From: Shelly Campbell [mailto:shellykcampbell@yahoo.com]
Sent: Thursday, April 14, 2011 11:05 AM
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Cc: Brian Malone; Dana Johnson
Subject: Noise and its Affects on Children

City Council Member,
I have attached the findings of Dr. Lorraine E. Maxwell & Dr. Gary W. Evans from Cornell University on the affects that noise produced by large commercial enterprises pose to young children that live nearby. I know that I have been flooding your e-mail inbox this week with data. I apologize for taking up so much of your time with my thoughts and research. I had all this information prepared for the last City Council meeting, but due to the time constraints I was unable to share it with you then. And to keep from giving you mass amounts of information at one time I decided to piece it up into smaller portions. Bite size information if you will.

Below are some of the excerpts from the article mentioned above. If you wish to read the article in its entirety please feel free to open the attachment and read the findings for yourself.

Much of the research on noise and children concerns damage to the auditory system. While the possibility of hearing damage is, and should be, of concern to parents and educators, the nonauditory effects of noise on children also deserves attention. The literature on the latter topic falls into three categories; physiological effects, motivational effects, and cognitive effects.

Physiological effects Elevated blood pressure levels in school-aged children is associated with living or going to school near a major noise source (e.g., airport, traffic, trains).
Motivational effects Research findings suggest that exposure to uncontrollable noise may make children more vulnerable to learned helplessness. Learned helplessness means that the individual learns that the outcomes of it's behavior are independent of the actions of the individual.
Cognitive effects One study found that children attending a school near a major airport were less likely to solve a challenging puzzle and to persist at it as well.
One study in a residential setting found that 12 month-old infants in noisy homes exhibited less mastery-oriented play behavior with their toys than their counterparts in quieter homes. The peak noise readings in the studies described above was 95 dBA. Please remember the prior data I sent you on the decibel level of concerts reaching 110 to 120 decibels.

If an individual has to pay particular attention because of the difficulty of the task, noise may interfere with the memory task. Noise levels in these studies were in the range of 22 - 78dBA. In these studies older children from quieter environments were better at discrimination tasks done under noisy conditions. These children were able to screen out the noise and concentrate on important cues. Children from noisy environments learned to tune out auditory stimuli but in a nondiscriminatory way and tuned out important cues. Hence, the children that live or go to school near noisy commercial enterprises learn to tune out everything--including important sounds.

Chronic exposure to noise has been shown to be harmful to children of various ages. It can have especially detrimental effects on younger children when language and discrimination skills are forming. Sometimes major noise sources are not in the control of teachers or designers. However, as this study documents, sometimes the noise source is the design of the spaces. Designers should keep in mind the use of the spaces they are creating. In child care centers, spaces must allow for the fact that children need to make noise but the subsequent noise levels should not be harmful to them or others in the center.

Now, take all that you have read and think of what it will do to the 500+ children that live in and around the proposed fairgrounds site. Take it from an educator, this study is one of great concern to me. If you google noise and children you will discover multiple articles and findings similar to the one I have attached here for you.

Thank you!

Shelly Jones