I'm Sorry, I Can't Hear You!

--- City of Denver

The NOISE CYCLE

EVENT HAPPENS
   Festival Designation (80 dbA allowed)
   No Actue Notification to Residents

It's LOUD! At my house!

Don’t Like it?
   LEAVE until it’s over
   FUME and do nothing
   COMPLAIN - 311, email, phone call

It's OVER - NO VIOLATIONS Recorded

REPEAT through the Noisy Season
What is LOUD?

The noise produced by a rock concert on average measures between 108 and 114 decibels — about as loud as the inside of a steel mill and louder than a jackhammer. By comparison, a normal conversation is about 60 decibels, an interstate highway measures 76 decibels and a baby's cry comes in at 115 decibels. A noise begins to cause pain to the ear between 115 and 140 decibels, and prolonged exposure to noise in excess of 85 decibels can cause hearing loss.

----- Bangor Daily News, May 12, 2015

Talking loud is 80 dB


Sec. 36-1. Purpose.

This chapter is enacted to protect, preserve and promote the health, safety, welfare, peace and quiet for the citizens of the city through the reduction, control, and prevention of noise. This chapter establishes standards intended to eliminate and reduce unnecessary and excessive motor vehicle and community noises that are physically harmful and otherwise detrimental to individuals and the community in the enjoyment of life and property and to the conduct of business.

Sec. 36-2. Definitions.

(10.5) Festival, for this [sic] purpose of this chapter, means cultural, athletic, educational, charitable, or civic events (including those with entertainment) provided the event does not exceed four days, is not part of a series of two (2) or more separate events in the same vicinity, is open to the general public, a permit for street closure or occupancy is obtained, and a license is, or licenses are, obtained to serve food, beverage, or liquor.

Sec. 36-4. Inspections.

(a) For the purpose of determining compliance with the provisions of this chapter, the manager of environmental health and the chief of police or their authorized representatives are hereby authorized to make inspections of all noise sources and to take measurements and tests whenever necessary to determine the quantity and character of noise.
### Denver Law: Allowable Sound Pressure Levels in dBA

<table>
<thead>
<tr>
<th>Source (who is making the noise)</th>
<th>Residential</th>
<th>Commercial</th>
<th>Industrial</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM-10PM</td>
<td>10PM-7AM</td>
<td>7AM-10PM</td>
<td>10PM-2AM</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>53</td>
<td>65</td>
<td>60</td>
</tr>
<tr>
<td>Commercial</td>
<td>55</td>
<td>60</td>
<td>80</td>
<td>75</td>
</tr>
<tr>
<td>Industrial</td>
<td>65</td>
<td>60</td>
<td>80</td>
<td>75</td>
</tr>
<tr>
<td>Public</td>
<td>45</td>
<td>45</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Festival</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* For festivals and associated activities, between the hours of 8:00 a.m. and 10:00 p.m., production, re-production, or amplification of sound may not exceed a sound pressure level of 75 dBA when measured from the nearest residential receptors.

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A band cutout bass - less nerve damage

Low frequencies travel further

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**dbA Measure Subtracts Sound**

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*a Image credit: Engineering Interfax*
Enforcement

Model is complaint-driven. Doesn't work for events
DPD does not "do noise" unless you're willing to file
a criminal complaint (neighbor, repetitive)
No data collection or analysis (311)
dBA vs. dBc. Denver code does not include limits/
measurements in the range that cause problems

Citizen Engagement

Chive Fest (August, 2014) Riot Fest (Sept, 2014) - meetings,
letters, complaints
INC Resolution on Revising Ordinance to include full
spectrum measures (dBc) (Sept, 2014)
Meeting with EH, Mayor's representative (Nov, 2014)
--- No response.
2015: the Noise Cycle begins in City Park with the Colfax
Marathon
What is City Policy?

- Noise from park events affects neighborhood residents
- 10+ year Denver policy to promote “activation” of parks
- ABE policy encourages loud commercial activity, use of public assets (parks) for private profit
- Office of Special Events created to facilitate events
- Are parks venues?

What about Office of Special Events?

- Their role is to facilitate events
- No role in policy or enforcement
- Holding post-mortem meetings on an event-by-event basis to assist promoters in improving their events
- Planning to produce an event calendar
What could help?

Noise limits to reflect dBc range - requires City Council to change ordinance

311 to produce & post meaningful reports to encourage reporting/engagement

Active notification of events

Require event planners to pay for noise measurement & enforcement

Model noise planning & enforcement on zoning, a la Portland, Oregon

Vuvu Fest?

<table>
<thead>
<tr>
<th>Noise Source</th>
<th>Decibel Level</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet take-off (at 25 meters)</td>
<td>150</td>
<td>Eardrum rupture</td>
</tr>
<tr>
<td>Aircraft carrier deck</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>Military jet aircraft take-off from aircraft carrier with afterburner at 50 ft (130 dB)</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Thunderclap, chain saw, Oxygen torch (121 dB)</td>
<td>120</td>
<td>Painful. 32 times as loud as 70 dB</td>
</tr>
<tr>
<td>Steel mill, auto horn at 1 meter, Turbo-fan aircraft takeoff at 200 ft (118 dB), Riveting machine (110 dB)</td>
<td>110</td>
<td>Average human pain threshold 1.6 times as loud as 70 dB</td>
</tr>
<tr>
<td>Jet take-off (at 305 meters), use of outboard motor, power lawn mower, motorcycle, farm tractor, jackhammer, garbage truck</td>
<td>100</td>
<td>8 times as loud as 70 dB</td>
</tr>
<tr>
<td>Boeing 707 or DC-8 aircraft at one nautical mile (6080 ft) before landing (105 dB), jet flyover at 1000 ft (103 dB), Bell J-2A helicopter at 100 ft (100 dB)</td>
<td>90</td>
<td>Serious damage possible in 6 hr exposure</td>
</tr>
<tr>
<td>Boeing 737 or DC-9 aircraft at one nautical mile (6380 ft) before landing (97 dB), power mower (96 dB), motorcycle at 25 ft (90 dB), newspaper press (97 dB), Garbage disposal, dishwasher, average factory, freight train (at 15 meters), Car wash at 20 ft (89 dB), propeller plane flyover at 1000 ft (88 dB), diesel truck 40 mph at 50 ft (84 dB), diesel train at 45 mph at 100 ft (83 dB), Food blender (88 dB), riveting machine (86 dB), garbage disposal (80 dB)</td>
<td>80</td>
<td>4 times as loud as 70 dB. Likely damage 8 hr exp</td>
</tr>
<tr>
<td>Passenger car at 65 mph at 25 ft (77 dB), freeway at 50 ft from pavement edge 10 a.m. (76 dB), Living room music (76 dB), radio or TV-audio, vacuum cleaner (76 dB)</td>
<td>70</td>
<td>2 times as loud as 70 dB. Possible damage in 8 h exposure</td>
</tr>
<tr>
<td>Conversation in restaurant, office, background music, Air conditioning unit at 100 ft</td>
<td>60</td>
<td>Arbitrary base of comparison. Upper 70s are annoyingly loud to some people.</td>
</tr>
<tr>
<td>Quiet suburb, conversation at home, Large electrical transformers at 100 ft</td>
<td>50</td>
<td>Half as loud as 70 dB. Fairly quiet</td>
</tr>
<tr>
<td>Library, braided wire (44 dB), lowest unit of urban ambient sound</td>
<td>40</td>
<td>One-fourth as loud as 70 dB</td>
</tr>
<tr>
<td>Quiet rural area</td>
<td>30</td>
<td>One-eighth as loud as 70 dB</td>
</tr>
<tr>
<td>Whisper, rustling leaves</td>
<td>20</td>
<td>One-sixteenth as loud as 70 dB</td>
</tr>
<tr>
<td>Breathing</td>
<td>10</td>
<td>Very Quiet</td>
</tr>
<tr>
<td>Barely audible</td>
<td>10</td>
<td></td>
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</tbody>
</table>