Progress on a Model Community Noise Ordinance Standard

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American National Standards Institute (ANSI)

- **Accredited Standards Committee**
  S-12, Noise
  P. Schomer - Chair
  R. Hellweg - vice-Chair
- **Working Group (WG) 41**
- **B. Brooks, L. Finegold – co-Chairs**
- **Given task to develop a *model community noise ordinance***

Model Community Noise Ordinance

Purpose:

Provide local authorities a basis for developing:

- **noise ordinance**
- **zoning performance standard**

Gives local communities a technical basis for being able to manage local sound environment

Model Community Noise Ordinance

- **Should be suitable for all types of communities**
  - **Urban**
  - **Suburban**
  - **Rural**
- **Can be tailored for local circumstances**

Model Community Noise Ordinance

Local noise ordinances generally follow policy of:

Source noise emission control

Why?

- **Common law system provides means to control individual or corporate behavior**
- **Individual property rights**

Model Community Noise Ordinance

Four steps to developing an effective local noise ordinance

- **Identify local official as focal point**
- **Determine local needs & issues (e.g., number & type of complaints – community input)**
- **Establish procedures for selecting noise control measures (i.e., a plan of action)**
- **Adopt, implement & enforce ordinance**

Enforcement will be crucial to success

Model Community Noise Ordinance

- **Should address**
  - **Acoustical metrics**
  - **Assessment criteria**
  - **Enforcement methodology**

Model Community Noise Ordinance

Variety of available metrics:

- **Single value (ANSI S1.1 and S12.9, Parts 1-6)**
  - L_{AS}
  - L_{Adn}
  - L_{AE}
  - L_{apk}
  - L_{An} (n= 10, 50, 90)
- **frequency weighting, time weighting, averaging period**

Model Community Noise Ordinance

Variety of available metrics:

- **Spectral properties**
  - **Octave band levels**
  - **1/3 Octave band levels**
  - **Prominent tones**
  - **SIL**

Model Community Noise Ordinance

Available *assessment criteria*:

1 Absolute level limits

2 Relative level limits

Emitter level above background level

(subject to definition)

Model Community Noise Ordinance

First draft model ordinance:

- **Property Line Noise Limits**
- **Slow time weighting**
- **Short time average (1 sec) Leq**
- **Metrics:**
  1. **A-weighted SPL**
  2. **dB(A) & C minus A levels**
  3. **Octave Band (OB) levels**

Model Community Noise Ordinance

Assessment Criteria:

- **Absolute limits:**
  - **Daytime level limits**
  - **Nighttime level limits**
  - **Impulse level limits**
  - **Limit adjustment for tones**

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Assessment Criteria:

Relative limits

‘high background’ level limits

Model Community Noise Ordinance

Assessment Criteria:

Limits at property line based on *Land Use* of receptor and emitter

1 Residential

2 Commercial

3 Industrial

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Noise Limits: Residential receptor

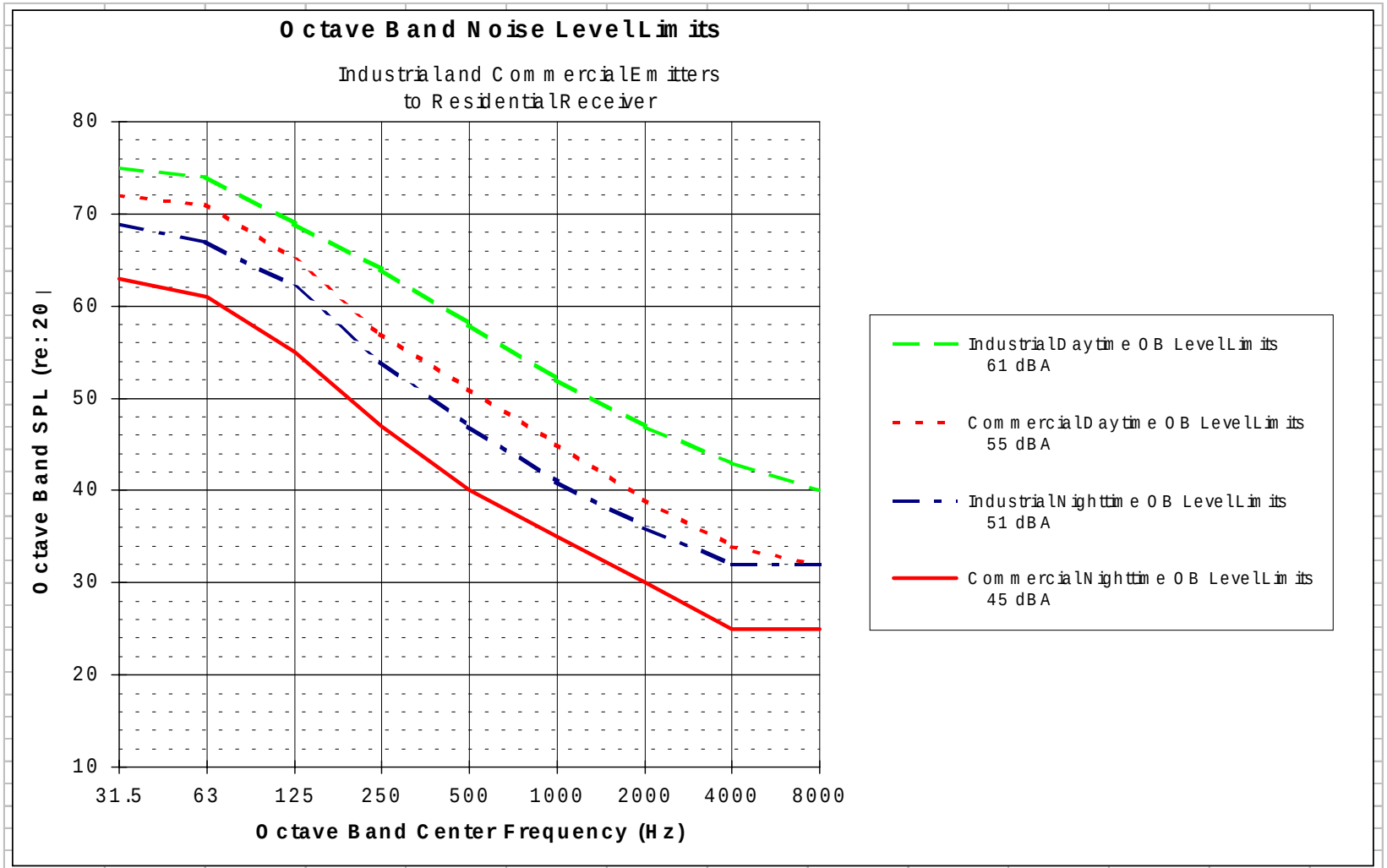
Industrial emitter

Daytime limit	61 dBA
Nighttime limit	51 dBA

Commercial emitter

Daytime limit	55 dBA
Nighttime limit	45 dBA

Model Community Noise Ordinance



Model Community Noise Ordinance

Limit on: C minus A levels

19 dB

Model Community Noise Ordinance

C-wt Limits: Residential receptor

Industrial emitter

Daytime limit	**80 dBC**
Nighttime limit	**70 dBC**

Commercial emitter

Daytime limit	**74 dBC**
Nighttime limit	**64 dBC**

Model Community Noise Ordinance

Issues yet to be addressed include:

- Will only emission limits adequately protect citizens? How can emission limits be integrated with immission limits?

- How can a local noise ordinance be integrated into a larger Community Based Environmental Protection (CBEP) Program?

Conclusions

Final version expected to be available by mid - 2002

Will provide a model that can be tailored - useful to all communities

Supplements local technical expertise

Can be linked to other local noise control programs (Community Based Environmental Protection)

Provides model ordinance which is *objective* and *fair to all*