CAOHC®

Fall 2009

# UPDATE

VOLUME 21 • ISSUE 3

*The Newsletter of the Council for Accreditation in Occupational Hearing Conservation*

## What Farmers Can Teach Us About Hearing Protector Use

*Marjorie McCullagh, PhD, RN, PHCNS-BC, COHN-S*

Farmers are exposed to hazardous noise from equipment and livestock (Table 1), and experience higher rates of noise-induced hearing loss (NIHL) than non-farmers of similar age (Rabinowitz, Sircar, Tarabar, Galusha, & Slade, 2005). Unlike workers in general industry, farmers generally work in a non-regulated environment and are not commonly served by work-based health programs. Other challenges to using hearing protection in the farm work environment include intermittent noise exposure, diversity of noisy work activities, and lack of organization of workers. Although the best way to prevent NIHL is to eliminate noise whenever possible (e.g., "buy quiet" and use automation), noise elimination is often not technically or economically feasible in the farm work environment (Murphy, 1992). Use of hearing protection devices (HPDs) would help prevent NIHL, but use among farmers is low. For example, recent studies have described frequency of farmers' use of HPDs as 7% of the time exposed to loud noise (Carruth, Robert, Hurley, & Currie, 2007), seldom (Gates & Jones, 2007), and poor (Jenkins, Stack, Earle-Richardson, Scofield, & May, 2007). Factors influencing use of hearing protectors among farmers have been identified as barriers (such as difficulty communicating and fear of not hearing warning sounds), access and availability of HPDs, and interpersonal influences such as family support for HPD use (McCullagh, Lusk & Ronis, 2002).

Although most farmers do not use HPDs consistently when they are exposed to loud noise, a small minority of farmers have successfully adopted this safety practice into their work. Currently we know little about the motivations and mechanisms for this success from the perspective of the user. Understanding of this would be useful in the future development of interventions to increase HPD use. A qualitative study was conducted in effort to describe farmers' personal experiences in successfully becoming HPD users, influencing others' use of HPDs, and overcoming barriers to the use of HPDs.

### Design & Methods

Institutional review board approval of the study protocol was secured prior to collection of data. Study participants were screened and recruited individually from farm trade shows and commodity meetings in the upper Midwest. Farmers were selected who reported they are exposed to loud noise in their farm work and use hearing protection all of the time, or nearly all of the time (90% or better), they are exposed to loud noise. Sampling continued until saturation was reached.

Face-to-face interviews were conducted using a semi-structured interview guide. Questions focused on actions that the farmer takes to protect himself from farm noise, who encouraged or supported the farmer's use of hearing protection, how the farmer might have influenced the use of hearing protectors by other farmers, and how the farmer overcomes obstacles to using hearing protection at work. An additional item asked farmers to describe their personal motivations for becoming a user of HPDs.

After the farmer provided informed consent, he was individually interviewed one time for about 10 to 25 minutes. Interviews took place on the exhibit floors of farm shows, or common areas at trade group meetings, and were videorecorded. Participants received a cash incentive of $20 in recognition of their time.

### Results

Twenty farmers participated; all but one were men. Although most (90%) participants were middle-aged (35-60 years), the age range of participants was 18 to 65 years. Producers of crops, livestock, and dairy were included. Most were owner-operators.

All the participants reported they were frequently exposed to loud noise as part of their farm work. Many were well-

continued on page 6

Content | Page

UPDATE
CAOHC®

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## Chair's Message

*By Mary M. McDaniel, AuD CCC-A CPS/A*

Have you reviewed your company's noise level survey lately? When was the last time you looked at the plant's noise level measurements? Have you used the noise level survey data to determine the most appropriate hearing protectors for your workers? Are the employees with whom you work aware of their own noise exposures on the job? If yes…terrific! If no….why not?

An *effective* hearing loss prevention program (HLP) begins with noise monitoring. The results ultimately drive the entire program. The noise levels are used to determine which employees must be included in the hearing conservation program and to make decisions about the type, style and noise reduction ratings of the hearing protective devices we select and fit on each worker. The noise exposure levels must be included on each employee's annual audiometric test record and shared with the employees during the annual training program. Every worker needs to know about the level of hazardous noise on the job. And don't forget it is the employer's responsibility to assess the feasibility of noise controls when time-weighted-average exposure levels exceed 90 dBA. How can we accomplish all these components of the program without an accurate, comprehensive noise level survey?

The most effective HLPs always include a phase of program evaluation. This phase allows the HLP "team" to realistically assess the current status of the program and, more importantly, provides meaningful feedback that helps the team make on-going priority decisions about the program. I challenge you to take a close look at the noise survey this year during your periodic program evaluation and ask yourself the following questions. Have you collected all of the necessary information? Have you collected a "representative sample" of all potential noise hazards? Did you base your HLP decisions on the noise data collected?

Noise monitoring can be a challenge and is often a costly endeavor for a company. However, without this piece of the puzzle, it will be extremely difficult to make appropriate program decisions. You simply must have the noise data to move forward effectively!

As always, CAOHC strives to enhance HLPs through excellent educational programming, and the topic of noise measurement is being 'tackled" as we speak. Be watching for the launch of a new teaching module – designed to make the student more knowledgeable about how to collect, interpret, and use noise measurement data. Your program will be more effective when the important decisions concerning inclusion, hearing protection, audiometry and training are made in the context of up-to-date noise data. Let CAOHC be a resource to you and help you continue to improve your program. CAOHC….there is no equal.

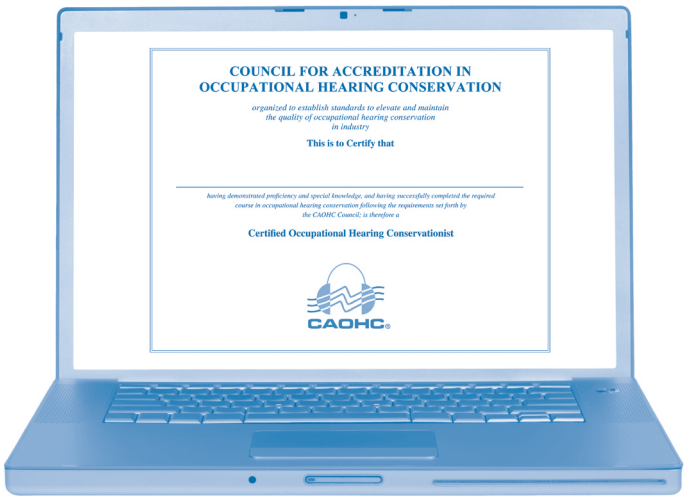
OHC Corner

# Spotlight on an OHC

This OHC Spotlight shines the light of recognition on Dorothea Walters, co-founder and President of Occupational Health Solutions, Inc. (OHC, Inc.). Dorothea has over thirty years of nursing experience with a focus on occupational health since the mid 1980s and a CAOHC Certified Occupational Hearing Conservationist since 1992. Her success managing hearing conservation and other aspects of occupational health programs for large companies encouraged her and her business partner to form OHS in 2002. Since that time their organization has grown significantly and is now recognized as a leader in hearing conservation efforts in the Pacific Northwest.

She has always been a strong advocate of the goals of CAOHC, seeking to prevent occupational hearing loss by providing education, information and guidance to industry and those serving industry regarding the successful implementation of occupational hearing conservation programs. Utilizing their mobile test van, her company administers audiograms, recommends and fits hearing protection, provides counseling on hearing preservation and hearing loss, coordinates environmental noise evaluations, and conducts training annually for thousands of noise exposed workers throughout the states of Washington, Idaho and Oregon. In addition to herself she assures her staff members involved in all aspects of the Hearing Conservation service, including Workers' Compensation Management, are certified Occupational Hearing Conservationists. She remains an active faculty member in certification classes, passing on her experience and knowledge to others seeking to support CAOHC's goals.

# Occupational Hearing Conservationist (OHC) Online Verification System




Effective December 15, 2009 CAOHC will launch a new feature on our website. Due to the high demand by employers, Course Directors and Professional Supervisors to verify certification status of our OHCs, CAOHC has instituted an electronic process that will allow easy access of this information.

The process will be simple, just enter the first and last name of the OHC you are inquiring about and you will quickly be taken to verification of the OHC expiration date and their certification number.

Additional features will allow the OHC the opportunity to download a copy of their certificate and access their own records provided they have a current e-mail address on file with CAOHC. To ensure that your information is current please contact the CAOHC administrative office via e-mail at info@caohc.org or use the "Address Correction link" from the CAOHC website www.caohc.org

*Editor's note: In this article, which appeared in the Winter 2000-2001 issue of Update, former council member, Dr. Paul Brownson, provides a very practical overview of the options for working with employees in hearing conservation programs who experience difficulties associated with cerumen accumulation in the outer ear.*

# Cerumen Management

*Paul J. Brownson, MD, FACOEM, FAAFP*

Approximately 2-6% of the general population is afflicted by cerumen (earwax) impaction. Some of the known causes of cerumen impaction include abnormal external earcanal anatomy, occlusion by a hearing aid mold, associated dermatosis, and misguided attempts to remove wax via instrumentation.[1] Each week in the United States, it has been estimated that approximately 150,000 cerumen removals take place.[2] Otologic complications include failure to succeed in cerumen removal (which is the most common complication), pain, perforated eardrum, dizziness, bleeding and infection.

This article provides some guidance on cerumen management for the OHC and the OHC's professional supervisor, focused on simple measures the OHC may recommend to the individual prior to referral to an audiologist or physician. It is suggested that the OHC and the professional supervisor review cerumen management issues, and establish a plan or protocol for dealing with cerumen problems.

**What is cerumen?**

The outer ear is the funnel-like part of the ear you can see on the side of the head, plus the earcanal (the hole which leads down to the eardrum). The earcanal is shaped somewhat like an hourglass—narrowing part way down its length.

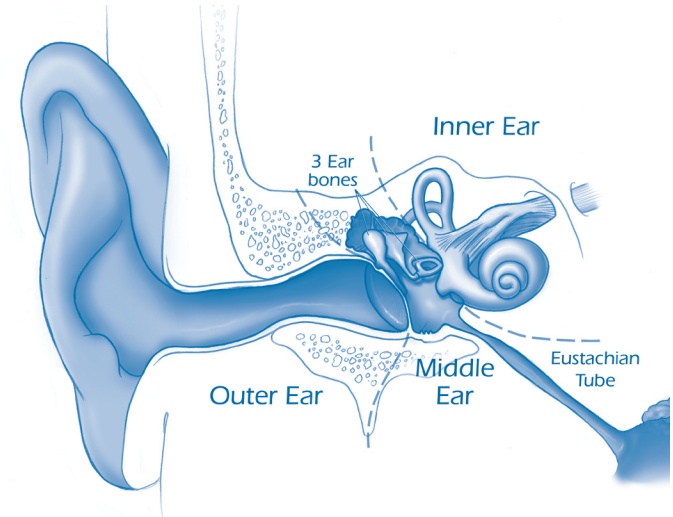



*Figure 1. Frontal section of the earcanal with magnification of the skin of the cartilaginous and osseous (bony) portions. (image courtesy of Burroughs Wellcome Co.)*

The skin of the outer part of the canal has special glands, the ceruminous and sebaceous that produce cerumen (earwax). Earwax functions to trap dust and sand particles to keep them from reaching the eardrum. Usually the wax accumulates a bit, then dries up and tumbles out of the ear, carrying the accumulated sand and dust with it. Or the wax may slowly migrate to the outside where it is wiped off. Wax is not formed in the deep part of the earcanal near the eardrum, it is formed in the outer part of the canal. Earwax is healthy in normal amounts and serves to coat the skin of the earcanal where it acts as a temporary water repellent. In addition to its water repellant effect, earwax may enhance resistance to infection of the earcanal, possibly related to the normally acid pH of earwax. In diabetics, earwax has been found to be less acid, and less protective.[1] The absence of earwax may result in dry, itchy ears. Most of the time the earcanals are self-cleaning; that is, there is a slow and orderly migration of earcanal skin from the eardrum to the ear opening. Old earwax is constantly being transported from the earcanal to the ear opening where it usually dries, flakes, and falls out.[3] When an individual has wax blocked up against the eardrum, it is often because s/he has been probing their ear with such things as cotton-tipped applicators, bobby pins, or twisted napkin corners. Such objects only serve as ramrods to push the wax in deeper. Also, the skin of the earcanal and eardrum is very thin and fragile and is easily injured. Continual rubbing of the earcanal with a cotton-tipped applicator can abrade the skin and promote an infection. Individuals who wear hearing aids may also develop an accumulation of earwax because the hearing aid or ear mold prevents the normal migration of the wax to the outside. Individuals who wear such devices should always have their health care provider inspect their earcanals for accumulation of cerumen. When wax has accumulated so much that it blocks the earcanal (and reduces hearing), the individual's audiologist or physician may have to wash it out, vacuum it with suction devices, or remove it with special instruments. The professional issues and techniques of earwax removal have been reviewed elsewhere.[4]

The physician may prescribe ear drops that are designed to soften the wax. Available products include prescription only (such as Cerumenex) and over-the-counter products (OTC) such as Debrox, or Murine Ear Drops, Audiologist's Choice (distributed through audiologists and same as Debrox or Murine), or straight hydrogen peroxide (3%).[5] While the OTC drops are not as strong as the prescription earwax softeners, they are effective for many individuals, and are less likely to cause irritation or allergic reaction.

continued on page 8

# EPA Proposes Changes to the Noise Reduction Rating for Hearing Protectors

*By: Lee D. Hager, CAOHC Council Representative, AIHA*

After 30 years, the Environmental Protection Agency (EPA) is moving ahead with revisions to 40 CFR 211, subpart B; the federal regulation that defines and describes the labels we see on packages of hearing protection devices (HPD). Substantial changes to the attenuation test requirements and the methods for computing and presenting the Noise Reduction Rating (NRR) have been proposed. The labeling requirements in the proposed rule have been extended to a much wider range of electronic and level-dependent hearing protectors for which no rating system had previously been available.

EPA published proposed changes to this regulation on August 5, 2009, and set a deadline of November 4, 2009 for the public to submit written comments to the federal docket. At a hearing in Washington DC on October 7, 2009 representatives from hearing protector manufacturers, occupational health and safety experts, hearing protection users and members of the general public had the opportunity to provide spoken comments.

**Why change the NRR?**

In the preamble to the proposed rule (EPA, 2009) the EPA recognized that, "Field studies by various researchers over the past three decades, revealed a relatively poor correlation between the labeled NRR of selected protectors, as determined from testing in accordance with the American National Standards Institute (ANSI) S3.19–1974 test procedure, and the attenuation realized by typical users of these protectors when tested without the benefit of the experimenter fitting the device as required in ANSI S3.19." The authors of the proposed rule went on to say, "...the current required test methodology…can result in unrealistically high sound reductions that are generally not attainable in real world use. The resultant labeled NRR can lead to product selections that may leave users under-protected and subject to potential hearing damage. Further, the procedure lacks suitability for the testing of other than passive devices."

**Highlights of Proposed Rule**

With these observations in mind, the proposed rule featured numerous significant changes, including:

1. Replacing test methods referred to in the original regulation, which were based on an ANSI standard from 1974, with test methods from the most current version of that standard, published in 2008.
2. Expanding the regulation to address new HPD technologies, particularly for electronic and noise-cancelling devices. These technologies did not even exist when the current rule was written.
3. New test methods for evaluating HPD for impact and impulse noise environments. These are based largely on a soon-to-be-published ANSI standard (S12.42-200x).
4. Replacing the single-number NRR with a dual-number rating.

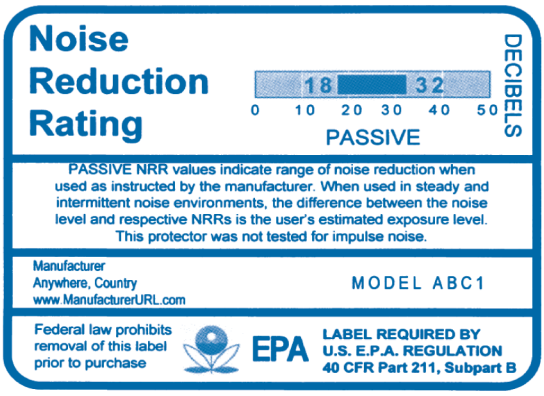



**Figure 1 EPA proposed label**

An example of the dual-number NRR proposed by the EPA is shown in Figure 1. It describes a range of performance based on the range of noise reduction obtained in the laboratory with subjects tested using test method A of ANSI S12.6-2008.

The lower NRR value is the attenuation that 80% of the test subjects achieved or exceeded. The higher value reflects the attenuation obtained or exceeded by 20% of the subjects; those who obtained the best fit in the laboratory test.

This protocol allows the person conducting the tests to train and coach the subjects thoroughly, with no time limit for training. Once the experimenter is confident that the test subject has the ability to properly fit the HPD, the experimenter measures the hearing thresholds of the subject while the HPD is not worn and subtracts those values from the hearing thresholds measured while the HPD is worn. This "threshold-shift" procedure is similar to the one used today and is referred to in the standard as Method A.

EPA gave careful consideration to the alternate test methods such as the "untrained-subject" procedure (Method B from S12.6-2008) but ultimately decided that Method A was more reflective of expected use values and was a consistent test of the properties of the HPD.

continued on page 7

## What Farmers Can Teach Us About Hearing Protector Use… – continued from page 1

informed about the effects of noise exposure on hearing, as well as the impact of hearing loss on work, social, and family life. Participants told us they were motivated to use HPDs by a desire to prevent losing their good hearing, to prevent extension of their hearing loss, or to avoid the annoyance of loud noise. Most of them knew what it was like to have NIHL through their own experience, or that of a close family member, most commonly a parent. Many of them had tried to influence another person's use of HPDs, particularly other family members.

All participants were regular users of HPDs, and most used foam plugs or muffs exclusively, or alternated between these two. As owner-operators, farmers were responsible for their own selection and purchase of HPDs. None reported that the cost was a barrier to their use. Most participants purchased HPDs at a local retail outlet, and were unaware of the variety of types of HPDs available for their use (e.g., semi-aurals, pre-molded plugs). All informants described methods they had developed to overcome problems with access and barriers to use of HPDs. For example, most participants reported that they place a supply of hearing protectors in locations around their farm operation where exposure to noise was likely. Although it is common for farmers to fear failure to hear equipment sounds when they wear HPDs, several interviewees reported that their HPDs enhanced their ability to hear (e.g., in-cab radios and critical equipment sounds). Others adapted alternative methods for monitoring equipment operation (e.g, using gauges and inspections, and being more aware of changes in vibrations that signal equipment malfunction). Many of these frequent users make a practice of purchasing HPDs in bulk, and carry HPD s with them as they move about the farm.

### Conclusions & Implications

Although most farmers have high noise exposure, high rates of NIHL, and low rates of use of HPDs, some farmers are models for using HPDs in their noisy work world. Important lessons were learned from these frequent users. First, consistent use of HPDs in the farm work environment is possible. There are specific methods for overcoming the most common obstacles to farmers' use of HPDs. These videotaped recordings of actual farmers who consistently use HPDs will be used in the development of a future Intervention to increase HPD use among farmers.

This study was supported by NIOSH (R03 OH 008358).

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**Table 1.**

| *Noise Levels of Selected Common Farming Activities (dBA)* | |
|---|---|
| Tractors | 74-112 |
| Grain dryers | 85-110 |
| Combines | 85-105 |
| Chain saws | 77-115 |
| Pig squeals | 85-112 |

Source: Themann, C. (1993). Agricultural noise exposure and control. In D. Pedersen, *Cooperative agricultural surveillance training: Farm family health hazard surveillance program*. Cincinnati, OH: NIOSH.

### Author Biographical Information

*Marjorie McCullagh is Assistant Professor of Nursing and Director of the Occupational Health Nursing Program at the University of Michigan School of Nursing. Her research focuses on promotion of hearing health for farmers and farm families.*

## EPA Proposes Changes to the Noise Reduction Rating for Hearing Protectors… – continued from page 5

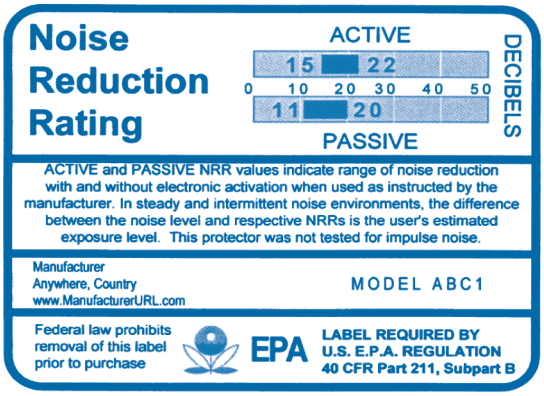


**Figure 2 Proposed label for active/electronic HPD**

When the HPD becomes more complex, so does the label. The proposed label shown in Figure 2, for example, shows how an electronic sound restoration HPD might be labeled, with different ranges for the same device when in active and passive modes. Adding in yet different ranges for the effectiveness of the device for impulsive noises further complicates the label.

At the time of this publication, the effective date for the new EPA rule and the dates when hearing protector manufacturers must begin testing and labeling their HPD according to the new procedures have not been finalized.

### Implications

There has been much discussion about how this new dual-number rating will be used to manage selection of the proper HPD for a given amount of noise exposure. Since the source of the range is the 80th and 20th percentiles, can hearing conservationists be expected to keep track of which of their noise exposed employees do well with using HPD, or will they simply default to the lower number in the range as a conservative estimate? Will OSHA require derating of either of the NRR values when hearing protectors are used in the workplace? Answers to these and similar questions are certainly not clear at this point.

So what is a hearing conservationist to do? In terms of HPD selection, the best approach, regardless of the noise reduction ratings listed on the package, is to provide in-depth training to noise-exposed workers. New research indicates that face-to-face training interaction is the most effective way to get workers to properly fit and use their HPD.

Likewise, many employers are turning to fit testing of hearing protectors to help measure the noise reduction obtained by each employee and identify which employees need additional training in how to fit and wear HPD in the workplace.

Lastly, it's helpful to keep in mind that 90% of all noise exposures commonly encountered in industry are less than 95 dBA TWA. Nearly any hearing protectors that are fit properly and used consistently will provide the 12 to 15 dB of protection necessary to protect the vast majority of noise exposed workers.

## Upcoming 2010

### Upcoming **Course Director** Workshop

Tuesday, February 23, 2010
Rosen Plaza Hotel
Orlando, FL

*This workshop being held prior to NHCA meeting, registration will open December 1, 2009*

## Upcoming 2010

### Upcoming **Professional Supervisor** Workshop

Friday, April 30, 2010
Rosen Shingle Creek Resort
Orlando, FL

*This workshop will be a preconference workshop to the ACOEM meeting. Registration will open December 1, 2009.*

See CAOHC website **www.caohc.org** for further details.

## Cerumen Management… – continued from page 4

### The OHC's role

With appropriate training the OHC will recognize potential cerumen impaction from the otoscopic exam. Under the professional supervisor's guidance and with careful review of contraindications, the OHC may recommend use of ear drops to facilitate cerumen removal. A history of perforation of the tympanic membrane, the presence of myringotomy (PE) tubes, or cerumen impaction in the only hearing ear are universal contraindications for cerumen management by ear canal irrigation; such cases should be referred to the individual's physician or otolaryngologist.[6] Relative contraindications which also suggest need for referral to an employee's physician or otolaryngologist include: recent earache, history of ear surgery, chronic otitis media, drainage, dizziness, diabetes mellitus, AIDS, or any other condition that would put the individual at risk.[4] The OHC may wish to provide the individual with suggested instructions for use of over-the-counter ear drops, for example:

### Suggested Use of OTC Eardrops as Earwax Removal Aid

1. For use in the EAR ONLY: Do not use if the individual has a history of perforation of the eardrum (including myringotomy or tympanostomy tubes) or prior ear surgery unless directed by a doctor, ear drainage or discharge, ear pain, irritation or rash in the ear, dizziness, diabetes mellitus, AIDS, chronic otitis media, or any other condition that would put the individual at risk.
2. Adults and children over 12 years of age: tilt head sideways and place 5-10 drops into the ear (tip of applicator bottle should not enter ear-canal).
3. Keep ear drops in ear for several minutes by keeping head tilted or by placing cotton in the outer part of the earcanal.
4. Use 2 times daily for 3-4 days if needed, or as directed by your doctor or audiologist.
5. Any wax remaining after treatment may be removed by gently flushing the ear with warm water, using a soft rubber bulb syringe.
6. If excessive earwax remains after use of the drops, consult a doctor or audiologist.
7. Children under age 12 should consult a doctor.
8. Do not use for more than 4 days unless directed by a doctor.
9. Avoid contact with the eyes.

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The fall meeting of CAOHC's Council was held in Philadelphia on November 12, 2009. Outgoing chair, Mary McDaniel welcomed new council members Eric Evenson, Theresa Schulz, James Crawford, and Chandran Achutan. Mary also turned the gavel over to CAOHC's new chair Lee Hager. In addition to a new chair CAOHC welcomed its new slate of officers to include; Madeline Kerr as Vice Chair; Robert Bruce will retain the role of Secretary/ Treasurer for an additional two year term, and Laurie Wells will become the new Vice Chair-- Education. Our new slate of officers replaces several who have made outstanding contributions to CAOHC's success, they include; Thomas Hutchison Vickie Tuten as Vice Chair and Vice Chair-Education respectfully.

Our meeting concluded by bidding a sad farewell to our outgoing Chair, James Banach (pictured here) who had served on the Council since 1997. His input will be missed but we know he will never be far away.

The meeting was preceded by a 1/1/2-day Strategic Planning session during which Council members reviewed the Mission and purpose of CAOHC, discussed priorities and developed strategies for the Council that will help keep CAOHC strong and effective in its ongoing quest to promote the conservation of hearing by enhancing the quality of occupational hearing conservation practices. Addition details about the strategic plans for CAOHC will be discussed in upcoming issues of UPDATE.

*Top Row from left: Robert Sataloff, Madeleine Kerr, Diane DeGaetano, Chandran Achutan, David Lee, Theresa Schulz, Lee Hager, Laurie Wells, Kimberly Lefkowitz, Bruce Kirchner, James Crawford*

*Seated Row from left: Kim Breitbach, Robert Bruce, Vickie Tuten, Mary McDaniel, James Banach, and Tom Hutchison (not pictured: Eric Evenson)*

# UPCOMING OCCUPATIONAL HEARING CONSERVATIONIST (OHC) COURSES 2009/10


**Below is a listing as of December 1, 2009. Please note new courses are added daily, check our website at www.caohc.org for the most up-to-date list.**

| Start Date | End Date | City | State | FULL_NAME | Phone |
|---|---|---|---|---|---|
| 12/7/2009 | 12/9/2009 | Honolulu | HI | Dennis T. Sekine, MS CCC-A | 808-781-3533 |
| 12/16/2009 | 12/18/2009 | Salinas | CA | Kirsten R. McCall, AuD CCC-A | 425-254-3838 |
| 12/17/2009 | 12/19/2009 | Anacortes | WA | Donald L. Wolfe, MA | 509-924-3459 |
| 1/5/2010 | 1/7/2010 | Cherry Valley | IL | Robert A. Williams, AuD F-AAA CCC-A | 815-332-3460 |
| 1/6/2010 | 1/8/2010 | Cleveland | OH | Basil Wolfe, AuD | 440-796-4575 |
| *1/7/2010 | 1/7/2010 | Cleveland | OH | Basil Wolfe, AuD | 440-796-4575 |
| *1/6/2010 | 1/6/2010 | Cherry Valley | IL | Robert A. Williams, AuD F-AAA CCC-A | 815-332-3460 |
| 1/6/2010 | 1/8/2010 | Toledo | OH | James J. Jerome, MA CCC-A | 317-841-9829 |
| *1/7/2010 | 1/7/2010 | Toledo | OH | James J. Jerome, MA CCC-A | 317-841-9829 |
| *1/8/2010 | 1/8/2010 | Morrisville | NC | Thomas H. Cameron, PhD CCC-A CPS/A | 919-459-5255 |
| 1/13/2010 | 1/15/2010 | Houston | TX | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| *1/14/2010 | 1/14/2010 | Houston | TX | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| *1/19/2010 | 1/19/2010 | San Diego | CA | Kirsten R. McCall, AuD CCC-A | 425-254-3833 |
| 1/20/2010 | 1/22/2010 | San Diego | CA | Kirsten R. McCall, AuD CCC-A | 425-254-3833 |
| 1/27/2010 | 1/29/2010 | Cleveland | OH | Lynn E. Cook, AuD FAAA | 800-869-6783 |
| *1/28/2010 | 1/28/2010 | Cleveland | OH | Lynn E. Cook, AuD FAAA | 800-869-6783 |
| 1/27/2010 | 1/29/2010 | Seattle | WA | Gaye Chinn, MS CCC-A FAAA CPS/A | 206-764-3330 |
| *1/28/2010 | 1/28/2010 | Seattle | WA | Gaye Chinn, MS CCC-A FAAA CPS/A | 206-764-3330 |
| 1/28/2010 | 1/30/2010 | Fairfield | CA | Charles E. Fankhauser, PhD | 707-746-6334 |
| *1/29/2010 | 1/29/2010 | Fairfield | CA | Charles E. Fankhauser, PhD | 707-746-6334 |
| 2/1/2010 | 2/3/2010 | Indianapolis | IN | James J. Jerome, MA CCC-A | 317-841-9829 |
| *2/2/2010 | 2/2/2010 | Indianapolis | IN | James J. Jerome, MA CCC-A | 317-841-9829 |
| *2/4/2010 | 2/4/2010 | Birmingham | AL | Georgia W. Holmes, AuD CCC-A | 205-934-7178 |
| 2/3/2010 | 2/5/2010 | Birmingham | AL | Georgia W. Holmes, AuD CCC-A | 205-934-7178 |
| 2/3/2010 | 2/5/2010 | Phoenix | AZ | Kathryn M. Deppensmith, MS CCC-A | 800-869-6783 |
| *2/4/2010 | 2/4/2010 | Phoenix | AZ | Kathryn M. Deppensmith, MS CCC-A | 800-869-6783 |
| 2/3/2010 | 2/5/2010 | Alpharetta | GA | Jason M. Feld, MCD CCC-A | 770-475-2055 |
| *2/4/2010 | 2/4/2010 | Alpharetta | GA | Jason M. Feld, MCD CCC-A | 770-475-2055 |
| 2/3/2010 | 2/5/2010 | Atlanta | GA | Melette L. Meloy, MS CCC-A | 678-363-9897 |
| *2/4/2010 | 2/4/2010 | Atlanta | GA | Melette L. Meloy, MS CCC-A | 678-363-9897 |
| 2/8/2010 | 2/10/2010 | Omaha | NE | Thomas W. Norris, PhD | 760-636-4191 |
| *2/10/2010 | 2/10/2010 | Omaha | NE | Thomas W. Norris, PhD | 760-636-4191 |

**indicates a one-day recertification course*

# UPCOMING OCCUPATIONAL HEARING CONSERVATIONIST (OHC) COURSES 2009/10, continued

| Start Date | End Date | City | State | FULL_NAME | Phone |
|---|---|---|---|---|---|
| 2/10/2010 | 2/12/2010 | Loveland | CO | Laurie Wells, AuD, FAAA CPS/A | 970-593-6339 |
| 2/10/2010 | 2/12/2010 | Morrisville | NC | Thomas H. Cameron, PhD CCC-A CPS/A | 919-459-9255 |
| 2/10/2010 | 2/12/2010 | Austin | TX | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| *2/11/2010 | 2/11/2010 | Austin | TX | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| *2/12/2010 | 2/12/2010 | Loveland | CO | Theresa H. Small, AuD | 303-741-2212 |
| 2/15/2010 | 2/17/2010 | St Pete Beach | FL | George R. Cook, Jr., AuD CCC-A | 267-637-6595 |
| *2/16/2010 | 2/16/2010 | St Pete Beach | FL | George R. Cook, Jr., AuD CCC-A | 267-637-6595 |
| 2/22/2010 | 2/24/2010 | Tampa | FL | Herbert J. Greenberg, PhD CCC-A | 813-974-0989 |
| *2/23/2010 | 2/23/2010 | Tampa | FL | Herbert J. Greenberg, PhD CCC-A | 813-974-0989 |
| 2/22/2010 | 2/24/2010 | Chicago/Oak Park | IL | Robert C. Beiter, PhD | 708-445-7171 |
| *2/23/2010 | 2/23/2010 | Chicago/Oak Park | IL | Robert C. Beiter, PhD | 708-445-7171 |
| 2/24/2010 | 2/26/2010 | Kansas City | MO | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| *2/25/2010 | 2/25/2010 | Kansas City | MO | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| 3/3/2010 | 3/5/2010 | Louisville | KY | James J. Jerome, MA CCC-A | 317-841-9829 |
| *3/4/2010 | 3/4/2010 | Louisville | KY | James J. Jerome, MA CCC-A | 317-841-9829 |
| 3/9/2010 | 3/11/2010 | Auburn | MA | Steven R. Fournier, AuD CPS/A | 508-932-8484 |
| *3/10/2010 | 3/10/2010 | Owensboro | KY | Joseph E. Etienne, PhD CCC-A | 270-929-8965 |
| 3/10/2010 | 3/12/2010 | Owensobor | KY | Joseph E. Etienne, PhD CCC-A | 270-929-8965 |
| *3/10/2010 | 3/10/2010 | Minneapolis | MN | Lynn E. Cook, AuD FAAA | 800-869-6783 |
| *3/11/2010 | 3/11/2010 | Minneapolis | MN | Lynn E. Cook, AuD FAAA | 800-869-6783 |
| *3/12/2010 | 3/12/2010 | Morrisville | NC | Thomas H. Cameron, PhD CCC-A CPS/A | 919-459-5255 |
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| 3/24/2010 | 3/26/2010 | Sacramento | CA | Kirsten R. McCall, AuD CCC-A | 425-254-3833 |
| 3/24/2010 | 3/26/2010 | Birmingham | AL | Georgia W. Holmes, AuD CCC-A | 205-934-7178 |
| *3/25/2010 | 3/25/2010 | Birmingham | AL | Georgia W. Holmes, AuD CCC-A | 205-934-7178 |
| 3/24/2010 | 3/26/2010 | Amherst | NY | David Todd Nelson, AuD FAAA CCC-A CPS/A | 716-633-7210 |
| *3/25/2010 | 3/25/2010 | Amherst | NY | David Todd Nelson, AuD FAAA CCC-A CPS/A | 716-633-7210 |
| 3/24/2010 | 3/26/2010 | Houston | TX | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| *3/25/2010 | 3/25/2010 | Houston | TX | Johnny L. Sanders, MA CCC-A | 800-869-6783 |
| 3/25/2010 | 3/27/2010 | Pittsburgh | PA | Roger M. Angelelli, PhD | 412-831-0430 |
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CAOHC would like to offer a sincere thank you to all of the outgoing Council members. Your contributions have been an invaluable asset to the organization.

CAOHC would also like to welcome all of the incoming members who will begin their term at the November Council meeting. The Council looks forward to your contributions and insight.

## CAOHC 2010 Incoming Officers and The Organizations They Represent

**Chair**
Lee Hager
*American Industrial Hygiene Association*

**Vice Chair**
Madeleine Kerr, PhD, RN
*American Association of Occupational Health Nurses*

**Secretary/Treasurer**
Robert Bruce, PE, INCE Board Certified
*Institute of Noise Control Engineering, Inc.*

**Vice Chair-Education**
Laurie Wells, AuD, FAAA, CPS/A
*American Academy of Audiology*

**Past Chair**
Mary McDaniel, AuD CCC-A CPS/A
*American Speech-Language-Hearing Association*

CAOHC-1009-600 *Fall 2009*

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