

Results of Noise Reading at Barcroft School Garden, 11:30 am, Wednesday, November 01, 2006

Present: Miriam Hughey-Guy, Barcroft Principal
 Carol Hunter, Barcroft PTA President
 Inspector Pugh, Arlington Code Enforcement
 Inspector Avant, Arlington Code Enforcement
 5 school children with various types of mallets

The children were instructed to play the drums with their hands, and the chimes and imbarimba with mallets, and on one reading they were instructed to hit the chimes with the stick of the mallet rather than the head.

The mallets that will be used for the instruments will have rubber coated sticks, rather than the metal ones that were used for the reading.

When all instruments were played there were at least 7 people playing at the same time. When the readings were made at the various property lines, all the children outside were instructed to freeze and made no noise. The only noise during that testing was the item being tested. The following is all the readings made by Inspector Pugh:

| Source | Reading Distance | Item(s) Played | Decibel Reading |
|-------------------|---|---|------------------------|
| Children Cheering | 100 feet | 15 Voices | 80.3 decibels |
| Helicopter | 500+ feet | Helicopter flying overhead | 75 decibels |
| All Instruments | At source (within 4') | 6 drums, imbarimba, chimes | 74.4 decibels |
| Chimes only | At source | Used metal stick of mallets | 74 decibels |
| Chimes only | At source | Used soft head of mallets | 72.7 decibels |
| Imbarimba only | At source | Used hardest mallet | 68 decibels |
| Squeaky See Saw | 75 feet | swung see saw | 67.6 decibels |
| Imbarimba only | At source | Used adapted mallet | 62 decibels |
| Playground Equip. | At Pipestem #2 lot fence - 193 ft. | Hit 3 poles with sticks and 1 slide with hands | 58 decibels |
| All instruments | At 50 feet | 6 drums, imbarimba, chimes | 54.7 decibels |
| All instruments | At new fence - 225 ft. | 6 drums, imbarimba, chimes | 45.9 decibels |
| All instruments | At Pipestem #1 lot fence - est.185 ft. | 6 drums, imbarimba, chimes | 45.7 decibels |
| All instruments | At Pipestem #2 lot fence - 193 ft. | 6 drums, imbarimba, chimes | 43.9 decibels |

When the decibel reading was made in the summer the reading from the instruments to the property line was approximately 54 decibels, with 1 person playing the drums only, which is now comparable to what is heard at a distance of only 50 feet from 7 people playing all the instruments.

For comparison with other noises you might hear, pulled from the website <http://www.lhh.org/noise/facts/environment.html>

Points of Reference measured in dBA (decibels) at the source of the sound

- 0 The softest sound a person can hear with normal hearing
- 10 normal breathing
- 20 whispering at 5 feet
- 30 soft whisper
- 40 quiet office, library
- 40 quiet residential area
- 50 rainfall
- 50 refrigerator
- 50 large office
- 50 - 60 electric toothbrush
- 55 coffee percolator
- 60 normal conversation
- 50 - 75 washing machine
- 50 - 75 air conditioner
- 55 - 70 dishwasher
- 50 - 80 electric shaver
- 110 shouting in ear
- 120 thunder

Some Examples of Noisy Toys

- Certain rattles and squeaky toys are measured at sound levels as high as 110 dBA.
- Musical toys, such as electric guitars, drums and horns, emit sounds as loud as 120 dBA.
- Toy phones for small children are measured between 123 and 129 dBA.
- Toys which are designed to amplify the voice are measured at up to 135 dBA.
- Toys producing firearm sounds emit volumes as loud as 150 dBA one foot away from the noise source.