



Hot Air from EEOP – A Newsletter

Environmental Education Outreach Program (EEOP)
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The Newsletter

This newsletter is a service of the Institute for Tribal Environmental Professionals (ITEP) Environmental Education Outreach Program (EEOP). We've created this newsletter specifically for K-16 students, educators, and tribal professionals that are interested in learning more about environmental issues with a focus on air quality. The newsletter will also contain information about EEOP programs and activities.

Air Quality in Alaska

Recently the Senior EEOP Program Coordinator spent three weeks in Alaska providing air quality education and outreach. He was the lead instructor and facilitator for two air quality training courses for village environmental coordinators. The purpose of the courses was to prepare the village environmental coordinators to address air quality issues in their respective villages. The third week was spent working with a school and community in Ouzinkie.

The Ouzinkie Village Environmental Coordinator, Katherine Ellanak, invited the EEOP staff to Ouzinkie in order to increase awareness of asthma and asthma triggers. While in Ouzinkie the Senior Coordinator did an Indoor Air Quality (IAQ) Building Assessment on the school building and provided presentations on asthma.

Asthma is a serious, sometimes life-threatening respiratory disease that affects the quality of life for millions of Americans. Although there is no cure for asthma, asthma can be controlled through medical treatment and management of environmental triggers. The EEOP staff is interested in educating all Native Americans about asthma so that everyone knows what asthma is, how the environment can affect asthmatics, and how to manage environmental asthma triggers. We can all help asthmatics reduce their exposure to asthma triggers.

Indoor Air Quality

In the last several years, a growing body of scientific evidence has indicated that the air within buildings can be more seriously polluted than the outdoor air in even the largest and most industrialized cities. Other research indicates that people spend approximately 90 percent of their time indoors. Thus, for many people, the risks to health may be greater due to exposure to air pollution indoors than outdoors.

Immediate effects may show up after a single exposure or repeated exposures. These include irritation of the eyes, nose, and throat, headaches, dizziness, and fatigue. Such immediate effects are usually short-term and treatable. Sometimes the treatment is simply eliminating the person's

exposure to the source of the pollution. Symptoms of some diseases, including asthma, and hypersensitivity pneumonitis, may show up soon after exposure to some indoor air pollutants.

The likelihood of immediate reactions to indoor air pollutants depends on several factors. Age and preexisting medical conditions are two important influences. In other cases, whether a person reacts to a pollutant depends on individual sensitivity, which varies tremendously from person to person. Some people can become sensitized to biological pollutants after repeated exposures, and it appears that some people can become sensitized to chemical pollutants as well.

Some effects are made worse by an inadequate supply of outdoor air or from the heating, cooling, or humidity conditions prevalent in the building. Proper ventilation is one of the essential ways to reduce air pollutants in buildings.

Other health effects may show up either years after exposure has occurred or only after long or repeated periods of exposure. These effects, which include some respiratory diseases, heart disease, and cancer, can be severely debilitating or fatal. It is prudent to try to improve the indoor air quality in your home even if symptoms are not noticeable.

The EEOP staff is interested in working with school and tribes to improve Indoor Air Quality (IAQ) in tribal schools and buildings.

Youth Leadership Conference

On June 8 over 60 Native American students descend on the Northern Arizona University (NAU) campus. The EEOP staff is working with an organization called “Futures for Children” to conduct a conference on sustainability. The students learned about different aspects of sustainable living. The students participated in presentations by Dr. George Koch, NAU biologist, who led a discussion on the impacts of global climate change on the southwestern ecosystems, and Arnold Clifford, Navajo ethno-botanist, who led a discussion on plant and soil conservation in the four corners region. The EEOP staff covered water conservation and renewable energy.

The goal of this program is to inspire and encourage these student leaders to take an active role in promoting sustainable living practices in their respective communities. All participating students have been actively engaged in providing youth leadership in communities around the four corners region for the past year.

The EEOP staff will be seeking additional opportunities to collaborate with the Future for Children staff on additional projects and programs. The EEOP staff is interested in collaborating with other organizations with common goals.

Sustainability

Sustainability is defined by its proponents as balancing the fulfillment of human needs with the protection of the natural environment so that these needs can be met not only in the present, but in the indefinite future. The field of sustainability can be conceptually broken into four constituent parts: environmental sustainability, economic sustainability, social sustainability, and political sustainability.

Sustainability marries two important themes: that environmental protection does not preclude economic development and that economic development must be ecologically viable now and in the long run. This concept of sustainability encompasses ideas, aspirations and values that continue to inspire public and private organizations to become better stewards of the environment and that promote positive economic growth and social objectives. The principles of sustainability can stimulate technological innovation, advance competitiveness, and improve our quality of life.

Sustainability will be the theme of Summer Scholars 2007 and Summer Scholars 2008. Teachers and students will learn about principles of sustainability, then they will be encouraged to seek opportunities to increase the sustainability of their school campus.

Internships: Indoor Air Quality – Short Internship Program (IAQ-SIP)

The EEOP staff is planning workshop sessions to work with tribal professionals and students on Indoor Air Quality (IAQ). The EEOP staff will be collaborating with the Southwestern Indian Polytechnic Institute (SIPI) in Albuquerque, New Mexico and Makah Nation in Neah Bay, Washington.

The workshop sessions will prepare students and tribal environmental professionals to understand the impact of poor Indoor Air Quality (IAQ) on human health. The training will cover issues such as radon, carbon monoxide poisoning, asthma triggers and general air quality monitoring and remediation. The workshops will include doing an IAQ Building Assessment of a public building or school.

Following the education portion of the internship, the students will work with the Tribal Environmental Professional in their local community to complete a 20 hour internship. This 20 hour internship will include one or more building assessments, which will involve taking scientific measurements and making observations on building conditions that might impact on air quality.

The EEOP staff will also be planning a workshop for teachers to learn about Indoor Air Quality and introducing an Indoor Air Quality curriculum from Oregon State.

Wildlife in Native Schools (WINS) Program

The EEOP Wildlife in Native Schools (WINS) 2007 is coming to a close, but hopefully will be carried on by the students and their teachers that were involved in the program.

The EEOP staff would like to thank all of those that helped to make the WINS program a huge success. Thanks to a grant from the Arizona Game and Fish Department's Heritage Program the EEOP staff was able to work with over 600 students, 25 teachers, 10 schools and 5 organizations.

The goals of this program were to bring wildlife education into classrooms around the state, as well as get students out observing wildlife in their communities. This was accomplished through providing teachers training and materials to encourage personal observation of wildlife, preparing and delivering classroom presentations in conjunction with WINS sponsored community wildlife viewing events. Through these and other activities WINS has helped to foster the enjoyment of wildlife viewing and respect for wildlife that will last a lifetime.

One of our many stories that came from visiting schools across the Navajo Nation, illustrates how a little knowledge can be turned to action for good. While observing an Occult Little Brown Bat, (*Myotis occultus*) near an entrance of their school, a kindergarten class was being very quiet so as not to disturb the bats slumber. A group of older boys walked up noisily and asked what was going on. One little girl whispered, “Quiet, there is a bat sleeping up there.” One of the older boys said “Where? Let’s kill it!”

The entire kindergarten class quickly encircled the older boys and effectively ushered the “would be tormenters” off the premises, with words of scolding and teaching about how the bats eat bugs, should be treated with respect, and that you shouldn’t kill wildlife.

It was wonderful to see these little protectors of nature at work. Hopefully they can carry this knowledge and understanding with them through-out their lives.

Schools that participated in the WINS program:

Ganado Middle School	Cottonwood Day School
Rocky Ridge Boarding School	Chinle High School
San Carlos High School	Shonto High School
Tuba City Junior High School	Shonto Middle School
Red Mesa high School	Navajo Elementary

Thanks to the organizations that helped during WINS:

High Country Raptors of Flagstaff	Dine’ Office of Fish and Wildlife
Canyon De Chelly National Park	Office of Dine’ Science, Math and Technology
Navajo National Monument	

The EEOP staff would like to extend special thanks to the Arizona Game and Fish Department and the Heritage Fund for the funding and other resources used in the program.

The EEOP staff will be seeking funding to continue the WINS program.

Future Issues

We are also interested in publishing articles from you. We are interested in articles sharing stories from students, teachers, or tribal professionals influenced by ITEP or EEOP activities.

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.nelson@nau.edu.

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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