



101ST GENERAL ASSEMBLY

State of Illinois

2019 and 2020

HB5520

by Rep. Bradley Stephens

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. Provides that "noise annoyance levels" means levels derived from data compiled using the noise annoyance protocol proposed by members of the International Commission on Biological Effects of Noise and adopted by ISO TS 15666. Provides that the cited document is incorporated into the Act by reference. Makes a conforming change.

LRB101 18230 LNS 70238 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
$$\text{Annual CNEL} = 10 \log_{10}[(1/365) \text{SIGMA antilog} (\text{CNEL}(i)/10)]$$

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

14
$$(\text{HNLE}/10) + 10 \text{ SIGMA antilog} (\text{HNLN}/10)]$$

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-7) "Noise annoyance levels" means levels derived from
24 data compiled using the noise annoyance protocol proposed by

1 members of the International Commission on Biological Effects
2 of Noise and adopted by ISO TS 15666, which is hereby
3 incorporated by reference.

4 (a-8) "Noise exposure level" means the level, in decibels,
5 of the time-integrated A-weighted squared sound pressure for a
6 stated time interval or event, based on the reference pressure
7 of 20 micronewtons per square meter and reference duration of
8 one second.

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

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

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

23 (2) computer equipment sufficient to process the data
24 from each noise monitor so that permanent noise monitoring
25 reports in accordance with Section 15 of this Act can be
26 generated.

1 (c) "Division" means the Division of Aeronautics of the
2 Illinois Department of Transportation.

3 (d) (Blank).

4 (Source: P.A. 99-202, eff. 1-1-16.)

5 (620 ILCS 35/15) (from Ch. 15 1/2, par. 765)

6 Sec. 15. Permanent noise monitoring reports. Beginning in
7 1993 and through 2008, the Division shall, on June 30th and
8 December 31st of each year, prepare a permanent noise
9 monitoring report and make the report available to the public.
10 Beginning in 2009, the airport sponsor shall, on June 30th and
11 December 31st of each year, prepare a permanent noise
12 monitoring report and make the report available to the public.
13 Copies of the report shall be submitted to: the Office of the
14 Governor; the Office of the President of the Senate; the Office
15 of the Senate Minority Leader; the Office of the Speaker of the
16 House; the Office of the House Minority Leader; the United
17 States Environmental Protection Agency, Region V; and the
18 Illinois Environmental Protection Agency. Beginning in 2009, a
19 copy of the report shall also be submitted to the division.
20 Beginning in 2021, the permanent noise monitoring report shall
21 track noise annoyance levels as defined in subsection (a-7) of
22 Section 5. The permanent noise monitoring report shall contain
23 all of the following:

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

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

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

9 (c) Noise contour maps showing the 65 annual CNEL, 70
10 annual CNEL and 75 annual CNEL zones around the airport.

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

- 13 (1) 7:00 a.m. through 6:59 p.m.;
14 (1.5) 7:00 p.m. through 9:59 p.m.;
15 (2) 10:00 p.m. through 6:59 a.m.; and
16 (3) types of aircraft.

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

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

1 (8) the number of residences (single and multi-family)
2 within each contour;

3 (9) the number of residents within each contour;

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

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

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

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

14 (Source: P.A. 99-202, eff. 1-1-16.)