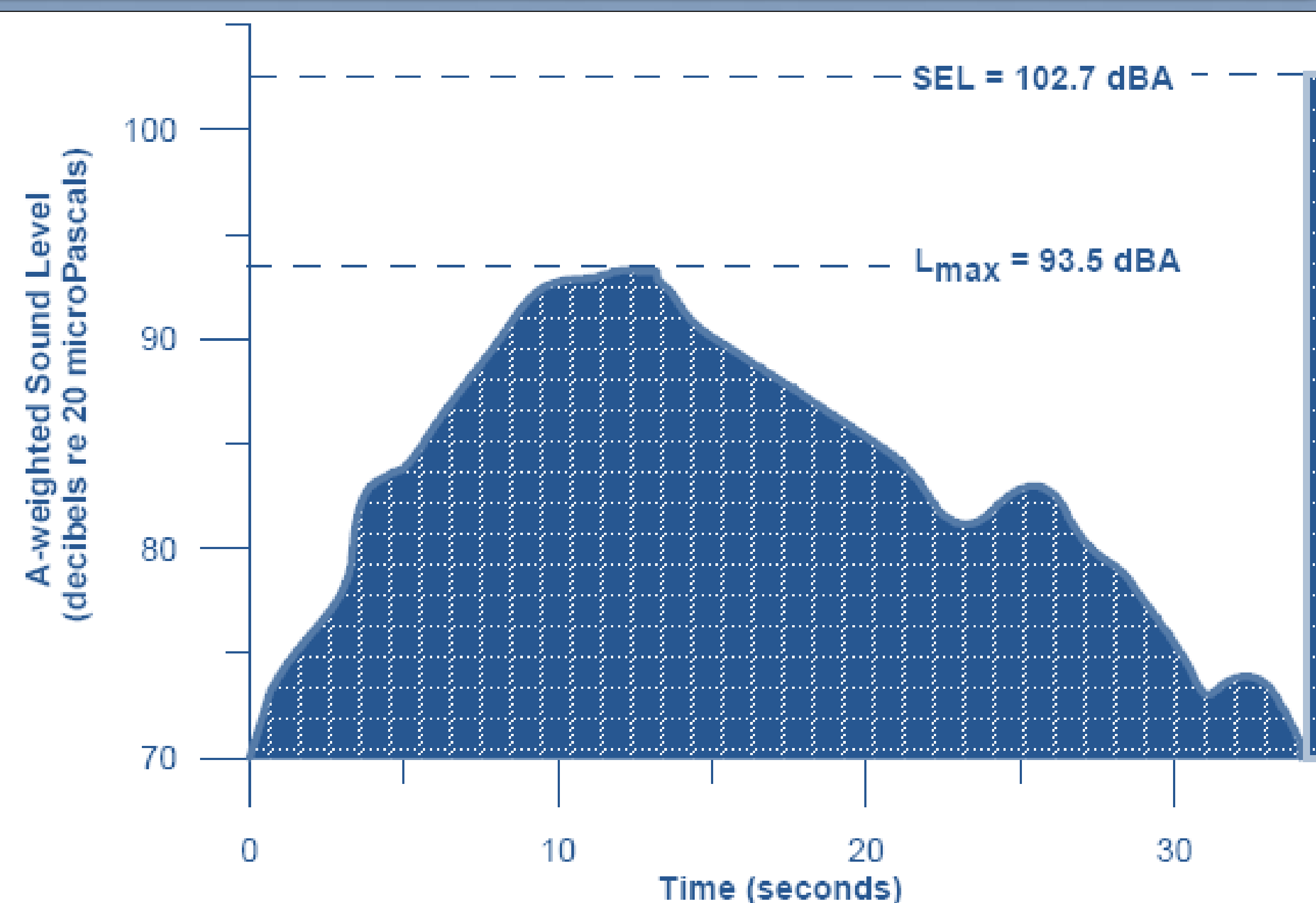
Sound is logarithmic.

It is measured in Decibels (dB)

Adding noise levels: 70 dB + 70 dB = 73 dB

Normal conversation = 60 to 65 dB

Profile of Typical Aircraft Event



Comparison of Typical Sounds

