

President's Message

Now that summer is here I am reminded once again of the amazing soundscape that accompanies it. Here in Minnesota, thousands of us head "Up North" to a resort or a family cabin on one of the 10,000 lakes. (I doubt there are exactly 10,000 lakes but that's what the license plates say!) As we do once or twice each summer, my family is spending this week at the lake for some R & R. Last night, after the kids went to bed, I sat next to the campfire, near the lakeshore, listening. As I threw another log on the fire, the sparks flew and, with this infusion of new fuel, the fire roared back to life with a satisfying crackle. Thanks to the gentle breeze blowing across the lake, I could hear the quiet splash of the water against the shore and the calming "whoosh" of the red pines high above me. Out on the lake, two loons were calling to one another, over and over. For those of you who haven't heard it, I'm at a loss as to how to describe the many different calls of the Common Loon. The various combinations of "whoops" and cries have an eerie quality to them — almost mournful. Definitely a distinctive part of the Up North auditory experience.

Unfortunately, the peaceful, relaxing vacation soundscape that I enjoy is changing. Over the weekend, some of my newest neighbors here at the lake added a few more data points to Doug Ohlin's theory about "dumb and noisier" people. For hours on end, one family managed to pollute the soundscape for dozens of

other families. The incessant roar and buzz of their many ATVs, motorcycles, and "personal watercraft" (i.e., jet skis) drove me from my hammock into the cabin with the windows closed. In my resentment and frustration, I have a renewed zeal for protecting people from the unwanted onslaught of noise in our world. Not just at work but at home and even here in vacationland. I'm up to my ears with lawn mowers, leaf blowers, weed trimmers, motorcycles, and boom cars.

I know that many of you share my feelings. In particular, Les Blomberg of the Noise Pollution Clearinghouse (<http://www.nonoise.org/>) has a passion for reducing noise pollution. Recently NHCA donated \$1000 to the Quiet Lawns Initiative, one of NPC's ongoing efforts to educate people about the destructive effects of noise in our daily lives. Likewise, NPC's Quiet Lakes Initiative promotes the virtues of protecting the peace and quiet of aquatic settings.

The reason NHCA has decided to support organizations such as NPC, the World Council on Hearing Health



Ted Madison, President

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Spectrum is a quarterly publication of the National Hearing Conservation Association, 9101 E. Kenyon Ave., Suite 3000, Denver, CO 80237. The information contained herein is designed to promote action and discussion among members. The information has been obtained from sources believed reliable, and the editors have exercised reasonable care to assure its accuracy. However, the NHCA does not guarantee that the contents of this publication are correct, and statements published do not necessarily reflect the opinion or official position of the NHCA.

Spectrum is available without charge to NHCA members in all categories. Anyone interested in publishing in *Spectrum* should contact Karen Wojdyla at the national office, or David Byrne or Kevin Michael, Co-Editors.

The mission of the National Hearing Conservation Association is to prevent hearing loss due to noise and other environmental factors in all sectors of society.



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(<http://www.wchh.com>) and other groups that work to educate the general public about noise and hearing loss is that NHCA, by itself, cannot accomplish its mission to “prevent hearing loss due to noise and other environmental factors in all sectors of society.” We need partners to amplify the message and extend our reach.

I make this assertion based on the results of our long-range planning meeting held one year ago this month. At that meeting, a hard working group of NHCA members met to visualize and articulate a plan for NHCA to grow and thrive. During that meeting, after a lengthy discussion, this group came to the conclusion that NHCA needs to focus its attention and resources on its primary constituency: professionals who spend a large percentage of their time working in hearing conservation and hearing loss prevention. This is a diverse group of audiologists, industrial hygienists, noise control engineers, safety professionals, occupational health nurses and physicians who are on the front lines in the effort to prevent noise-induced hearing loss in the workplace.

Likewise, the long-range planning group came to the conclusion that NHCA, to a lesser extent, should attempt to serve the needs of people who only occasionally are involved in hearing conservation activities. However, when it comes to the important task of educating the general public and the media about the harmful effects of overexposure to noise, the planning group recognized that there are numerous other organizations that have more experience and resources than NHCA. We agreed that NHCA may be able to use its resources more wisely by supporting and partnering with those groups rather than trying to duplicate their efforts. With these recommendations in mind, NHCA will continue to build relationships with organizations whose missions complement ours.

In addition to defining whom we serve, the long-range planning group clarified that the primary function of NHCA is information sharing. While this comes as no surprise, given our long history of outstanding conferences and seminars, it helps us set our priorities as we move ahead. As we look down the list of important projects to be completed in 2004, we see that each of them involves either developing collections of information that are valuable to hearing conservationists or improving access to that type of information:

- Building the NHCA/OSHA Alliance
- Improving the NHCA website
- Updating practical guides
- Organizing joint conferences with NIOSH, NIDCD, ASHA, and others
- Partnering with Dangerous Decibels™ to teach children about hearing conservation
- Awarding student scholarships
- Assisting academic programs to develop hearing conservation curricula

Unlike other associations, many of which are preoccupied with activities such as accreditation of professionals, writing standards, or promoting a political agenda, the National Hearing Conservation Association has the luxury of a singular focus: developing and distributing state-of-the-art information about the practice of hearing conservation. With your continued support, we will become more and more successful at doing so.

Have a wonderful, quiet summer! **NHCA**



Communications Update

Rick Neitzel

The NHCA Executive Council is committed to updating and expanding the presence of NHCA on the internet, and providing more materials to members electronically. As part of this effort, the first electronic version of the NHCA directory was emailed to members in June 2004. A Web Development Task Force was also formed in 2003, and has recommended a number of revisions and modifications needed to upgrade the current website. Rohit Verma, designer of the NIOSH “Work-Related Hearing Loss” website, has been contracted to redesign the website during Summer 2004. Watch for a new NHCA website look by Fall 2004. The new site will feature a more user-friendly interface, enhanced graphics, and expanded content. **NHCA**

In Memoriam

Paul L. Michael, Ph.D., died May 12, 2004, at the age of 78. After a childhood on a dairy farm in West Virginia, Paul served in the U.S. Army in World War II as a paratrooper in the 11th Airborne in the South Pacific. He attended Fairmont State University, West Virginia State University, the University of Maryland, and finally the University of Pittsburgh for his Ph.D. in Occupational Health. While at Pitt, he worked for Mine Safety Appliances Company where he eventually became Chief Physicist. He then moved to State College, PA, to work for the transducer group at the Ordnance Research Laboratory at Penn State. He started the Environmental Acoustics Lab at Penn State and remained Director until his retirement in 1986. His professional life was dedicated to hearing conservation and acoustics. His greatest joys in life were his work and his friendship with his colleagues. Memorial contributions may be made through the Alzheimer’s Foundation of America. **NHCA**

The Benevolent Nuisance—A Paradox

Rob Pluta

To some, I'm a reminder of days past. To others, I invoke memories of different places. Since I'm very loud there are many who become distressed when they hear me. Woe to those who don't heed my alert. Sadly, there are nearly 1000 that ignore me each year. I'm the train horn and I save lives.

The Federal Railroad Administration

<http://www.fra.dot.gov/>

<http://ntl.bts.gov/display.cfm?sub=c6&cat=3>

The FRA is one of ten agencies within the U.S. Department of Transportation concerned with intermodal transportation. Until this year there was never a federal requirement to sound the train horn at public highway–rail crossings. The railroad companies sounded horns as part of their operations, and later the various states and localities legislated the use of train horns.

In 1984, the state of Florida authorized local governments to allow whistle bans at crossings that were equipped with flashing lights, bells, crossing gates, and highway signs that warned motorists that train whistles would not be sounded at night. In August 1990, the FRA issued a study on the effect of these whistle bans for the period 1984–1989. An increase in collisions (and deaths) was observed, and the FRA issued an emergency order in August 1991. A later study, issued in April 1995, considered whistle bans in other states. The states with the largest number of whistle bans were IL, WI, KY, NY, and MN. Half of the crossings were on three railroads: CSX, Conrail, and Soo Line. Whistle ban crossings averaged 84 percent more collisions than similar crossings with no bans.

Since the 1995 study, the FRA continued to analyze relevant data. During 1992–1996, there were 793 collisions at 2,366 crossings subject to whistle bans. The results include \$2 million in motor vehicle damages.

Type of person involved	Injuries	Fatalities
Motorist	258	56
Pedestrian	17	41
Railroad Employee	56	0

The obvious need for the train horn provided the impetus for the legislation. The quick facts about the Train Horn Rule include:

- The rule fulfills the statutory mandate (PL 103–440) to require the use of the horn.
- It provides exceptions so communities may establish quiet zones.
- It provides flexibility to choose supplementary and alternative safety measures that can compensate for loss of the train horn.
- Outside of quiet zones, requires railroad to sound horn

15–20 seconds prior to arrival at crossing, rather than for 1/2 mile regardless of speed.

The rule prescribes both a minimum of 96 dB(A) and maximum 110 dB(A) sound level for the train horn. Measurement is obtained at 100 feet in front of the locomotive and 15 feet above the rail.

The research arm of the FRA is the Volpe National Transportation Systems Center located in Cambridge, MA. Several Adobe Acrobat® files are provided in the website that showcase the work of the Volpe Center and give further information and background on the train horn, including research on use of the wayside horn, which comprises a stationary approach. Studies include chapters on:

- Acoustic characteristics of railroad horn systems
- Acoustic characteristics of motor vehicles
- Analysis of detectability
- Railroad horn bans, horn effectiveness, and horn detectability

There is plenty of information and fascinating reading for those interested in learning more about warning systems:

Transport Canada—Transportation Development Centre

<http://www.tc.gc.ca/tdc/projects/rail/b/9919.htm>

Results from Transport Canada's recent study on the locomotive horn suggest that the location of the horn is very important to its effectiveness and that a horn's harmonic content is more important than its fundamental frequency.

Horns, Inc.

<http://www.dieselaiahorns.com>

Being a railroad fan isn't quite the same after September 2001 (and March 2004). Police are beginning to scrutinize people like Ed Kaspriske when they take to the track. Ed is a fan of the train horn—a big fan. His website offers a fascinating perspective on a device that is essential to transportation safety. He also produces videos and sound recordings related to his hobby of horn collecting.

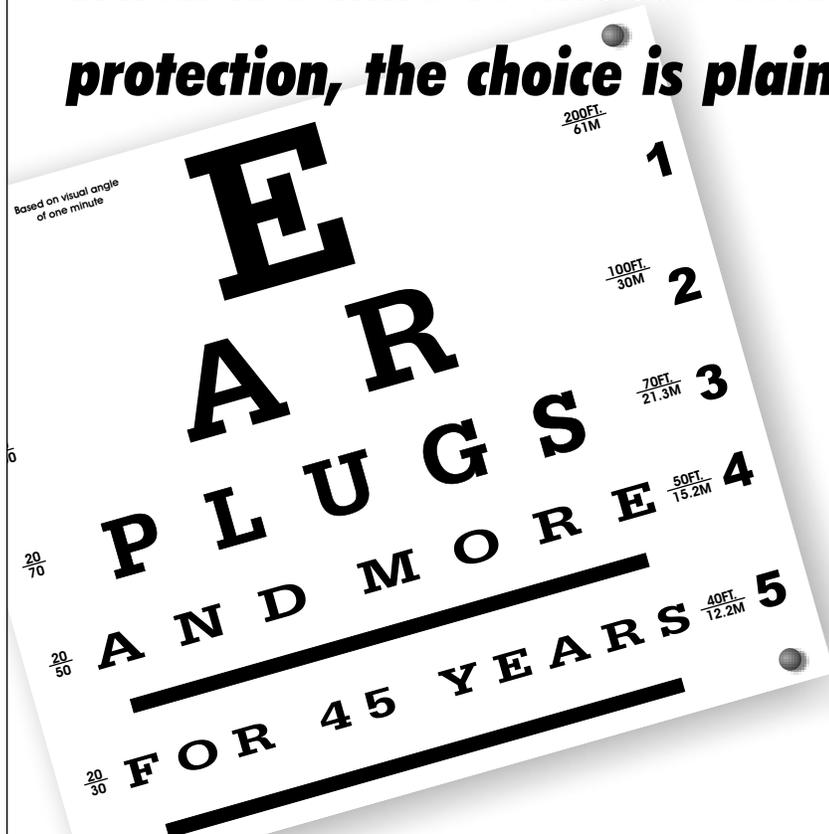
On his website are many recordings of a diverse selection of horns. Most recordings are made live in the field and you can hear the Doppler effect and crossing gate bells as the train approaches and passes. The differences between some of the horns are striking. Choose a few to listen to and you'll sense that you've heard many of these before in different places. You'll also have the chance to hear the AirChime K–5 tuned in the “Canadian minor” chord. Canada requires train horns to sound unique from truck horns, and the tunings on some of these horns vary greatly in terms of consonance and dissonance. **NHCA**

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Legislative Corner

OSHA held a series of public meetings concerning their notice of proposed rulemaking (NPRM) on a hearing conservation program for the construction industry. The first meeting was held in Chicago, Illinois, in March 2004. A second meeting was scheduled to gather input on plans to address construction's high noise exposures on a task-by-task basis as well as answer questions about the significant noise exposures in the construction industry: Can the exposures be characterized by job title or the equipment used? Are data available to characterize anticipated exposures, their duration, and current use of hearing protection? The second meeting was held in Herndon, Virginia, on July 21 and 22. The meeting

was open to the public but attendees who wished to present were required to pre-register with OSHA prior to the meeting. Results of this meeting will be presented in a future column.

On April 27, 2004, in response to an inquiry from Lee Hager, OSHA issued an interpretation regarding the occupational noise standard and the successor owner's responsibility to retain audiometric records from the previous owner. OSHA stated that when an employer ceases to do business, it is that employer's responsibility to transfer the records to the new owner who is then responsible for retaining these records according to the noise regulation. The act of terminating employees and then rehiring them as employees of the purchasing company does not relieve the

new employer of responsibility for the employees' hearing. The successor owner should continue to use the baseline audiograms established by the former employer unless there is a good-faith and reasonable basis to question the validity of the baseline audiograms. The letter of interpretation should be posted on the OSHA website in the near future. Go to <http://www.osha.gov/index.html> and click on Interpretations under Laws & Regulations. A search for 29CFR1910.95 with a date range of April 1, 2004, to April 30, 2004, should find this interpretation once it is posted.

The Federal Railroad Administration (FRA) issued a NPRM on "Occupational Noise Exposure for Railroad Operating Employees" in the June 23, 2004, *Federal*

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Register (Volume 69, Number 120, Pages 35145-35192). The notice is the result of a mandate in the Rail Safety Enforcement and Review Act of 1992 where a consensus group representing the FRA, the railroad industry, rail labor, manufacturers, suppliers, and others examined the issue of occupational noise and recommended that the FRA update their existing noise standard. The proposed changes would require manufacturers to design and build locomotives with quieter cabs and for railroads to maintain them to new standards. Noise reduction features such as better insulation, relocation of air brake exhaust piping, and less vibration from cab equipment already are being incorporated into newer locomotives. The rule supports these and other methods to reduce interior cab noise to the proposed lower levels. In addition, the rule would require train crews to use hearing protection and railroads to provide training in hearing loss prevention, implement hearing conservation pro-

grams, and conduct regular noise monitoring. The FRA believes the changes will reduce the incidence of noise-induced hearing loss, and that the rule will not impose significant additional costs on the railroad industry. The FRA will accept comments on the NPRM until September 21, 2004.

The Department of Health and Human Services, Centers for Medicare & Medicaid Services, published a final rule on "Provider Qualifications for Audiologists" in the *Federal Register* (Volume 69, Number 104, Pages 30580-30587) on May 28, 2004. This final rule revises the requirements for audiologists furnishing services under the Medicaid program. As a result, the requirements will create consistency with the Medicare program's definition of a qualified audiologist by recognizing state licensure in determining provider qualifications. The revised standards will expand the state's flexibility in choosing qualified audiologists. These regulations became effective on June 28, 2004. **NHCA**

Editor's Note

The brief obituary contained in this issue mentions a few facts about the professional life of Dr. Paul L. Michael—much more could have been included if we described him as Kevin's father. Many of us knew him or have read some of his publications, but I also want to point out that he was the one who "grounded" Kevin when he missed curfew; revoked his driving privileges when he wrecked the family car; disciplined Kevin for bothering his sister; suspended his driving privileges when he wrecked the family car (again), etc., etc. **DCB NHCA**

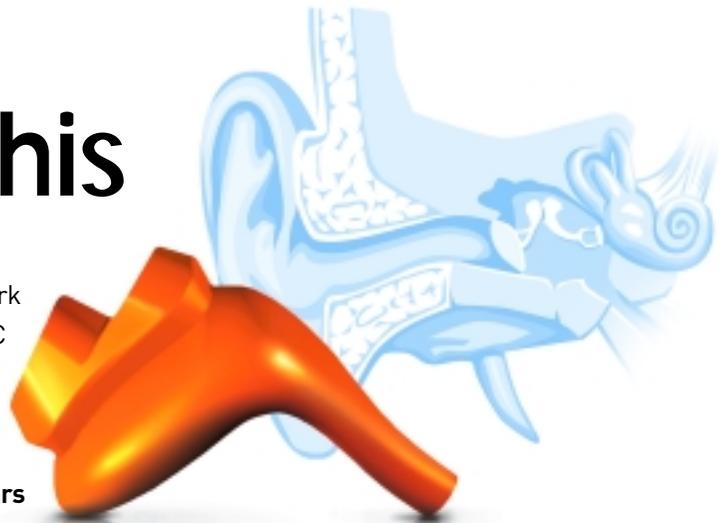
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A New Hearing Conservation Training Resource Developed by NASA John H. Glenn Research Center

Give me Ear Pieces for 30, please! JeopEARdy is an adaptive and interactive training tool that takes advantage of PC multimedia capabilities. JeopEARdy was developed by Beth Cooper of the NASA Glenn Research Center Acoustical Testing Laboratory and Dick Danielson of the NASA Johnson Space Center Audiology and Hearing Conservation Clinic.

The game is presented in an easy-to-use Microsoft® PowerPoint® format. As shown, the game's graphic interface is the familiar Jeopardy grid with six topics and five 'answers' under each topic with point values of 10 to 50. Of course, there is also a Final JeopEARdy question.

The program ships with a PowerPoint viewer, which is an executable file that allows the game to be run on PCs that do not have PowerPoint installed. A Read Me file located in the directory with the game file contains some important information for users.

While there are many possible applications of the game, JeopEARdy was intended to be used by an instructor in an OSHA-required hearing conservation training class. The instructor could run the program on the PC, preferably using a projector, while soliciting answers from the attendees. The interactive nature of JeopEARdy is more fun and probably more effective than traditional training lectures.

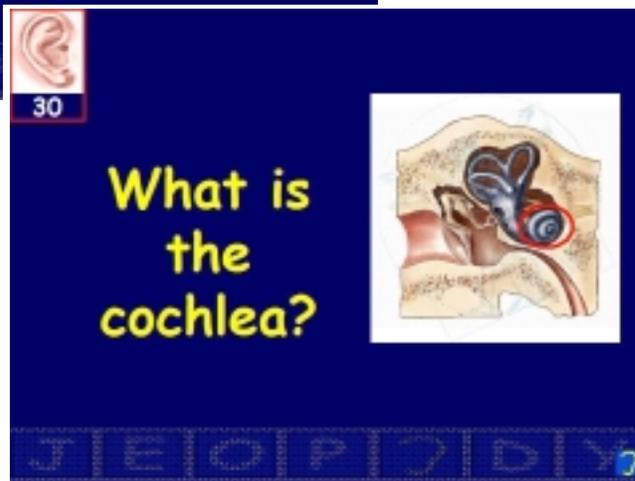
An innovative feature of the game is that it can be completely customized by the user. As the instructions state, the PPT game file can be either run as an executable or opened for editing from PowerPoint where the user can use the 'answers' and 'questions' as templates for their own specific application, perhaps customized for a particular company or industry. Another approach for a simpler modification would be to replace the provided graphic files with pictures from a particular workplace.

It is likely that the end-user will use the program as shipped and then make modifications as time progresses to avoid the



By continuing to modify the game with different questions and answers, like "What is a typical level from the pot lines?" from an aluminum smelter, or "What is the 8 hour L_{eq} from the dragline?" from a surface coal mine, participants will

typical over-familiarization that compromises conventional training materials. The program comes with 31 thoughtful questions based on the standard foundations of industrial hearing conservation, as shown here.



continually be challenged during this training activity. It is also possible that other areas of industrial hygiene could be addressed as well.

The JeopEARdy CD (which also contains tutorials on selected technical topics related to developing multimedia Power-Point shows) is distributed for public use by hearing conservationists. To request a single free copy of the disc, please visit the Acoustical Testing Laboratory website at <http://acousticaltest.grc.nasa.gov> and look in the section on Hearing Conservation for the JeopEARdy request form. Please allow four to six weeks for delivery.

JeopEARdy is one of several educational outreach products developed and distributed by the NASA Glenn Research Center Acoustical Testing Laboratory. Please visit their website at <http://acousticaltest.grc.nasa.gov> for information about other offerings. If you have comments or questions about JeopEARdy or other products or services, please direct them to Beth.A.Cooper@nasa.gov. **NHCA**

NHCA LISTSERVE

NHCA has a mailing list (listserv) through which the membership can chat with each other via e-mail messages. Some of you may already do this with your own small groups. With the NHCA listserv, you'll be able to share items with the membership at large.

So, if someone catches a new FRA (Federal Railroad Administration) noise issue, as Lee Hager recently did, then you can share your news item with the membership without having to wait for *Spectrum* to publish the item.

The listserv has been a very low-volume list during the past years. Your mailbox will not be flooded with messages after subscribing to this list.

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If you have questions about the listserv, feel free to write Rob Pluta at: nhca-listserve-admin@hearingconservation.org. **NHCA**

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Evaluating the Quality of Hearing Conservation from Hearing Test Results

George Cook, CCC-A, Occupational Audiologist

Often I am asked the question, "What information may be gleaned from the plant hearing testing that would indicate the quality of our hearing conservation program?"

It is important to separate successful hearing conservation from recording hearing loss on the OSHA 300 Log. The OSHA regulation (29 CFR 1910.95) requires monitoring of hearing change using a Standard Threshold Shift (STS). This is defined as a change in hearing of 10 dB average at the frequencies of 2, 3, and 4 kHz in either ear. Additional loss is accepted by allowing the use of aging tables presented in the appendix of the standard. A 30-day calendar retest is

allowed. If confirmed with a retest or if the 30-day period passes without a retest, then the loss is considered confirmed. The occurrence of an STS triggers a set of actions by the company commonly called "STS follow-up." This consists of notifying the employee in writing of the change, recalculating the attenuation of their hearing protectors to be sure they have adequate protection, fitting and/or refitting hearing protection, and enforcement of wearing hearing protection.

In a separate regulation, OSHA recently (January 1, 2003) defined the criteria and procedures for identifying and entering changes in hearing on the OSHA 300 Log. They tied the change in

hearing to the occurrence of an STS as defined in 29 CFR 1910.95. However, several additional qualifiers were added. The change is not recordable if the loss is within the range of normal hearing (i.e., thresholds less than 25 dB). Nor is the loss recordable if an audiologist or physician determines, on a case-by-case basis, that the change is non-occupational.

Therefore, within the hearing test data there are three types of identified changes:

1. An STS defined as a 10 dB average change at 2, 3, and 4 kHz without aging. This is called an Early Warning Shift.
2. An STS with aging which is used to initiate STS follow-up.

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Cook's Table:*

Quality of Hearing Conservation Program Determined by Percent Change

Type Change	Excellent	Good	Poor	Unacceptable
Early Warning Shift	<6%	6-8%	9-10%	11% +
STS with Aging	<3%	3-4%	5-6%	7% +
Possible OSHA Recordable	<2%	2-3%	4-5%	6%+
Actual OSHA 300				
Recorded	<1%	2%	3%	4%+

*Note: The table is referred to as Cook's Table because the percentages indicated are the author's opinion based upon the author's experiences in reviewing plant hearing conservation programs.

3. An STS which qualifies as an OSHA Loggable.

The best indicator for the quality of the hearing conservation program in terms of preserving hearing is the Early Warning Shift. This measure is sensitive to changes of a total of 30 dB at the frequencies of 2, 3, and 4 kHz. It will identify employees with a minimal change. By monitoring these employees to be sure they are wearing hearing protection and wearing it correctly, the company may prevent noise-induced hearing loss and avoid future STSs with aging and OSHA recordable shifts. It should be noted that in a plant with an aging population (50 years plus), the Early Warning Shift goals may not be possible to meet. Certainly that does not mean we should not try and work more diligently with this vulnerable population.

If the only cause of hearing loss was noise or aging, the task would be easy. However, hearing loss may occur for many different reasons. Every cause of hearing loss is present in the general population and testing employees in a plant constitutes testing the general population. It is expected that some 3% of the population will have significant change in hearing without noise. Age is the biggest agent; however, the Standard adequately allows for aging changes by adding to the 10 dB average change from the aging charts presented in the Standard. Noise is another significant agent, and plant workers are at high risk for noise exposure. In most cases it is possible to determine if a work-related or non-work-related change has occurred, and therefore determine

that the employee's change is not loggable; however, it is impossible to determine in every case of change that noise did not aggravate, contribute to, or cause an individual's hearing loss.

Expectations for the hearing conservation program should be realistic and obtainable. Ideally, no hearing loss resulting from noise exposure is acceptable;

however, it would be rare not to have any STSs or Loggables in a plant of 200 or 300 employees. A 1% change would be 1 person out of 100.

Whereas it would be imprudent to suggest that percent change is the only indicator of program quality, it has become an acceptable place to begin. The adjacent table may be helpful in assisting plant safety managers and management in determining the success of their program.

Many times our attention is on the wrong end of the process. Rather than committing a great deal of time and money to efforts to prevent possible OSHA recordables from being recorded, program focus is better spent on identifying the Early Warning Shift and monitoring their noise exposure and hearing protection wearing. With good testing, audiological review, availability of properly fitted hearing protection, enforcement of hearing protection wearing and hearing conservation education, the recordable loss issues will diminish significantly. **NHCA**

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the NHCA office at 303-224-9022 for more information.



Decibels in the Desert

February 24 – 26, 2005



SOUNDS LIKE FUN

Deanna Meinke and Adam Beehler

Physical and Visual Demonstrations of Principles of Sound Relevant to Training in Hearing Conservation Programs

These demonstrations are adapted from a workshop by Adam Beehler (CSU Little Shop of Physics), Billy Martin (Oregon Health & Science University), Susan Griest, and Deanna Meinke, that was presented in Seattle, WA, at NHCA's 2004 Conference. These demonstrations may be applicable to employee/employer training, school presentations, CAOHC

courses, and other educational opportunities NHCA members may have. This month's feature is especially targeted toward those NHCA'ers who missed out on the 2004 conference auction items and who are willing to make their own. Please share any innovative applications you might discover along the way or a picture if you dare.

Weird Ears / Big Ears

One gets to hear what it is like to gather sound from different directions.

Grade Level

- grade school and up

Science Focus

- localization
- timing
- velocity of sound
- brain processing

Supplies

- earmuffs* (~\$1500)
- two funnels (~\$1.00)
- tubing (<\$1.00; hardware store)
- tubing/pipe connector piece (<\$1.00; hardware store)
- two small hose clamps (<\$1.00; hardware store)
- tape
- drill and drill bit the size of the tubing connector piece

**Although one brand is pictured here, any solid cup earmuff can be used.*

Important Safety Note: It requires a drill to make this project. We are assuming that adults would do the building ahead of time.

Doing the Activity

First we must build some weird ears for ourselves. Drill a hole into the sides of each earcup. The hole should be just big enough for the tubing/pipe connector piece to



screw into it. If you mess up, you can always seal up any openings with some silicone caulking. We just need the sound to go through the tubing

and not leak out anywhere. Next cut an appropriate length of tubing to attach over the other end of the tubing/pipe connector piece. You may well need to use a hose clamp to keep the tubing on the connector piece tight. Insert a funnel into the other end of the tubing so that the bell of the funnel opens up to the other side of the head. In other words, the sound that comes from the left side of your body should go into the funnel and be channeled into the right ear. Now do the same thing for the other side, and we are set. You may want to tape or tie the tubing down so that things do not flap around. Notice that it helps a lot to have the tubing, connector piece, and funnel all about the same size, to avoid unnecessary adaptors or adjusting.

This activity is certainly entertaining if nothing else! Place the headphones on your head and observe how things sound differ-

ently. Here are just a few things to try:

- Can you tell from which direction sounds come?
- Can you hear sounds better or worse? Louder or softer?
- Are certain frequencies enhanced through the weird ears? Are any diminished?
- Try doing a physical activity with the weird ears on.
- Sing or play an instrument with the weird ears on.
- Listen to a surround sound movie with the weird ears on. How about a movie theater?
- Have you looked at yourself in the mirror yet? How do you look?

For clarification or any questions feel free to email Adam Beehler at beehler@lamar.colostate.edu 

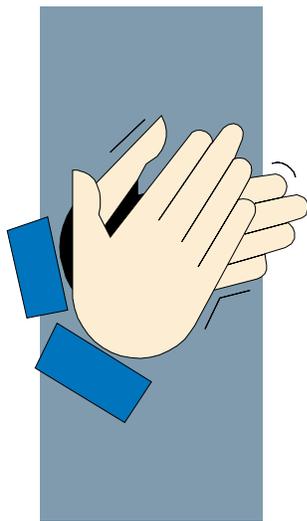


Kudos...

...to **Nancy Green**, Industrial Audiologist from Jacksonville, FL for her time in reviewing all seven practical guides and the Crank It Down brochure. Nancy offered recommendations to update the content of each brochure for any inaccuracies and to make any necessary changes since the guides were originally written. In addition, the graphics will be freshened up to reflect a sleeker and more eye appealing appearance. **NHCA**

Congratulations...

...to the NHCA Director of Education, **Theresa Schulz**, on her retirement from the U.S. Air Force after over 20 years of service. Dr. Schulz has joined Sonomax Hearing Health Care as Vice President of Professional Operations. Theresa and her husband, Randy, have moved to a farm in Northeast Tennessee. You can reach her at tschulz@sonomax.com or (210) 573-3379. **NHCA**



Note from NHCA Management Office

A broadcast email was sent to all NHCA members on July 14 informing you of the change in accessing the Members Only section of the website. If you did not receive this email, please contact the NHCA office at nhca@gwami.com or call 303-224-9022. The Membership Directory is now posted online in this area of the website as well as other information. **NHCA**

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