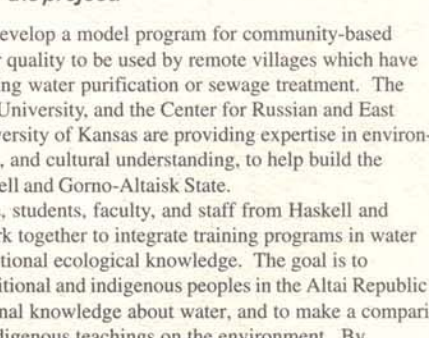




## HINU and Siberian university partner to assess water quality

Haskell Indian Nations University launched its first international student exchange program this fall when it received a university affiliation grant to work with a Russian university, Gorno-Altaiisk State University, in the center of Siberia. Students and faculty from the two institutions are developing culturally appropriate methods to allow communities in both the Altai Republic (Russia) and on tribal lands in the U.S. to assess the quality of their own drinking water. The partnership, which also includes support services from Kansas State University and the University of Kansas, was awarded a grant from the Association Liaison Office for University Cooperation in Development under a cooperative agreement with the U.S. Agency for International Development.

As is the case with many rural communities in the U.S., poor drinking water is a significant cause of health problems for young children in the Altai Republic of Russia. Haskell and Gorno-Altaiisk State will work together to develop a model program for community-based monitoring of drinking water quality to be used by remote villages which have little infrastructure for drinking water purification or sewage treatment. The HERS Center, Kansas State University, and the Center for Russian and East European Studies at the University of Kansas are providing expertise in environmental assessment, language, and cultural understanding, to help build the institutional capacity at Haskell and Gorno-Altaiisk State.



Haskell students Tina Scott and Sheldon Selwyn review maps of Siberia as Drs. Larry Erickson and Cynthia Annett discuss the project.

Over the next three years, students, faculty, and staff from Haskell and Gorno-Altaiisk State will work together to integrate training programs in water quality assessment with traditional ecological knowledge. The goal is to develop methods to help traditional and indigenous peoples in the Altai Republic capture and interpret traditional knowledge about water, and to make a comparison with North American indigenous teachings on the environment. By stressing community ownership of traditional knowledge, and by providing communities with the tools necessary for the application of western scientific knowledge for water quality assessment and database compilation, individual communities will become empowered to more actively engage in discussions with governmental and international organizations devising economic development programs for the region.

Continued on page 8

## On page...

- 2.....Air Quality Training
- 3.....Indigenous Earth Science
- 4-5.....TIO Training
- 6.....HERS Profile
- 7.....NAOMI Seminar Program

## HERS begins new role as satellite training center for air quality

by Patricia Ellsworth, Northern Arizona University

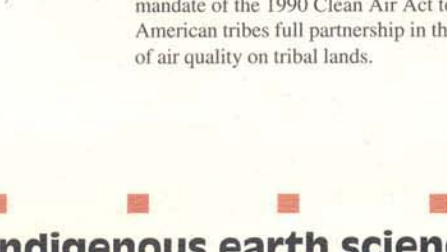
Haskell Indian Nations University hosted an "Introduction to Air Quality Management" tribal workshop October 26-29, 1999. Participants representing 17 tribes and a BIA Field Office traveled from as far away as Alaska and New York to attend.

Deb Madison (Fort Peck Tribes in Montana), Pat Ellsworth (Northern Arizona University), David Pierotti (University of New Mexico), and Lee Greorri (U.S. Environmental Protection Agency, Region 7, Kansas City) served as instructors for the workshop.

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Continued on page 8



Tanya Haviland and Darren Shields, both from the Iowa Tribe of Oklahoma, prepare to take a pH reading.

Participants for several hands-on activities during the week.

Major topics in the workshop included: the concept of pH, criteria pollutants and the National Ambient Air Quality Standards, air toxics, use of a PM10 air sampler, major provisions of the Clean Air Act and its application to tribes, and components of a tribal air quality program.

The Institute for Tribal Environmental Professionals (ITEP) at Northern Arizona University developed the four-day training course and has presented it at Haskell four times since February 1997. This entry-level workshop is part of ITEP's American Indian Air Quality Training Program (AIAQTP) which began in 1993 with funding from the U.S. EPA. The AIAQTP seeks to fulfill the mandate of the 1990 Clean Air Act to offer Native American tribes full partnership in the management of air quality on tribal lands.



Deb Madison, of the Fort Peck tribal environmental office provides instruction on a PM10 monitor.

For more information about the American Indian Air Quality Training Program, call or send email to: Virgil Masayeva (520-523-9651 or virgil.masayeva@nau.edu); Pat Ellsworth (520-523-6721 or patricia.ellsworth@nau.edu); ITEP; or Patterson Yazzie at the HERS Center.

## Indigenous earth science curriculum offer unique perspectives

by Patterson T. Yazzie, Haskell Indian Nations University

As part of a continuing effort to recruit and retain Native American students in science fields at colleges and universities, the Haskell Environmental Research Studies Center (HERS), in collaboration with scientists from the United States

knowledge of Canada's Indigenous peoples. Mary Lou Bevier from the University of British Columbia and Judy Thompson from the Northwest Indian College are developing this section of the supplement.

Wildcat will coordinate the Alaskan supplement with several Alaska Natives. The HERS web site will facilitate dissemination of the curriculum supplements.

The project also funded internship opportunities with the USGS for two Haskell students at the Denver USGS office. Charles Ginsbach and Sheldon Selwyn spent eight weeks in Denver and Yellowstone National Park working with USGS scientists.

Ginsbach worked with Lisa Morgan, a geologist from the Denver USGS office, at Yellowstone National Park collecting lava flow samples and mapping the lake bottom of the Yellowstone Lake. On his time off from his internship, Ginsbach volunteered to work on Bison Management research conducted by the University of Wisconsin.

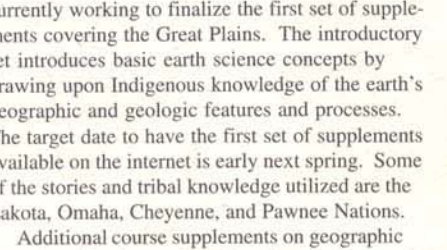
Ginsbach's immediate supervisor but also a mentor and taught him different methods of sample collecting and data interpretation.

Selwyn worked with Ray Kokali and Dr. James Crock, both from the USGS Denver office, on water and mineral samplings. A major part of his internship allowed him to work with several GIS programs to map out Yellowstone National Park.

Selwyn spent the last two weeks at Yellowstone verifying the accuracy of the maps that he developed from satellite images and infrared imaging.

A 30-minute video summarizing the entire project was also produced this summer. The video involves onsite interviews with tribal people on tribal accounts of geologic activities.

For more information on the Indigenous Earth Science curriculum, contact Dan Wildcat at 785-749-8498 or at dwildcat@ross1.cc.haskell.edu.



The internship provided Selwyn and Ginsbach with new experiences and knowledge in a natural setting.

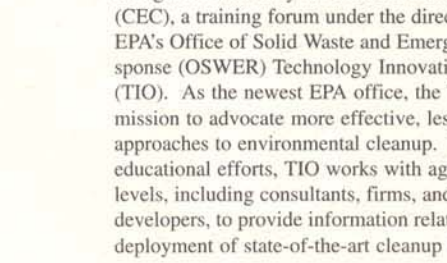
Geological Survey (USGS); professionals from Diné College, Northwest Community College in Prince Rupert, BC; University of British Columbia; and Dr. Stan Grant, are developing an Indigenous Earth Science curriculum supplement for teaching students about geology using Native American philosophies, teachings, and scientific perspectives.

Diné College at Shiprock campus is one of the few tribally controlled colleges that integrates both traditional Diné and Euro-American scientific concepts in a place-based approach to teaching earth science. The Indigenous Earth Science curriculum's goal is to incorporate the perspectives and traditional knowledge of many tribes.

Dan Wildcat, HERS co-director, and Grant are currently working to finalize the first set of supplements covering the Great Plains. The introductory set introduces basic earth science concepts by drawing upon Indigenous knowledge of the earth's geographic and geologic features and processes.

The target date to have the first set of supplements available on the internet is early next spring. Some of the stories and tribal knowledge utilized are the Lakota, Omaha, Cheyenne, and Pawnee Nations.

Additional course supplements on geographic areas found in the northern Rockies incorporate the



Randy Gee (Cherokee) participates in the immunoassay as Wade Gregson, Nebraska DEQ, looks on.

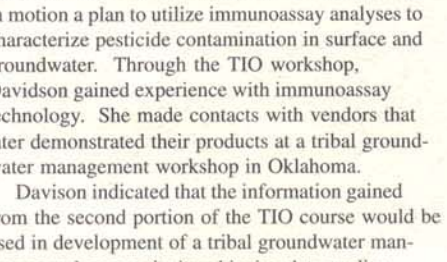
Response, Compensation and Liability Act (CERCLA) training course. Tribal environmental department professionals traveled from Oklahoma and Kansas homelands to join Kansas Department of Health and Environment (KDHE), Nebraska Department of Environmental Quality (NDEQ), and EPA Region 7 representatives in anticipation of gaining knowledge of and experience with new field-based site characterization technologies.

The Field-Based Site Characterization Technologies course and the Strategies for Field-Based Analytical and Sampling Technologies course were brought to Haskell by the CERCLA Education Center (CEC), a training forum under the directive of the EPA's Office of Solid Waste and Emergency Response (OSWER) Technology Innovation Office (TIO). As the newest EPA office, the TIO has a mission to advocate more effective, less costly approaches to environmental cleanup. Through educational efforts, TIO works with agencies at all levels, including consultants, firms, and technology developers, to provide information related to the deployment of state-of-the-art cleanup technologies.



Participants view a borehole sampling demonstration.

apply field-based site characterization technologies, the Strategies for Field-Based Analytical and Sampling Technologies course introduced basic steps in planning for site characterization and other sampling and analysis activities in a two-day session.



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## HERS Profile: Runner follows path to help tribes

by Wendy Griswold, Kansas State University

This summer, the Environmental Protection Agency, Region 7, sponsored a Tribal Multi-Media Workshop, hosted by Haskell Indian Nations University. The workshop brought together tribal representatives and EPA staff to discuss environmental concerns of the Indian Country.

The main organizer of the workshop was March Runner of the Blackfeet Nation in Montana. Runner currently works part-time with the EPA Region 7 Environmental Justice Department. The Environmental Justice Department is concerned with equal disbursement of services to all communities in the United States.

It has been designated to deal primarily with low-income and minority communities. Runner works with tribal nations located in Region 7, which includes the Kickapoo, Prairie Band of Potawatomi, Sac & Fox, Winnebago, Santee Sioux, Iowa, and Omaha nations. She is currently focusing her attention on the Santee Sioux, assisting them with grant funded projects addressing water and pesticide on their land.

Runner, who holds a bachelor's degree in accounting and management information systems and a master's degree in business administration and computer science, is also a law student in the University of Kansas' Tribal Law Program.

Runner's prime motivation in attending law school is her desire to work with the Blackfeet Nation of Montana. "I contacted the nation to find out what areas I should concentrate in that would best serve them. After speaking with Gerald Wagner, Environmental Officer, and Vivki Santana, an attorney and professor at the Blackfeet Community College, I learned that in addition to general legal concerns there were concerns dealing with oil and gas contracts that had been signed with the nation.

There was also a need for an individual who had an environmental background," said Runner. She has always been interested in the environment and through her work with EPA has learned that tribal nations have a great need for environmental attorneys.

According to Runner, an important challenge facing tribal environmental programs is that they are not given the same concern and project support that Hispanic, Black, Asian and White communities are receiving. She said that tribal environmental programs have difficulty obtaining information that is not made readily available to them and feel they must take what is handed out from the government.

Runner believes tribes should determine their needs and stop letting the environmental government staff determine what they need.

She said, "the majority of tribes, unfortunately, have very little income to meet the environmental needs that exist on their lands and are under the whims of EPA." Runner's list of environmental issues plaguing tribal nations includes clean drinking water; preventing contamination of lands from misuse of pesticides; damage done to lands by dams

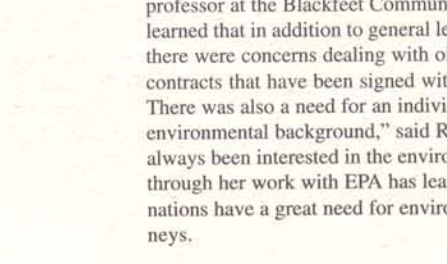
that have been constructed to help large urban cities; the fight against lead poisoning resulting from housing constructed 30 years ago; and problems of asthma, diabetes, and TB as a result of a combination of all the items above that affect children as well as adults. Says Runner, "Tribal nations need a voice that is heard to help resolve these issues. The voice that hears them now only says what it feels tribes want to hear in the hopes that they will go away. There is no dedication to help as in other communities."

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