

Impacts on Indoor Air Quality and Tribal Housing

National Tribal Forum Meeting
May 3, 2017

Chris Griffin
Indoor Environments Division
US Environmental Protection Agency
Washington, DC



Overview

- I. Why be concerned of bad IAQ?
- II. IAQ Health Effects on Tribes and Housing
- III. What EPA is Doing with IAQ and Tribes?

Indoor Air Quality

Why Be Concerned?

Poor IAQ is a major environmental health risk

- Many people spend as much as 90 percent of their time indoors.
- Pollutant levels can be 2 to 5 times higher indoors; sometimes 100 times higher.

IAQ Health-Related Impacts

- More than 25 million people, including 7.1 million children, have asthma
20-50% increased risk of asthma in damp houses
- More than 20,000 people die from radon induced lung cancer every year
- More than 40,000 people die of cancer and cardiovascular disease from secondhand smoke expose every year
- Pesticides, particular matter (PM), Volatile Organic Compounds (VOCs), Carbon Monoxide (CO) and more



Source: Children's Dayton Hospital



Source: University of Vermont

IAQ Health Effects and Tribal Housing

- 22% (1.144M) of 5.2 Million Native Americans reside on tribal lands (US Census 2010)
- 90,000 Native Americans are homeless or under housed (Indian Country Today 2004)
- 30% of Indian housing is overcrowded (Indian Country Today, 2004)
- Infant death rates are 60% higher than for Caucasians (2001, HHS Office of Minority Health)
- 218,000 American Indian/Native American adults reported that they currently have asthma (2014, HHS Office of Minority Health)
- 21.9% of AI/AN adults in the United States smoked cigarettes, compared with 15.1% of U.S. adults overall. (CDC -2015)
- 19.0% among AI/AN men and about 24.0% among AI/AN women smoke (CDC-2015)
- AI/AN have the highest smoking rates during pregnancy (26.0%) (CDC-2015)
- AI/AN women have the highest smoking prevalence after delivery (40.1%) (CDC-2015)

What is EPA Doing to Respond to Tribes' IAQ and Healthy Homes Priorities?

IED Tribal IAQ Program Efforts:

- **Federal Tribal Collaboration – Healthy Homes Initiative:**
 - Housing and Urban Development (HUD)
 - Health and Human Services (HHS)/ Indian Health Service (IHS)
 - USDA – Rural Development
- **Tribal IAQ Cooperative Agreements/Grants:**
 - Northern Arizona Univ./Institute for Tribal Professionals (NAU/ITEP)
 - Upper Mid-West American Lung Association (ALA)
 - Radon Tribal Grants
- **Tribal Stakeholders/Partnerships:**
 - National Tribal Air Association (NTAA) – IAQ Subcommittee Workgroup
 - Tribal Green Building Code Toolkit/Workgroup
 - Tribal Healthy Homes Northwest (THHNW)
 - Alaska Native Tribal Health Consortium (ANTHC)

Key Things We are Trying to Accomplish:

- Institutionalize IAQ risk reduction guidance in National Tribal Housing Grant Program Policies
- Tribes and Tribal Designated Housing Entities (TDHE) will leverage grant criteria to request funding for eligible IAQ activities in Tribal housing.
- Increase more Tribal housing training/technical assistance focused on IAQ education, outreach efforts.
- Encourage use of IAQ guidance for Tribal builders/ contractors on new and renovated housing.
- Proper training on tools for conducting assessments and interventions.

Where do we want to be a year from now?

Where we want to be in a year:

Sub-Goal: Identify and utilize data which will allow team to accurately track how many (new/modified) homes are being built with IAQ interventions w/federal grant funds yearly.

Current Tribal Housing Data:

825K Occupied Tribal Housing Units for AI/AN – (Owned and Rented) -2015

810K Occupied Tribal Housing Units for AI/AN – (Owned and Rented) -2010
(*American Community Survey/US Census*)

Resources and Tools to Support Tribal IAQ and Healthy Homes Efforts

Professional Guidance and Training

Moisture Control



IAQ Master Class Professional Training Webinar Series



Health, Energy, and Climate IAQ Guidelines

Single Family



Schools



Multifamily



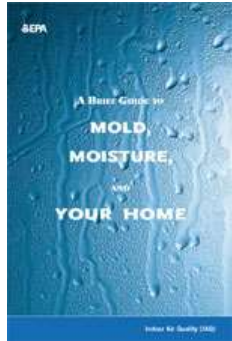
Tools and Resources

www.epa.gov/indoorairplus

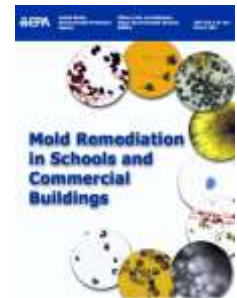
- Facebook
- Twitter
- YouTube Videos
- Mobile App
- Podcasts



Mold and Moisture Resources

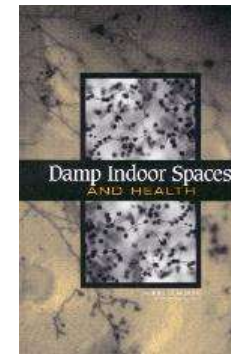


- *Indoor Environments Division Mold Website*
www.epa.gov/mold
- *HUD Healthy Homes Mold/Moisture Website*
http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/healthyhomes/mold
- *Mold Remediation in Schools and Commercial Buildings*
www.epa.gov/iaq/molds/mold_remediation.html
- *New: A Brief Guide to Mold, Moisture, and Your Home*
www.epa.gov/iaq/molds/moldguide.html
- *Guidance for Clinicians on the Recognition and Management of Health Effects Related to Mold Exposure and Moisture Indoors*
www.oehc.uchc.edu/cieh.asp



Mold and Moisture Resources

- National Academy of Sciences Damp Indoor Spaces Report
<http://books.nap.edu/catalog/11011.html>
- IAQ Scientific Findings Resource Bank - Indoor Dampness, Mold, and Health
www.iaqscience.lbl.gov/dampness-summary.html
- Online mold course –Introduction to Mold and Mold Remediation for Environmental and Public Health Professionals www.epa.gov/mold/moldcourse/index.html



www.epa.gov/iaq

Where do we go from here:

Two questions to process together:

- What did you hear that was new and important to you and what will you do with that information to help you with your work?
- What would you like EPA to do to help your Tribe(s) to address the impact climate change may be having on indoor air quality in your community?

The Approach:

Two rounds – one for each question:

At your table:

- 1 – minute: quiet time to organize your thoughts into 30-second “lightning talk”
- 3 – minute: share your “lightning talks”
- 2 – minute: discuss the “best thing” you learned
- 1 – minute: decide on 1 “best thing” to share

Full Group:

- Will have 3-4 tables share their example