

# Tribal Air Monitoring Outlook

US EPA/R&IE/CIE



TAMS Center

February 2010  
Editor: Polly Hennessey

## TAMS Climate Change Toolkit A Beginning Resource for the Future



*TAMS  
A Tribal Climate Change Resource*

Stephanie Cheaney (see her profile below), the Environmental Protection Agency's (EPA) Tribal Air Coordinator for Region 5, recently spent several months at the Tribal Air Monitoring Support Center (TAMS) in Las Vegas, NV, developing a Climate Change ToolKit to provide better understanding and guidance to interested Tribes on how to meet the needs and challenges of global climate change. The ToolKit emphasizes the steps necessary for Tribes to make informed decisions. These steps include:

- ◆ Funding
- ◆ Education
- ◆ Outreach
- ◆ Implementation

**Funding:** One of the quickest ways to find current funding opportunities is to go to [www.grants.gov](http://www.grants.gov). This is the access point for over 900 grant programs. The US Department of Health and Human Services (HHS) is the "managing partner" for this site. EPA has several funding sources available: Source Reduction Assistance, [www.epa.gov/p2/pubs/grants/srap10.pdf](http://www.epa.gov/p2/pubs/grants/srap10.pdf); American Recovery and Reinvestment Act of 2009: A Guide to Renewable Energy and Energy Efficiency Opportunities for Local and Tribal Governments; [www.epa.gov/cleanenergy/documents/local\\_guide\\_to\\_arra.pdf](http://www.epa.gov/cleanenergy/documents/local_guide_to_arra.pdf); American Indian Tribal Portal, [www.epa.gov/tribalportal/grantsand\\_funding/index.htm](http://www.epa.gov/tribalportal/grantsand_funding/index.htm). Tribal grants can also be accessed through the Tribal Energy Program website of the US Department of Energy (DOE), [www.eere.energy.gov/tribalenergy/governmentgrants.cfm](http://www.eere.energy.gov/tribalenergy/governmentgrants.cfm). This site also provides links to the Department of the Interior (DOI), US Department of Agriculture (USDA), Department of Commerce (DOC), and Housing and Urban Development (HUD).

For Tribes seeking financial assistance to combat global warming federal grants are available and the sites listed above can be a beginning resource.

## Education and Outreach:



The Tribal community's awareness of renewable and efficient energy development is a valuable tool towards understanding the science behind global warming. With knowledge comes the ability to make informed decisions and to strive towards reaching a higher level of environmental quality on Tribal lands. EPA, other federal agencies and the Institute for Tribal Environmental Professionals (ITEP) have program websites that provide detailed information on many of the climate change and renewable energy problems facing Tribes. A few of them are listed below:

Tribal Energy and Environmental Information Clearinghouse (TEEIC): The US Department of the Interior is funding the development of the TEEIC through the Assistant Secretary of Indian Affairs' Office of Indian Energy and Economic Development: <http://teeic.anl.gov/index.cfm>.

Institute of Tribal Environmental Professionals and Northern Arizona University (NAU): <http://www4.nau.edu/tribalclimatechange/Index.asp>.

Energy Kids, US Energy Information Administration: Kids can learn about energy and the role it plays in our daily lives, the economy and the environment: <http://tonto.eia.doe.gov/kids>.

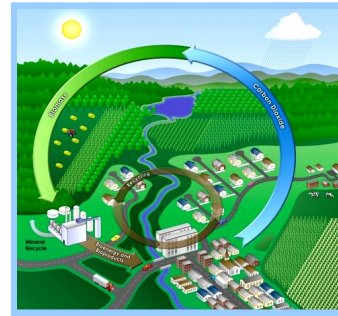
American Recovery and Reinvestment Act (ARRA) of 2009: A Guide to Renewable Energy and Energy Efficiency Opportunities for Local and Tribal Governments. The US EPA ARRA will directly foster improved energy efficiency and increased production and use of renewable energy sources through grants and loans for specific projects....” Signed into law on February 17, 2009: [www.epa.gov/cleanenergy/documents/local\\_guide\\_to\\_arra.pdf](http://www.epa.gov/cleanenergy/documents/local_guide_to_arra.pdf).

Natural Resource Conservation Service-US Department of Agriculture (NRCS): Stewardship Incentive Program (SIP) provides technical and financial assistance to qualifying lands which includes rural lands with existing tree cover or land suitable for growing trees and which is owned by a private individual, group, association, corporation, Indian tribe or other legal private entity: [www.nrcs.usda.gov/programs/sip](http://www.nrcs.usda.gov/programs/sip).

# Implementation

The methods for carrying out the implementation of resources necessary to meet the challenges of climate change.

**Biomass**  
**Solar**  
**Wind**  
**Geothermal**  
**Wave**  
**Weatherization**  
**Sustainable Agriculture**  
**Sustainable Construction**



*Biomass: plant material, vegetation or agricultural waste used as a fuel or energy source.*



*Solar energy from the sun that is converted into thermal or electrical energy.*



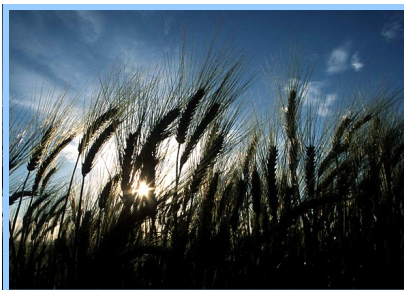
*Wind is a renewable energy source.*



*Energy of oceanic waves that can be used to generate power and electricity.*



*Energy from the heat stored in the earth's core and heat from the sun warming the earth.*



*Environmentally friendly methods of farming that allow the production of crops or livestock without damage to the farm as an ecosystem.*



*Modification to a building to reduce energy consumption and optimize energy efficiency.*



*Green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment.*

The TAMS Climate Change Toolkit was created to guide tribes through the available resources of renewable energy technologies using a four-pronged approach. This approach is aimed at enhancing the ability of Tribes to adapt to the environmental issues surrounding the values of sustainable living. For more information on this subject, please contact Farshid Farsi or Christopher Lee, co-Directors of TAMS. Farshid can be reached at 702-784-8263 or [farsi.farshid@epa.gov](mailto:farsi.farshid@epa.gov) and Chris at 702-784-8278 or [Christopher.Lee@nau.edu](mailto:Christopher.Lee@nau.edu).



*Stephanie Cheaney,  
EPA, Region 5*

Stephanie Cheaney is the Tribal Air Coordinator at EPA's Region 5, Chicago, IL, office, Air and Radiation Division, Air Programs Branch, State and Tribal Planning Section. Region 5 serves the states of Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin and 35 Tribes.

Before coming to EPA, Stephanie was a Biological Sciences/Pre-Medicine student at the University of Illinois at Chicago, where she did an internship in the Mason-Gamer Ecology Lab performing DNA extraction on plant material. Prior to college she was an active duty Hospital Corpsman in the US Navy serving at the Naval Hospital, Keflavik, Iceland, where she worked in Emergency Medicine and Emergency Flight Evacuation (MedEvac).

If you would like more information about Region 5's Tribal Planning Section or the TAMS Climate Change Toolkit, please call Stephanie at 312-886-3509 or [cheaney.stephanie@epa.gov](mailto:cheaney.stephanie@epa.gov).

## Did you Know?



One ton of recycled paper can save:

- 17 trees
- 380 gallons of oil
- three cubic yards of landfill space
- 4,000 kilowatts of energy
- 7,000 gallons of water!



**Please  
Recycle  
Here** →

The average American uses 650 pounds of paper each year—100 million tons of wood could be saved each year if all that paper was recycled.





## **AIAQTP/TAMS Training Courses**

### **Tribal Data Toolbox**

April 6-9, 2010

TAMS Learning Center, Las Vegas, Nevada

### **Indoor Air Quality in Alaska**

April 13-16, 2010

Bethel, Alaska

### **Practical GIS for Air Quality Applications**

(Limited enrollment)

April 27-29, 2010

Tahlequah, Oklahoma

### **Air Quality System (AQS)**

May 25-27, 2010

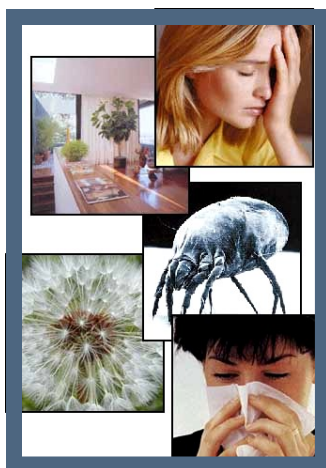
TAMS Learning Center, Las Vegas, Nevada

## **Indoor Air Quality in Alaska Level I**

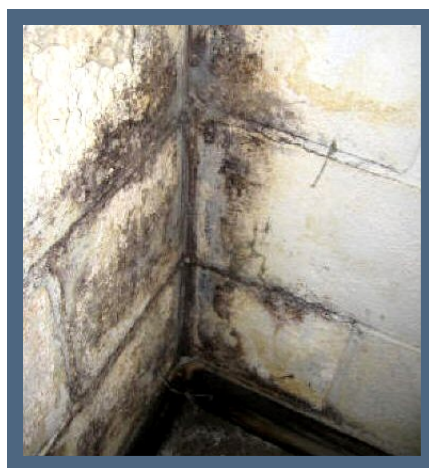
This Level 1 course is entry level and provides a basic understanding of common indoor air quality (IAQ) problems in village homes and schools. The course includes an overview of indoor air pollutants and their health effects and appropriate tips for solving IAQ problems. The course is directed primarily toward the air quality issues concerning Alaska villages. The major concerns voiced by Native Alaskans include dust, mold, burning and indoor air quality. The course itself consists of lectures, a tribal case study, demonstrations, small-group activities, and a building walkthrough. Also included will be hands-on practice with a comprehensive assessment tool used to identify IAQ problems.

## Course Topics include:

- Indoor Air concerns in tribal communities
- Overview of home construction and fundamentals of building science
- Mold and its health effects
- IAQ pollutants and cancer
- Household hazardous materials
- Combustion products
- Comprehensive assessment tool for identifying IAQ problems
- Equipment for assessing IAQ
- Outreach: prevention of IAQ problems
- Collaboration and resources



*Indoor air concerns*



*Mold found in buildings*



*Household hazardous materials*

**Indoor Air Problems:** “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.” *Source: US EPA, Indoor Air Quality.*

**Molds:** “Molds can be found almost anywhere; they can grow on virtually any organic substance, as long as moisture and oxygen are present....When excessive moisture accumulates in buildings or on building materials, mold growth will often occur, particularly if the moisture problem remains undiscovered or unaddressed....” *Source: US EPA, Indoor Air Quality, Mold and Moisture.*

**Household Hazardous Waste:** “Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be ‘household hazardous waste’ (HHW). Products, such as paints, cleaners, oils, batteries and pesticides, that contain potentially hazardous ingredients require special care when you dispose of them.” *Source: US EPA, Household Hazardous Waste.*

For more information on the Indoor Air Quality in Alaska course, please contact Lydia Scheer, 928-523-6887 or [Lydia.Scheer@nau.edu](mailto:Lydia.Scheer@nau.edu). For other courses listed, contact Lee Rose, 702-784-8264 or [Lee.Rose@nau.edu](mailto:Lee.Rose@nau.edu).

## Chris Lee TAMS co-Director



*Chris Lee at the Grand Canyon during the TAMS  
Steering Committee's Southwest Tour-2009  
Photo courtesy of Dennis Wall, ITEP*

Chris Lee was named ITEP's co-Director for TAMS in February 2009. He works alongside Farshid Farsi, who is EPA's co-Director for TAMS. Together they comprise a small piece of the partnership between Northern Arizona University (NAU) and EPA assisting Tribes with diverse environmental issues. Chris is a member of the Diné Nation (Navajo), which includes portions of Arizona, New Mexico and Utah. Chris graduated from NAU in 1999 with a degree in Environmental Sciences and served as an ITEP intern.

Before coming to TAMS, as one of its co-Directors, Chris worked with the Navajo Nation EPA Region 9 Air Quality Control Program as the Senior Environmental Specialist tasked with maintaining the

Tribe's air monitoring network. In this capacity, he operated and maintained the Tribe's PM10 and meteorological air monitoring network and updated the Quality Assurance Project Plan (QAPP). He established a new PM10 and meteorological monitoring site in Crownpoint, NM, and began the initial steps in establishing gaseous air monitoring shelters in Shiprock, NM and Aneth, UT. During his time as Program Supervisor for the Navajo Nation a Title V operating permit program for the 14 major sources of air pollution on the Reservation was developed. After a Voluntary Compliance Agreement (VCA) was finalized, the Part 71 supplemental program applications and eligibility determination were submitted in August 2005 and approved March 2006 opening the way for the Tribe to administer the operating permits for two of the larger coal-fired power plants located in the southwest.

Chris has also worked with the Southern Ute Environmental Programs Division Air Quality Program (2005-2008) as the Program Manager. During his time with this program, the Southern Ute Indian Tribe/State of Colorado Environmental Commission meetings were reestablished and the process of developing the "Reservation Air Program" was begun. Chris assisted in drafting a long-term plan to identify the air quality programs the Tribe intended to develop. An air quality code with implementing operating permit regulations was developed and presented to the tribal council and to the commission. Chris left the program in March 2008, after having received approval of the air quality code and permitting regulations from the Tribal Council. The Tribe chose to seek developing a Title V Part 70 Operating Permit program, which meant the authority would be based on the tribally developed and commission approved air quality code and regulations. The Tribe submitted the completed program application and eligibility determination in January 2009. While Chris was with the program, two air monitoring shelters were operated and maintained and the program participated in the Western Regional Air Partnership initiatives to inventory oil and gas emissions

in the Four Corners area and also participated in the Four Corners Air Quality Task Force to assess and address the emission sources of ozone precursors, NO<sub>x</sub> and VOCs. The Tribe also participated in an initial assessment of ammonia study for the Four Corners to identify the potential elevation of ammonia as a byproduct of placing control requirements on smaller compressor engines.

In April 2008, Chris began working with the Oglala Lakota College (OLC) as a research assistant for the intern program. From September 2008 through January 2009 he was the site director for the Science, Engineering, Math and Aerospace Academy (SEMAA) for the school. SEMAA is a NASA initiative created to bring a NASA approved science, engineering, math and aerospace curriculum to primarily minority students serving schools and institutions. The OLC site was the only Native American student serving site in the SEMAA program. While with the program, Chris revised the program's standard operating plan and reintroduced the program to the local Pine Ridge Reservation schools.

Having been with TAMS for little over a year, Chris feels that his "...current work with TAMS has been all that I anticipated and has been very rewarding personally as I have a deep interest in seeing tribal programs develop their capacity to sufficiently protect their lands." Some of Chris' highlights since joining TAMS include facilitating sessions at the 2009 National Tribal Forum (NTF), planning the 2009 Fall TAMS Steering Committee Meeting Southwest Tour; meeting with Assistant Administrator Gina McCarthy and other senior EPA managers, moderating the Tribal Session at the National Air Monitoring Conference and serving as the lead instructor for the Improve and Protect Air Quality in Indian Country course. Chris is currently working as a co-lead beside Stephen Hartsfield of the National Tribal Air Association for the 2010 NTF Planning Committee.

Chris brings to the TAMS Center his experience working with different tribal programs. Because he has been in similar circumstances and experiences that may face tribal professionals on environmental issues and has the basic understanding of how TAMS support can be used he is able to provide valuable assistance when required. Along with Farshid Farsi, TAMS' co-Director, they are able to coordinate good, strong technical support to the tribes from both ITEP and EPA. According to Chris, "Although, I do have some experience regarding addressing various issues, I do often see that all tribes have different situations that require a different way to deal with those issues they face."



*Toroweap Point, Grand Canyon, Arizona*

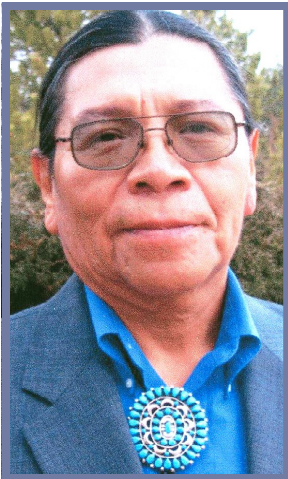




## Cal Seciwa

“Let no man imagine that he has no influence.”

Cal Seciwa was ITEP’s Director from March 2007 through July 2009. On July 13, 2009, Cal passed away after extensive health problems. He was born a member of Zuni’s Badger Clan, born for the Eagle Clan and had a commitment to the strong spiritual Zuni Tribal roots that were an integral part of his traditional background.



*Cal Seciwa  
1953-2009*

*Photo courtesy of Gary Elthie, ITEP*

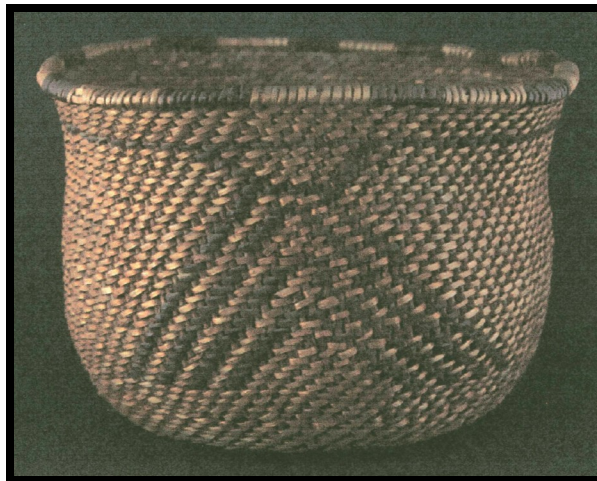
Cal’s legacy, while serving as ITEP’s Director, left its mark in various forms not only for tribal professionals, but for the staff at TAMS. He will be remembered for his passion in striving to provide top quality environmental training courses for tribal participants. It was through his personable nature that he was able to reach out to tribes sending a strong message advocating for tribal sovereignty and justice. Chris Lee, TAMS co-Director, noted that, “Anyone meeting Cal for the first time could recognize Cal’s push to see tribes develop their capacity to protect their sovereignty and cultural values.”

His memory and responsibility of service is the impetus that moves TAMS toward its commitment to serve tribes with continued high quality courses, now and into the future.



*Group of six Zuni men wearing  
coats and leather boots*

*Photographed by John K. Hillers, 1879.  
Archives.gov*



*Havasupai Basket (c. 1890) currently on display at the TAMS Learning Center, Las Vegas, Nevada.*



*TAMS staff, c. 2010*

*Front row, kneeling, left to right, Chris Lee, Farshid Farsi and Melinda Ronca-Battista.  
Back row, standing, left to right, Lee Rose, Bob Mosley, Polly Hennessey, Glenn Gehring,  
Ron Gibson, Emilio Braganza and Henry Gerard.*