



Hot Air from EEOP – A Newsletter

Environmental Education Outreach Program (EEOP)
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Web version @
<http://www.nau.edu/eeop/newsletter>

The Newsletter

This newsletter is a service of the Institute for Tribal Environmental Professionals (ITEP) Environmental Education Outreach Program (EEOP). The EEOP staff created this newsletter for K-16 students, educators, and tribal professionals that are interested in learning more about environmental issues with an emphasis on air quality. This newsletter issue will focus on the EEOP internship program and wood stoves.

Student Summer Internship (SSI) – Need Host Sites

The TEEOP staff is recruiting host sites for the 2009 Student Summer Internship (SSI) program. For all of those interested in hosting a summer intern, please visit our website to apply. The sooner we receive the project proposal the better visibility we can offer your organization. We are interested in helping environmental agencies in Indian Country do air quality monitoring, data analysis, emissions inventories, and develop community air quality outreach programs. regional EPA offices, state environmental offices, tribal environmental agencies, and others are eligible to apply. Host sites that apply early will be featured on our website, so that students can identify the projects they are interested in. Shortly after January 15th the host site applications will be posted on the EEOP website.

Successful host site applications will outline an appropriate air quality project. The project should go beyond general secretarial/clerical support but be feasible for a student with a ten week time line. The project must have an identifiable supervisor/mentor that is on location and committed to the interns' professional and academic development. The supervisor/mentor should ensure there is sufficient space, facilities and resources to support the project. The application should describe the type of project the student will be working on and how it relates to air quality. An outstanding application will describe the activities in which the student will be involved and provide a brief work-plan.

If you have questions about the internship program, contact the EEOP staff.

Recruitment for the 2009 Student Summer Internship (SSI) Program

The EEOP staff is actively recruiting interns for Summer 2009. The deadline for student intern applications is Feb 15th. There is an online application that should be completed, followed by several additional documents that can be mailed to the EEOP office. When completing the online application, please use good sentence structure and good grammar. We suggest preparing the text in a word processor, then cut and paste into the online application. All the documents submitted will be evaluated to create a picture of your communications abilities.

After the 15th, the EEOP staff will begin the process of placing an intern with each of the selected host sites. The staff will select the potential host sites, then match several interns to each host site. The staff at the host sites will interview the interns and select the intern of their choice. If the intern agrees, we have a match. If the intern does not accept the position, the process continues. Some interns may participate in several interviews.

If you would like more information about the Student Summer Internship (SSI) program please contact Matthew Zierenberg or visit the EEOP website.

Wood Stoves

Many tribal communities rely on wood stoves for heating homes. Unfortunately burning wood pollutes the air both inside and outside the home. If possible, community members should be encouraged to convert to cleaner technologies for heating their homes. However, in many cases tribal members use wood burning stoves because it is an economical way to heat their homes. If switching to alternative energy sources is not a viable option, then a stove change-out might help reduce pollutants both inside and outside, particularly if tribal members are using pre-1992 wood stoves.

Pre-1992 wood stoves have limited controls on smoke emissions. In contrast, newer, EPA certified stoves can cut emissions by over 70 percent. In areas where there is a concentration of the older stoves and where there are atmospheric conditions like inversions, smoke from these dirty stoves can cause an ambient air quality problem. Air pollutants from wood burning stoves can also cause problems indoors. The pollutants might be an asthma trigger and there is evidence that smoke from wood stoves potentially cause a variety of respiratory problems.

Smoke is made up of a complex mixture of gases and fine particles produced when wood and other organic matter burn. The biggest health threat from smoke comes from fine particles (also called particulate matter or PM). These microscopic particles can get into your eyes and respiratory system, where they can cause health problems such as burning eyes, runny nose, and illnesses such as bronchitis. Fine particles also can aggravate chronic heart and lung diseases—and are linked to premature deaths in people with these chronic conditions.

Some people are more susceptible than others. If you have heart or lung disease, such as congestive heart failure, angina, chronic obstructive pulmonary disease, emphysema or asthma, you may experience health effects earlier and at lower smoke levels than healthy people. Older adults are more likely to be affected by smoke, possibly because they are more likely to have chronic heart or lung diseases than younger people. Children are also more susceptible to smoke for several reasons: their respiratory systems are still developing; they breathe more air (and air pollution) per pound of body weight than adults; and they're more likely to be active outdoors.

The Hearth, Patio & Barbecue Association (HPBA) – in partnership with the U.S. Environmental Protection Agency (EPA), local governments and industry partners – supports the Wood Stove Changeout Program. This innovative program helps communities reduce emissions by providing consumers with incentives to remove old, dirty-burning wood stoves or wood heating appliances, and replace them with clean, efficient new heating appliances. The first community to benefit from this partnership was the Libby Montana community.

In the winter of 2003 – 2004 the University of Montana conducted a study that found that wood smoke contributed approximately 80 percent of fine particulate matter in the town's immediate atmosphere. While all new stoves and fireplace inserts sold in the U.S. are certified to be low-particulate emitting according to strict standards set by the U.S Environmental Protection Agency (EPA), most Libby homeowners installed their stoves long before the standards took effect in 1992. These older, uncertified stoves can release from 15 to 30 grams of smoke per hour, while new EPA-certified stoves produce only 2 to 5 grams, a 65 percent to 90 percent reduction.

After changing out 1,130 wood stoves in a little over two years another University of Montana study showed that Libby residents were breathing significantly cleaner air – both outdoors and inside their homes. By 2007, average wintertime fine particulate levels in the outdoor air decreased by nearly 30 percent. The results are even more dramatic for indoor air quality with initial research by the University of Montana finding indoor air more than 70 percent cleaner in homes with new, EPA-certified stoves.

Tribal communities are also benefiting from wood stove change-outs. The Nez Perce Tribe Environmental Restoration and Waste Management Division's Air Quality Program in collaboration with the University of Montana, Center for Environmental Health Sciences, received funding from the U.S. Environmental Protection Agency to conduct a woodstove study and woodstove change-out for 16 homes on the Nez Perce Reservation during winter/spring 2007 and winter/spring 2008.

Participants in the project are tribal member residences that are nonsmoking, use an older model woodstove as the primary source of heat, and have a child between the ages of 6 and 17 with asthma or a respiratory-related illness. The purpose of the study was to measure the change of indoor and outdoor air quality before and after a woodstove change-out. The first winter season established baseline indoor air quality and baseline ambient air quality. After these baseline conditions were established, the old woodstoves were removed and new EPA certified woodstoves were installed. After the new woodstoves were properly installed and adjusted, indoor and outdoor air quality are measured and compared to baseline conditions.

Three air quality interns funded through the EEOP Short Internship Program (SIP) are helping conduct the sampling in the Nez Perce homes. The EEOP staff is interested in involving more interns in woodstove change-out programs for other tribes. The EPA website has additional information on wood stove change-outs: <http://www.epa.gov/woodstoves/>

I-Pods at the Office

Younger workers are bringing their I-Pods to work and plugging in. A 2006 Harris Interactive Poll found that nearly 90 percent of younger employees say music improves their job satisfaction and productivity. About one-third of employees were plugged into personal music devices at work. Many managers believe that ear-buds are unprofessional. They feel that ear-bud wearers are isolating themselves from their co-workers. (As a teacher, I find ear-buds offensive when I am trying to give instructions or lead a discussion.) Currently most companies don't have policies to address I-Pod use, however in the future there may be more policies, if employees continue to abuse the use of ear-buds.

Meanwhile, perhaps we need a little ear-bud etiquette. If you chose to use ear-buds here are some suggestions that may help your older co-workers and managers tolerate them more.

- Answer your phone quickly.
- Be responsive to co-workers and supervisors.
- Don't wear ear-buds during a meeting.
- When talking with a co-worker or supervisor remove BOTH ear-buds and turn off the device.
- Don't sing along with your music, this is distracting to your co-workers.

Student Design Competition for Sustainability

EPA requests proposals for the 6th Annual P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet. This program supports science-based designs developed by interdisciplinary student teams that benefit people by improving their quality of life, promoting prosperity by developing local economies, and protecting the planet by conserving resources and minimizing pollution. P3 seeks to respond to the technical needs of the world while moving towards the goal of sustainability. Areas of interest include: Agriculture, Materials and Chemicals, Energy, Information Technology, Water, and the Built Environment. \$950K is expected to be available and up to 50 awards are anticipated. Responses due December 23. For more information, contact Cynthia Nolt-Helms at nolt-helms.cynthia@epa.gov or go to: http://es.epa.gov/ncer/rfa/2009/2009_p3.html

Communications

The EEOP staff offers a variety of communications. The EEOP website provides information about programs. We also have a list-serve for sharing information on internships, programs, scholarships, as well as EEOP services and projects. If you would like to join the list-serve send an email to mansel.nelson@nau.edu.

Future Issues

We are interested in articles sharing stories from students, teachers, or tribal professionals influenced by ITEP or EEOP activities. If you would like to see a topic or theme addressed in the newsletter, contact one of the EEOP staff with your ideas and recommendations.

Credits and Contacts

The US Environmental Protection Agency (USEPA) Office of Air and Radiation provides part of the funding to make this newsletter possible. The newsletter is disseminated on various list serves, however, if you would like to join the newsletter list serve, contact Mansel.

Our staff looks forward to providing new services and developing new programs, as well as continuing existing programs. We especially look forward to hearing from you. So please visit our website at <http://www.nau.edu/eeop> or contact us via telephone or email.

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