

Holmdel Noise Ordinance

3-1.1 Definitions

The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise. Terms not defined in this section have the same meaning as those defined in N.J.A.C. 7:29.

Construction shall mean any site preparation, assembly, erection, repair, alteration or similar action, including demolition of buildings or structures.

Demolition shall mean any dismantling, destruction or removal of buildings, structures, or roadways.

Department shall mean the New Jersey Department of Environmental Protection.

Emergency work shall mean any work or action necessary to deliver essential public services including, but not limited to, repairing water, gas, electricity, telephone, sewer facilities, or public transportation facilities, removing fallen trees on public rights-of-way, dredging navigational waterways, or abating life-threatening conditions.

Impulsive sound shall mean either a single pressure peak or a single burst (multiple pressure peaks) that has a duration of less than one second.

Motor vehicle shall mean any vehicle that is propelled other than by human or animal power on land.

Muffler shall mean a properly functioning sound dissipative device or system for abating the sound of escaping gasses on equipment where such a device is part of the normal configuration of the equipment.

Multi-dwelling unit building shall mean any building comprising two (2) or more dwelling units, including, but not limited to apartments, condominiums, co-ops, multiple family houses, townhouses, and attached residences.

Multi-use property shall mean any distinct parcel of land that is used for more than one (1) category of activity. Examples include, but are not limited to:

1. A commercial, residential, industrial or public service property having boilers, incinerators, elevators, automatic garage doors, air conditioners, laundry rooms, utility provisions, or health and recreational facilities, or other similar devices or areas, either in the interior or on the exterior of the building, which may be source of elevated sound levels at another category on the same distinct parcel of land; or
2. A building which is both commercial (usually on the ground floor) and residential property located above, behind, below or adjacent.

Holmdel Noise Ordinance

Noise control officer shall mean an employee of: (1) a local, County or regional health agency which is certified pursuant to the County Environmental Health Act (N.J.S.A. 26:3A2-21 et seq.) to perform noise enforcement activities; or (2) a municipality with a Department approved noise control ordinance and the employee has received noise enforcement training and is currently certified in noise enforcement. The employee must be acting within his or her designated jurisdiction and must be authorized to issue a summons in order to be considered a noise control officer.

Plainly audible shall mean any sound that can be detected by a person using his or her unaided hearing faculties. As an example, if the sound source under investigation is a portable or personal vehicular sound amplification or reproduction device, the detection of the rhythmic bass component of the music is sufficient to verify plainly audible sound. The noise control officer need not determine the title, specific words, or the artist performing the song.

Private right-of-way shall mean any street, avenue, boulevard, road, highway, sidewalk, alley or easement that is owned, leased, or controlled by a non-governmental entity.

Public right-of-way shall mean any street, avenue, boulevard, road, highway, sidewalk, alley or easement that is owned, leased, or controlled by a governmental entity.

Public space shall mean any real property or structures thereon that are owned, leased, or controlled by a governmental entity.

Real property line shall mean either (a) the imaginary line including its vertical extension that separates one (1) parcel of real property from another; (b) the vertical and horizontal boundaries of a dwelling unit that is part of a multi-dwelling unit building; or (c) on a multi-use property, the interface between the two (2) portions of the property on which different categories of activity are being performed (e.g., if the multi-use property is a building which is residential upstairs and commercial downstairs, then the real property line would be the interface between the residential area and the commercial area).

Weekday shall mean any day that is not a Federal holiday, and beginning on Monday at 7:00 a.m. and ending on the following Friday at 6:00p.m.

Weekends shall mean beginning on Friday at 6:00 p.m. and ending on the following Monday at 7:00 a.m.

(Ord. No. 97-31 § I)

3-1.2 Applicability.

This model noise ordinance applies to sound from the following property categories:

- a. Industrial facilities;
- b. Commercial facilities;

Holmdel Noise Ordinance

- c. Public service facilities;
- d. Community service facilities;
- e. Residential properties;
- f. Multi-use properties;
- g. Public and private rights-of-way;
- h. Public spaces; and
- i. Multi-dwelling unit buildings.

This model noise ordinance applies to sound received at the following property categories:

- a. Commercial facilities;
- b. Public service facilities;
- c. Community service facilities;
- d. Residential properties;
- e. Multi-use properties; and
- f. Multi-dwelling unit buildings.

c. Sound from stationary emergency signaling devices shall be regulated in accordance with N.J.A.C. 7:29-1.3, except that the testing of the electromechanical functioning of a stationary emergency signaling device shall not meet or exceed ten (10) seconds.

(Ord. No. 97-31 § I)

3-1.3 Declaration of Findings and Policy. Whereas excessive sound is a serious hazard to the public health, welfare, safety, and the quality of life; and, whereas a substantial body of science and technology exists by which excessive sound may be substantially abated; and, whereas the people have a right to, and should be ensured of, an environment free from excessive sound,

Now therefore, it is the policy of the Township to prevent excessive sound that may jeopardize the health, welfare, or safety of the citizens or degrade the quality of life.

This section shall apply to the control of sound originating from sources within the Township.

(Ord. No 97-31 § I)

3-1.4 Noise Control officers.

a. The provisions of this section shall be enforced by noise control officers. A person shall be qualified to be a noise control officer if the person meets the criteria set forth in the definition above and completes, at a frequency specified by the Department in N.J.A.C. 7:29-2.11, a noise certification and re-certification course which are offered by the Department of Environmental Sciences of Cook College, Rutgers, the State University of New Jersey or any other noise certification or re-certification course which is offered by an accredited university and approved by the Department.

Holmdel Noise Ordinance

b. Sound measurements made by a noise control officer shall conform to the procedures set forth at N.J.A.C. 7:29-2, except that interior sound level measurements shall also conform with the procedures set forth in subsection 3-1.5b. and c. of this regulation and with the definition of “real property line” as contained herein.

Noise control officers shall have the power to:

1. Coordinate the noise control activities of all departments in the Township and cooperate with all other public bodies and agencies to the extent practicable;
2. Review the actions of the Township and advise of the effect, if any, of such actions on noise control;
3. Review public and private projects, subject to mandatory review or approval by other departments or boards, for compliance with this section; and
4. Investigate and pursue possible violations of this section for sound levels which equal or exceed the sound levels set forth in Tables I and II, when measured at a receiving property located within the designated jurisdiction of the noise control officer, in accordance with subsection 3-1.7 below.
5. Cooperate with noise control officers of adjacent municipalities in enforcing on another’s municipal noise ordinances.

(Ord. No. 97-31 § I)

3-1.5 Maximum Permissible Sound Levels.

a. No person shall cause, suffer, allow, or permit the operation of any source of sound on any source property listed in subsection 3-1.2a. above in such a manner as to create a sound level that equals or exceeds the sound level limits set forth in Tables I and II when measured at or within the real property line of any of the receiving properties listed in Tables I and II, except as specified in paragraph b. below. *

b. When measuring total sound or residual sound within a multi-use property, or within a residential unit when the property line between it and the source property is a common wall, all exterior doors and windows shall be closed and the measurements shall be taken in the center of the room most affected by the noise. Residual sound shall be measured in accordance with N.J.A.C. 7:29-2.9(b) 2. When measuring total sound or residual sound, all sound sources within the dwelling unit must be shut off (e.g., television, stereo). Measurements shall not be taken in areas, which receive only casual use such as hallways, closets and bathrooms.

c. Indoor measurements shall only be taken if the sound source is on or within the same property as the receiving property, as in the case of a multi-use property (e.g., sound generated within a commercial unit of a multi-use property building and received within a residential unit of the

Holmdel Noise Ordinance

same building) or multi-dwelling unit building. In addition, indoor measurements shall be taken if the property line between the receiving property and the source property is a common wall, such as in a multi-dwelling building. The allowable sound level standards for indoors are as shown in Tables II and I. *

d. Impulsive Sound. Between 7:00 a.m. and 10:00 p.m., impulsive sound shall not equal or exceed 80 decibels. Between 10:00 p.m. and 7:00 a.m., impulsive sound which occurs less than four times in any hour shall not equal or exceed 80 decibels. Impulsive sound which repeats four or more times in any hour shall be measured as impulsive sound and shall meet the requirements as shown in Table I. *

(Ord. No. 97-31 § I)

3-1.6 Restricted Use and Activities.

a. 1. Except as provided in paragraph b. below, the provisions of this ordinance shall not apply to the exceptions listed at N.J.A.C. 7:29-1.4.

2. Construction and demolition activities are exempt from the sound level limits set forth in Tables I and II, except as provided in paragraph b. below.

b. Notwithstanding the provisions of Tables I and II, the following standards shall apply to the activities or sources of sound set forth below:

1. Noncommercial or nonindustrial power tools and landscaping and yard maintenance equipment shall not be operated between the hours of 8:00 p.m. and 8:00 a.m., unless such activities can meet the applicable limits set forth in Tables I and II. All motorized equipment used in these activities shall be operated with a muffler. At all other times, the limits set forth in Tables II and II do not apply to noncommercial or nonindustrial power tools and landscaping and yard maintenance equipment; *

2. Commercial or industrial power tools and landscaping and yard maintenance equipment, excluding emergency work, shall not be operated on a residential property or within two hundred fifty (250) feet of a residential property line when operated on commercial or industrial property, between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, or between the hours of 6:00 p.m. and 9:00 a.m. on weekends or federal holidays, unless such activities can meet the limits set forth in Tables I and II. In addition, commercial or industrial power tools and landscaping and yard maintenance equipment, excluding emergency work, utilized on commercial or industrial property shall meet the limits set forth in Tables I and II between the hours of 10:00 p.m. and 7:00 a.m. All motorized equipment used in these activities shall be operated with a muffler. At all other times, the limits set forth in Tables I and II do not apply to commercial or industrial power tools and landscaping and yard maintenance equipment; *

3. Construction and demolition activity, excluding emergency work, shall not be performed between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, or between the hours of 6:00 p.m.

Holmdel Noise Ordinance

and 9:00 a.m. on weekends and federal holidays, unless such activities can meet the limits set forth in Tables I and II. All motorized equipment used in construction and demolition activity shall be operated with a muffler. At all other times, the limits set forth in Tables I and II do not apply to construction and demolition activities; *

4. Motorized snow blowers, snow throwers, and lawn equipment with attached snow plows shall be operated at all times with a muffler;

5. An exterior burglar alarm of a building or motor vehicle must be activated in such a manner that the burglar alarm terminates its operation within five (5) minutes for continuous airborne sound and fifteen (15) minutes for impulsive sound after it has been activated;

6. Personal or commercial vehicular music amplification or reproduction equipment shall not be operated in such a manner that it is plainly audible at a residential property line between the hours of 10:00 p.m. and 8:00 a.m.;

7. Personal vehicular music amplification equipment shall not be operated in such a manner as to be plainly audible at a distance of fifty (50) feet in any direction from the operator between the hours of 8:00 a.m. and 10:00 p.m.;

8. Self-contained, portable, hand-held music or sound amplification or reproduction equipment shall not be operated on a public space or public right-of-way in such a manner as to be plainly audible at a distance of fifty (50) feet in any direction from the operator between the hours of 8:00 a.m. and 10:00 p.m. Between the hours of 10:00 p.m. and 8:00 a.m., sound from such equipment shall not be plainly audible by any person other than the operator;

9. Sound levels exceeding the limits set forth in Table I shall be prohibited between residential units within the same multi-dwelling unit building. Measurements shall be taken indoors as per subsection 3-1.5b and c.

(Ord. No. 97-31 § I)

3-1.7 Enforcement.

a. Violation of any provision of this section shall be cause for an enforcement document to be issued to the violator by the noise control officer according to procedures set forth at N.J.A.C. 7:29-1.6. The recipient of an enforcement document shall be entitled to a hearing in Municipal Court having jurisdiction to contest such action.

b. Any person who violates any provision of this section shall be subject to a civil penalty for each offense of not more than three thousand (\$3,000.00) dollars. If the violation is of a continuing nature, each day during which it occurs shall constitute an additional, separate, and distinct offense.

Holmdel Noise Ordinance

c. No provision of this section shall be construed to impair any common law or statutory cause of action, or legal remedy therefrom, of any person for injury or damage arising from any violation of this section or from other law.

(Ord. No. 97-31 § I)

TABLE I

MAXIMUM PERMISSIBLE A –WEIGHTED SOUND LEVELS

1. No person shall cause, suffer, allow, or permit the operation of any source of sound on any source property listed in subsection 3-1.2a. above in such a manner as to create a sound level that equals or exceeds the sound levels listed below.

(a) Outdoors

RECEIVING PROPERTY CATEGORY	Residential property, or residential portion of a multi-use property		Commercial facility, public service facility, non-residential portion of a multi-use property, or community service facility
TIME	7 a.m. – 10 p.m.	10 p.m. – 7 a.m.	24 hours
MAXIMUM A-Weighted sound level standard, dB	65	50	65

(b) Indoors

RECEIVING PROPERTY CATEGORY	Residential property, or residential portion of a multi-use property		Commercial facility* or non-residential portion of a multi-use property
TIME	7 a.m. – 10 p.m.	10 p.m. – 7 a.m.	24 hours
Maximum A-Weighted sound level standard, dB	55	40	55

*In those instances when a commercial facility shares a common wall/ceiling/floor with another commercial facility that is producing the sound.

TABLE II

MAXIMUM PERMISSIBLE OCTAVE BAND

SOUND PRESSURE LEVELS IN DECIBELS

Holmdel Noise Ordinance

1. No person shall cause, suffer, allow, or permit the operation of any source of sound on any source property listed in subsection 3-1.2a. above in such a manner as to create a sound pressure level that equals or exceeds the sound levels listed below in one or more octave bands.
2. When octave measurements are made, the sound from the source must be constant in level and character. If octave band sound pressure level variations exceed plus or minus 2 dB in the bands containing the principal source frequencies, discontinue the measurement.

Receiving Property Category	Residential property, or residential portion of a multi-use property
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OUTDOORS

Residential property, or residential portion of a multi-use-property

INDOORS

Commercial facility, public service facility, non residential portion of a multi-use property, or community service facility OUTDOORS Commercial facility*, or non residential portion of a multi-use property INDOORS

Octave Band	Center Frequency, Hz.	Octave Band Sound Pressure Level, db	Octave Band Sound Pressure Level, dB	Octave Band Sound Pressure Level, dB	Time
31	1,000	60	50	2,000	7 a.m. – 10 p.m.
63	2,000	52	42	1,726	10 p.m. – 7 a.m.
125	4,000	45	35	1,257	7 a.m. – 10 p.m.
250	8,000	38	28	827	10 p.m. – 7 a.m.
500	16,000	32	22	517	24 hours
1,000	31,000	27	17	261	
2,000	63,000	22	12	182	
4,000	125,000	17	7	125	
8,000	250,000	12	2	74	
16,000	500,000	7	-3	46	
31,000	1,000,000	2	-8	16	
63,000	2,000,000	-3	-13	6	
125,000	4,000,000	-8	-18	1	
250,000	8,000,000	-13	-23	4	
500,000	16,000,000	-18	-28	0	
1,000,000	31,000,000	-23	-33	5	
2,000,000	63,000,000	-28	-38	0	
4,000,000	125,000,000	-33	-43	5	
8,000,000	250,000,000	-38	-48	0	
16,000,000	500,000,000	-43	-53	5	
31,000,000	1,000,000,000	-48	-58	0	
63,000,000	2,000,000,000	-53	-63	5	
125,000,000	4,000,000,000	-58	-68	0	
250,000,000	8,000,000,000	-63	-73	5	
500,000,000	16,000,000,000	-68	-78	0	
1,000,000,000	31,000,000,000	-73	-83	5	
2,000,000,000	63,000,000,000	-78	-88	0	
4,000,000,000	125,000,000,000	-83	-93	5	
8,000,000,000	250,000,000,000	-88	-98	0	
16,000,000,000	500,000,000,000	-93	-103	5	
31,000,000,000	1,000,000,000,000	-98	-108	0	
63,000,000,000	2,000,000,000,000	-103	-113	5	
125,000,000,000	4,000,000,000,000	-108	-118	0	
250,000,000,000	8,000,000,000,000	-113	-123	5	
500,000,000,000	16,000,000,000,000	-118	-128	0	
1,000,000,000,000	31,000,000,000,000	-123	-133	5	
2,000,000,000,000	63,000,000,000,000	-128	-138	0	
4,000,000,000,000	125,000,000,000,000	-133	-143	5	
8,000,000,000,000	250,000,000,000,000	-138	-148	0	
16,000,000,000,000	500,000,000,000,000	-143	-153	5	
31,000,000,000,000	1,000,000,000,000,000	-148	-158	0	
63,000,000,000,000	2,000,000,000,000,000	-153	-163	5	
125,000,000,000,000	4,000,000,000,000,000	-158	-168	0	
250,000,000,000,000	8,000,000,000,000,000	-163	-173	5	
500,000,000,000,000	16,000,000,000,000,000	-168	-178	0	
1,000,000,000,000,000	31,000,000,000,000,000	-173	-183	5	
2,000,000,000,000,000	63,000,000,000,000,000	-178	-188	0	
4,000,000,000,000,000	125,000,000,000,000,000	-183	-193	5	
8,000,000,000,000,000	250,000,000,000,000,000	-188	-198	0	
16,000,000,000,000,000	500,000,000,000,000,000	-193	-203	5	
31,000,000,000,000,000	1,000,000,000,000,000,000	-198	-208	0	
63,000,000,000,000,000	2,000,000,000,000,000,000	-203	-213	5	
125,000,000,000,000,000	4,000,000,000,000,000,000	-208	-218	0	
250,000,000,000,000,000	8,000,000,000,000,000,000	-213	-223	5	
500,000,000,000,000,000	16,000,000,000,000,000,000	-218	-228	0	
1,000,000,000,000,000,000	31,000,000,000,000,000,000	-223	-233	5	
2,000,000,000,000,000,000	63,000,000,000,000,000,000	-228	-238	0	
4,000,000,000,000,000,000	125,000,000,000,000,000,000	-233	-243	5	
8,000,000,000,000,000,000	250,000,000,000,000,000,000	-238	-248	0	
16,000,000,000,000,000,000	500,000,000,000,000,000,000	-243	-253	5	
31,000,000,000,000,000,000	1,000,000,000,000,000,000,000	-248	-258	0	
63,000,000,000,000,000,000	2,000,000,000,000,000,000,000	-253	-263	5	
125,000,000,000,000,000,000	4,000,000,000,000,000,000,000	-258	-268	0	
250,000,000,000,000,000,000	8,000,000,000,000,000,000,000	-263	-273	5	
500,000,000,000,000,000,000	16,000,000,000,000,000,000,000	-268	-278	0	
1,000,000,000,000,000,000,000	31,000,000,000,000,000,000,000	-273	-283	5	
2,000,000,000,000,000,000,000	63,000,000,000,000,000,000,000	-278	-288	0	
4,000,000,000,000,000,000,000	125,000,000,000,000,000,000,000	-283	-293	5	
8,000,000,000,000,000,000,000	250,000,000,000,000,000,000,000	-288	-298	0	
16,000,000,000,000,000,000,000	500,000,000,000,000,000,000,000	-293	-303	5	
31,000,000,000,000,000,000,000	1,000,000,000,000,000,000,000,000	-298	-308	0	
63,000,000,000,000,000,000,000	2,000,000,000,000,000,000,000,000	-303	-313	5	
125,000,000,000,000,000,000,000	4,000,000,000,000,000,000,000,000	-308	-318	0	
250,000,000,000,000,000,000,000	8,000,000,000,000,000,000,000,000	-313	-323	5	
500,000,000,000,000,000,000,000	16,000,000,000,000,000,000,000,000	-318	-328	0	
1,000,000,000,000,000,000,000,000	31,000,000,000,000,000,000,000,000	-323	-333	5	
2,000,000,000,000,000,000,000,000	63,000,000,000,000,000,000,000,000	-328	-338	0	
4,000,000,000,000,000,000,000,000	125,000,000,000,000,000,000,000,000	-333	-343	5	
8,000,000,000,000,000,000,000,000	250,000,000,000,000,000,000,000,000	-338	-348	0	
16,000,000,000,000,000,000,000,000	500,000,000,000,000,000,000,000,000	-343	-353	5	
31,000,000,000,000,000,000,000,000	1,000,000,000,000,000,000,000,000,000	-348	-358	0	
63,000,000,000,000,000,000,000,000	2,000,000,000,000,000,000,000,000,000	-353	-363	5	
125,000,000,000,000,000,000,000,000	4,000,000,000,000,000,000,000,000,000	-358	-368	0	
250,000,000,000,000,000,000,000,000	8,000,000,000,000,000,000,000,000,000	-363	-373	5	
500,000,000,000,000,000,000,000,000	16,000,000,000,000,000,000,000,000,000	-368	-378	0	
1,000,000,000,000,000,000,000,000,000	31,000,000,000,000,000,000,000,000,000	-373	-383	5	
2,000,000,000,000,000,000,000,000,000	63,000,000,000,000,000,000,000,000,000	-378	-388	0	
4,000,000,000,000,000,000,000,000,000	125,000,000,000,000,000,000,000,000,000	-383	-393	5	
8,000,000,000,000,000,000,000,000,000	250,000,000,000,000,000,000,000,000,000	-388	-398	0	
16,000,000,000,000,000,000,000,000,000	500,000,000,000,000,000,000,000,000,000	-393	-403	5	
31,000,000,000,000,000,000,000,000,000	1,000,000,000,000,000,000,000,000,000,000	-398	-408	0	
63,000,000,000,000,000,000,000,000,000	2,000,000,000,000,000,000,000,000,000,000	-403	-413	5	
125,000,000,000,000,000,000,000,000,000	4,000,000,000,000,000,000,000,000,000,000	-408	-418	0	
250,000,000,000,000,000,000,000,000,000	8,000,000,000,000,000,000,000,000,000,000	-413	-423	5	
500,000,000,000,000,000,000,000,000,000	16,000,000,000,000,000,000,000,000,000,000	-418	-428	0	
1,000,000,000,000,000,000,000,000,000,000	31,000,000,000,000,000,000,000,000,000,000	-423	-433	5	
2,000,000,000,000,000,000,000,000,000,000	63,000,000,000,000,000,000,000,000,000,000	-428	-438	0	
4,000,000,000,000,000,000,000,000,000,000	125,000,000,000,000,000,000,000,000,000,000	-433	-443	5	
8,000,000,000,000,000,000,000,000,000,000	250,000,000,000,000,000,000,000,000,000,000	-438	-448	0	
16,000,000,000,000,000,000,000,000,000,000	500,000,000,000,000,000,000,000,000,000,000	-443	-453	5	
31,000,000,000,000,000,000,000,000,000,000	1,000,000,000,000,000,000,000,000,000,000,000	-448	-458	0	
63,000,000,000,000,000,000,000,000,000,000	2,000,000,000,000,000,000,000,000,000,000,000	-453	-463	5	
125,000,000,000,000,000,000,000,000,000,000	4,000,000,000,000,000,000,000,000,000,000,000	-458	-468	0	
250,000,000,000,000,000,000,000,000,000,000	8,000,000,000,000,000,000,000,000,000,000,000	-463	-473	5	
500,000,000,000,000,000,000,000,000,000,000	16,000,000,000,000,000,000,000,000,000,000,000	-468	-478	0	
1,000,000,000,000,000,000,000,000,000,000,000	31,000,000,000,000,000,000,000,000,000,000,000	-473	-483	5	
2,000,000,000,000,000,000,000,000,000,000,000	63,000,000,000,000,000,000,000,000,000,000,000	-478	-488	0	
4,000,000,000,000,000,000,000,000,000,000,000	125,000,000,000,000,000,000,000,000,000,000,000	-483	-493	5	
8,000,000,000,000,000,000,000,000,000,000,000	250,000,000,000,000,000,000,000,000,000,000,000	-488	-498	0	
16,000,000,000,000,000,000,000,000,000,000,000	500,000,000,000,000,000,000,000,000,000,000,000	-493	-503	5	
31,000,000,000,000,000,000,000,000,000,000,000	1,000,000,000,000,000,000,000,000,000,000,000,000	-498	-508	0	
63,000,000,000,000,000,000,000,000,000,000,000	2,000,000,000,000,000,000,000,000,000,000,000,000	-503	-513	5	
125,000,000,000,000,000,000,000,000,000,000,000	4,000,000,000,000,000,000,000,000,000,000,000,000	-508	-518	0	
250,000,000,000,000,000,000,000,000,000,000,000	8,000,000,000,000,000,000,000,000,000,000,000,000	-513	-523	5	
500,000,000,000,000,000,000,000,000,000,000,000	16,000,000,000,000,000,000,000,000,000,000,000,000	-518	-528	0	
1,000,000,000,000,000,000,000,000,000,000,000,000	31,000,000,000,000,000,000,000,000,000,000,000,000	-523	-533	5	
2,000,000,000,000,000,000,000,000,000,000,000,000	63,000,000,000,000,000,000,000,000,000,000,000,000	-528	-538	0	
4,000,000,000,000,000,000,000,000,000,000,000,000	125,000,000,000,000,000,000,000,000,000,000,000,000	-533	-543	5	
8,000,000,000,000,000,000,000,000,000,000,000,000	250,000,000,000,000,000,000,000,000,000,000,000,000	-538	-548	0	
16,000,000,000,000,000,000,000,000,000,000,000,000	500,000,000,000,000,000,000,000,000,000,000,000,000	-543	-553	5	
31,000,000,000,000,000,000,000,000,000,000,000,000	1,000,000,000,000,000,000,000,000,000,000,000,000,000	-548	-558	0	
63,000,000,000,000,000,000,000,000,000,000,000,000	2,000,000,000,000,000,000,000,000,000,000,000,000,000	-553	-563	5	
125,000,000,000,000,000,000,000,000,000,000,000,000	4,000,000,000,000,000,000,000,000,000,000,000,000,000	-558	-568	0	
250,000,000,000,000,000,000,000,000,000,000,000,000	8,000,000,000,000,000,000,000,000,000,000,000,000,000	-563	-573	5	
500,000,000					