



## 99TH GENERAL ASSEMBLY

### State of Illinois

2015 and 2016

HB3657

by Rep. Christine Winger

#### SYNOPSIS AS INTRODUCED:

620 ILCS 35/5  
620 ILCS 35/15

from Ch. 15 1/2, par. 755  
from Ch. 15 1/2, par. 765

Amends the Permanent Noise Monitoring Act. Deletes the definition of "Ldn". Defines "Annual community noise equivalent level" or "annual CNEL", "daily community noise equivalent level" or "CNEL", "noise exposure level", and "noise level". Requires permanent noise monitoring reports to include noise contour maps showing the 65 CNEL, 70 CNEL, and 75 CNEL zones (instead of "65 Ldn, 70 Ldn and 75 Ldn zones") around the airport. Makes corresponding changes.

LRB099 08667 MRW 28833 b

1 AN ACT concerning transportation.

2 **Be it enacted by the People of the State of Illinois,**  
3 **represented in the General Assembly:**

4 Section 5. The Permanent Noise Monitoring Act is amended by  
5 changing Sections 5 and 15 as follows:

6 (620 ILCS 35/5) (from Ch. 15 1/2, par. 755)

7 Sec. 5. Definitions. As used in this Act:

8 (a) "Airport" means an airport, as defined in Section 6 of  
9 the Illinois Aeronautics Act, that has more than 500,000  
10 aircraft operations (take-offs and landings) per year.

11 (a-1) "Airport sponsor" means any municipality, as defined  
12 in Section 20 of the Illinois Aeronautics Act, that can own and  
13 operate an airport.

14 (a-3) "Annual community noise equivalent level" or "annual  
15 CNEL" means the average sound level (on an energy basis), in  
16 decibels, of the daily community noise equivalent level over a  
17 12-month period. The annual CNEL is calculated by the  
18 following:

19 Annual CNEL = 10 log<sub>10</sub>[ (1/365) SIGMA antilog (CNEL(i)/10)]

20 Where:

21 (1) CNEL(i) = the daily CNEL for each day in a

1 continuous 12-month period; and

2 (2) SIGMA means summation.

3 When the annual CNEL is approximated by measurements on a  
4 statistical basis, the number 365 is replaced by the number of  
5 days for which measurements are obtained.

6 (a-5) "Daily community noise equivalent level" or "CNEL"  
7 means the 24-hour day average sound level, in decibels,  
8 adjusted to an equivalent level to account for the lower  
9 tolerance of people to noise during evening and night time  
10 periods relative to the daytime period. The daily community  
11 noise equivalent level is calculated from the hourly noise  
12 levels by the following:

13  $CNEL = 10 \log (1/24) [ \text{SIGMA antilog} (HNL D/10) + 3 \text{ SIGMA antilog}$   
14  $(HNLE/10) + 10 \text{ SIGMA antilog} (HNLN/10) ]$

15 Where:

16 (1) HNL D means the hourly noise levels for the period  
17 7:00 a.m. through 6:59 p.m.;

18 (2) HNLE means the hourly noise levels for the period  
19 7:00 p.m. through 9:59 p.m.;

20 (3) HNLN means the hourly noise levels for the period  
21 10:00 p.m. through 6:59 a.m.; and

22 (4) SIGMA means summation.

23 (a-8) "Noise exposure level" means the level, in decibels,  
24 of the time-integrated A-weighted squared sound pressure for a

1 stated time interval or event, based on the reference pressure  
2 of 20 micronewtons per square meter and reference duration of  
3 one second.

4 (a-9) "Noise level" means the sound level measure, in  
5 decibels, of an A-weighted sound pressure level as measured  
6 using the slow dynamic characteristic for sound level meters  
7 specified in American National Standard Specification for  
8 Sound Level Meters (ANSI S1.4-1983 as revised by ANSI  
9 S1.4A-1985), which is hereby incorporated by reference. The  
10 A-weighting characteristic modifies the frequency response of  
11 the measuring instrument to account approximately for the  
12 frequency characteristics of the human ear. The reference  
13 pressure is 20 micronewtons/square meter ( $2 \times 10^{-4}$  microbar).

14 (b) "Permanent noise monitoring system" or "system" means a  
15 system that includes at least:

16 (1) automated noise monitors capable of recording  
17 noise levels 24 hours per day 365 days per year; and

18 (2) computer equipment sufficient to process the data  
19 from each noise monitor so that permanent noise monitoring  
20 reports in accordance with Section 15 of this Act can be  
21 generated.

22 (c) "Division" means the Division of Aeronautics of the  
23 Illinois Department of Transportation.

24 (d) ~~(Blank). "Ldn" means day night average sound level.~~  
25 ~~"Day night average sound level" has the meaning ascribed to it~~  
26 ~~in Section 150.7 of Part 150 of Title 14 of the Code of Federal~~

1 ~~Regulations.~~

2 (Source: P.A. 96-37, eff. 7-13-09.)

3 (620 ILCS 35/15) (from Ch. 15 1/2, par. 765)

4 Sec. 15. Permanent noise monitoring reports. Beginning in  
5 1993 and through 2008, the Division shall, on June 30th and  
6 December 31st of each year, prepare a permanent noise  
7 monitoring report and make the report available to the public.  
8 Beginning in 2009, the airport sponsor shall, on June 30th and  
9 December 31st of each year, prepare a permanent noise  
10 monitoring report and make the report available to the public.  
11 Copies of the report shall be submitted to: the Office of the  
12 Governor; the Office of the President of the Senate; the Office  
13 of the Senate Minority Leader; the Office of the Speaker of the  
14 House; the Office of the House Minority Leader; the United  
15 States Environmental Protection Agency, Region V; and the  
16 Illinois Environmental Protection Agency. Beginning in 2009, a  
17 copy of the report shall also be submitted to the division. The  
18 permanent noise monitoring report shall contain all of the  
19 following:

20 (a) Copies of the actual data collected by each permanent  
21 noise monitor in the system.

22 (b) A summary of the data collected by each permanent noise  
23 monitor in the system, showing the data organized by:

24 (1) day of the week;

25 (2) time of day;

- 1 (3) week of the year;
- 2 (4) type of aircraft; and
- 3 (5) the single highest noise event recorded at each
- 4 monitor.

5 (c) Noise contour maps showing the 65 annual CNEL ~~Ldn~~, 70  
6 annual CNEL ~~Ldn~~ and 75 annual CNEL ~~Ldn~~ zones around the  
7 airport.

8 (d) Noise contour maps showing the 65 decibel (dBA), 70  
9 dBA, and 75 dBA zones around the airport for:

- 10 (1) 7:00 a.m. through 6:59 ~~to 10:00~~ p.m.;
- 11 (1.5) 7:00 p.m. through 9:59 p.m.;
- 12 (2) 10:00 p.m. through 6:59 ~~to 7:00~~ a.m.; and
- 13 (3) types of aircraft.

14 (e) The noise contour maps produced under subsections (c)  
15 and (d) shall also indicate:

- 16 (1) residential areas (single and multi-family);
- 17 (2) schools;
- 18 (3) hospitals and nursing homes;
- 19 (4) recreational areas, including but not limited to
- 20 parks and forest preserves;
- 21 (5) commercial areas;
- 22 (6) industrial areas;
- 23 (7) the boundary of the airport;
- 24 (8) the number of residences (single and multi-family)
- 25 within each contour;
- 26 (9) the number of residents within each contour;

1 (10) the number of schools within each contour; and

2 (11) the number of school students within each contour.

3 (f) Through 2008, a certification by the Division that the  
4 system was in proper working order during the period or, if it  
5 was not, a specific description of any and all problems with  
6 the System during the period.

7 (g) Beginning in 2009, a certification by the airport  
8 sponsor that the system was in proper working order during the  
9 period or, if it was not, a specific description of any and all  
10 problems with the system during the period.

11 (Source: P.A. 96-37, eff. 7-13-09.)