



**NORTHERN ARIZONA
UNIVERSITY**

College of Engineering, Forestry & Natural Sciences

Institute for Tribal Environmental Professionals
Environmental Education Outreach Program

PO Box 5768
Flagstaff, AZ 86011

928-523-1496

IAQ Management in Housing Fact Sheet

Housing conditions can significantly affect health of occupants. Childhood lead poisoning, injuries, respiratory diseases such as asthma, and quality of life issues have been linked to housing design and operation around the nation. Other issues of concern include exposure to pesticide residues, indoor toxicants, tobacco smoke, and combustion gases. The burning of oil, gas, and kerosene can release a variety of combustion products, including carbon monoxide, a known cause of illness and death.

Indoor pollution sources that release gases or particles into the air are the primary cause of indoor air quality problems in homes. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the home. High temperature and humidity levels can also increase concentrations of some pollutants. Several factors can contribute to poor IAQ in homes.

Some of the common problems that contribute to poor IAQ include:

- Radon
- Inadequate ventilation
- Pets
- Excess moisture and mold
- Cleaning materials
- Personal care products
- Odors and volatile organic compounds from paint, caulk, and adhesives
- Insects and other pests
- Odors from trash
- Diseases

Well built homes, operated by occupants who understand the proper care and maintenance of their home, can significantly improve air quality in the home. There are a number of resources to help with making decisions about home building and maintenance, as well as resources for educating occupants.

<http://www.epa.gov/iaq/homes/index.html>

<http://www.cdc.gov/healthyhomes/>

http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/hhi

<http://www.nchh.org>

http://www.hud.gov/offices/lead/library/hhi/HYHH_Booklet.pdf



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Occupant:

The Institute for Tribal Environmental Professionals (ITEP) at Northern Arizona University (NAU) serves tribal nations to protect natural resources and to provide educational programs. One ITEP program is the Indoor Air Quality in Tribal Communities (IAQTC), which provides services to tribal housing offices, schools and communities. The ITEP staff is conducting an Indoor Air Quality (IAQ) training in partnership with the Sisseton Waheton Oyate Tribe Indian Tribe. As part of the training, we need to conduct an IAQ Home Assessment. We would appreciate being able to use your home as an extension of the classroom.

The home assessments can provide suggestions for housing staff or the occupant on how to improve air quality in a home. If the residents are available, the assessment can also provide feedback to the occupants on the operation of the home. The assessment is not an inspection; it is an opportunity to educate the housing staff and occupants on ways to improve air quality throughout the home. The IAQ Assessment involves evaluating the home in terms of indoor environmental conditions that have potential impacts on occupant health, safety, comfort, performance, and quality of life. The assessment includes a review of the cleaning chemicals used in the home, as well as a check for carbon monoxide. We also like to check ventilation throughout the home. A review of all storage spaces is an essential part of the assessment. During the assessment the ITEP staff may propose basic recommendations to upgrade current practices, as well as suggest modifications and/or renovations to the home that will improve the indoor environment. The recommendations are intended as a guide to improve the indoor environment to a basic "good practice" level.

During the assessment, we would be using instruments such as a CO₂ monitor (ppm), a CO monitor, tracer smoke, thermometer, and a humidity meter to take some basic measurements. Any data or information collected during the assessment is for the home-owner or tribal housing office, not for public dissemination. The assessment is a voluntary program with no regulatory enforcement authority. Data from the assessment is not reported to the USEPA or any other regulatory agency.

Occupants that participate in the assessments will receive an Air Matters Kit, which provides basic tools and materials to help maintain a healthy home. If you have any questions about the training program or the assessment process or outcomes, please contact me at 928 523 1275 or mansel.nelson@nau.edu.

Sincerely,

Mansel A. Nelson
Program Coordinator