
HERS: A CENTER FOR RESEARCH, EDUCATION, AND COMMUNICATION

W.M. Griswold¹, G.L. Godfrey¹, S.C. Grant², and P.T. Yazzie¹, ¹Haskell Indian Nations University, Dept. of Natural and Social Sciences, 155 Indian Ave., Box 1247, Lawrence, KS, 66046, Phone: 913-749-8498, and ²Great Plains/Rocky Mountain Hazardous Substance Research Center, Kansas State University, 101 Ward Hall, Manhattan, KS, 66506-2502, Phone: 913-532-6519

ABSTRACT The Haskell Environmental Research Studies Center (HERS) is a center for environmental research, education, and communication for Native American colleges, universities, and tribes. Since its creation, HERS, in conjunction with the Great Plains/Rocky Mountain Hazardous Substance Research Center (HSRC), has administered the Native American and Other Minority Institutions (NAOMI) program. The goal of the NAOMI Program is to increase the involvement of minority educational institutions in research, training, and technology transfer. The NAOMI Program will begin funding its first training project in Fall 1996. The NAOMI Program also is continuing to coordinate a Summer Cooperative Research Program. Another primary element of the NAOMI Program is a seminar program that provides education on hazardous substances and related environmental issues. Seminars are disseminated through the distribution of videotapes and satellite downlinks. The NAOMI Program also fosters education by providing funding to NAOMI faculty and students to attend the HSRC/Waste-management Education and Research Consortium's Joint Conference on the Environment. NAOMI links research, training, technology transfer, and education activities through the publication of a bi-monthly newsletter, *Earth Medicine*. In addition to administering the NAOMI Program, HERS coordinated an environmental technology workshop during Summer 1995. HERS has also established a working relationship with Boeing Commercial Airplane Group to provide a research and summer internship program for Haskell Indian Nations University faculty and students.

KEY WORDS: Native American, minority, research, technology transfer, hazardous substances

INTRODUCTION

The Haskell Environmental Research Studies Center (HERS), based at Haskell Indian Nations University (HINU) in Lawrence, Kansas, currently administers several programs geared toward increasing the level of involvement of Native American faculty and students in hazardous substance and environmental research activities. With the assistance of the HSRC, HERS administers the Native American and Other Minority Institutions (NAOMI) Program. The elements of the NAOMI Program created the foundation of the programs administered by HERS. These programs fall

into three main categories: 1) research, training, and technology transfer, 2) education, and 3) communication.

RESEARCH, TRAINING, AND TECHNOLOGY TRANSFER

Research and training and technology transfer are key components of HERS and the NAOMI Program. There are three programs administered by HERS that fall into the categories of research and training and technology transfer. They are the Summer Research Cooperation Program, research and training projects, and the Boeing project. These three distinct

programs share the goal of increasing the level of expertise of students and faculty at Native American academic institutions in research and training programs.

Summer Research Cooperation Program

For the third consecutive summer, the NAOMI Program is coordinating the placement of NAOMI Consortium faculty as research associates at HSRC Consortium universities. For the first time, NAOMI Consortium students are participants in this particular program. NAOMI faculty and students work on HSRC-funded research projects with the goal of enhancing their research capabilities. Jamison Bear, a faculty member from Haskell Indian Nations University, participated in the program in Summer 1995. Bear reported that the "experiences gained from the NAOMI co-op program enrich my position as an instructor of biology at a Native American university and as a graduate student by giving an added dimension to my educational background."

Two students and one faculty member from the NAOMI Consortium are participating in the Summer 1996 Program. The participants and the projects they will be working on are:

- Jamison Bear (Osage), a professor of Biology at Haskell Indian Nations University in Lawrence, Kansas, is working with Dr. Lawrence Davis of Kansas State University. Bear is working with Davis to examine the interaction of plants and microbes in the remediation of volatile organic contaminants. They will examine ways in which the plant contributes to the degradation of the contaminant, either by its own metabolic processes or by stimulating the microbial populations that are able to carry out the degradative processes;

- Sherry Blackburn (Northern Arapaho), a student at Haskell Indian Nations University in Lawrence, Kansas, is working with Dr. Tissa Illangasekare from the University of Colorado-Boulder. Blackburn is working with Illangasekare on an on-going project to develop systematic procedures for extending information from laboratory to field to design and evaluate various treatment and remediation technologies associated with non-aqueous base organic chemicals and waste products in the subsurface; and
- Miranda Salt (Navajo), a student at Navajo Community College in Tsaile, Arizona, is working with Dr. Kathy Banks of Kansas State University in Manhattan, Kansas. Salt will be assisting Banks in investigating the use of plants and associated soil microorganisms to remediate soil contaminated with hazardous organic contaminants.

Research and training projects

The NAOMI Program will begin funding its first training project in Fall 1996. The project is a joint proposal between Sinte Gleska University (SGU) and the University of Nebraska-Lincoln (UNL). The principal investigators are Ben Whiting, SGU, and Bruce Dvorak, UNL. The project will fund environmental assessment training for the tribes in Montana, Wyoming, North Dakota, South Dakota, and northern Nebraska. The project is directed toward tribal environmental personnel to increase educational opportunities and to improve tribal environmental monitoring capabilities. The project also will improve the capacity of tribal governments in developing and delivering environmental training programs through tribal colleges and through existing environmental programs.

Boeing project

HINU received a grant from Boeing Commercial Airplane Group to establish a research and summer internship program for HINU faculty and students. Students will work on providing Boeing's Safety, Health, and Environmental Affairs (SHEA) office with statistical analyses of water and soil samples collected by SHEA. This project's goal is to show that real-life experiences in science lead Native American students to success in science, math, and engineering careers. The program is in its second year.

As a part of this project, two HINU students, Graham Snelding and Steve Brown, will be working on-site at Boeing's SHEA office in Wichita, Kansas, for one month this summer.

EDUCATION

HERS administers several programs whose goals are related to the education of faculty and students at Native American academic institutions. These include a seminar program that uses video and satellite technology to teach; conference attendance assistance; and environmental technology workshops. These programs are varied in approach, but have the same goal of providing education on issues related to hazardous waste research and other environmental issues in Indian Country.

Seminar program

The seminar program is a primary element of the NAOMI Program. Its purpose is to provide public education on hazardous substances and related environmental issues and to facilitate communication between faculty and students. The program currently has over 80 participants, which include tribally-controlled colleges, other minority

academic institutions, tribal offices, Kansas universities, and EPA offices.

Recent seminars include "Comparisons of Native American and European Worldviews: A Roundtable Discussion, Parts I and II," which featured four scholars gathered together to share their views on the concept of history and the place of humans in nature. These roundtable discussions were the third and fourth parts of the "Comparisons of Native American and European Worldviews" series.

The NAOMI Seminar Program also produced "Basin Creek Mine Closure Reclamation Techniques," presented by Dan B. Adams, Environmental Director for Basin Creek Mining, Inc. The seminar was filmed at the Mine Operation, Design and Closure '95 Conference in White Fish, Montana. This conference was sponsored by the Mine Waste Technology Program at Butte, Montana.

Satellite program

On April 11, 1996, HERS and the NAOMI Program broadcast the first satellite program from HINU. The program, "An Environmental Legacy For Our Grandchildren," focused on water quality issues in Indian Country and featured footage from four locations supplemented by a live panel of Native American environmental professionals. The program was moderated by George Tiger, the host and producer of *Inside Native America*, broadcast on CBS affiliate KTOK TV. Mr. Tiger was joined by panel members Wes Martel, vice-president of the Wind River Associates; Ella Mulford, environmental specialist; Russell Qualls, professor of hydrology at the University of Colorado-Boulder; and Kimberly TallBear, environmental policy specialist for the Council of Energy Resource Tribes. Panel

members commented on environmental issues facing the following tribes and geographic locations: Menominee, Forest Band Potawatomi, and Sokaogan Chippewa tribes from the Mole Lake, Wisconsin area; the Oglala Lakota Nation from Pine Ridge, South Dakota; the Kiowa Nation of Oklahoma; and the Hopi and Navajo Nations of the Four Corners area. Representatives from these locations joined the program via telephone links to provide updates and additional information.

Conference attendance assistance

For the third year, NAOMI Consortium faculty and students were funded to attend the annual conference of the HSRC. The 1996 conference is sponsored by the HSRC and the Waste-management Education and Research Consortium. This Joint Conference on the Environment, "Creating a New Path on the Santa Fe Trail," was held in Albuquerque, New Mexico, in May. Four faculty and eight students from the NAOMI Consortium attended this conference with NAOMI funding. Faculty conference attendance costs are reimbursed at the rate of 80%, and students are funded at 100%. Conference fundees are from several NAOMI Consortium institutions: Crownpoint Institute of Technology, Haskell Indian Nations University, Salish Kootenai College, Sinte Gleska University, and Turtle Mountain Community College.

Technologies in Clean-up and Compliance: An Environmental Technology Workshop

During July 1995, HERS was the host of a two-week environmental technology workshop at HINU. The workshop, *Technologies in Clean-up and Compliance*, was a test program for a two-year environmental technology curriculum being developed by Kansas State University for

use in community colleges. The modules tested in the workshop were compliance with environmental regulations and the clean-up of hazardous wastes. Workshop participants also received training in Hazardous Waste Operations and Emergency Response procedures.

The workshop was geared toward people aged 16-24. Thirty-six individuals completed the two-week workshop. Workshop participants came from Jackson State University in Jackson, Mississippi; the Kiowa Nation in Oklahoma; Rock Point Community High School in Rock Point, Arizona; Visible Horizons in Kansas City, Missouri; and Haskell Indian Nations University in Lawrence, Kansas.

COMMUNICATION

Communication is the third major component of the HERS programs. Communication among and between students and faculty at NAOMI and HSRC Consortium institutions is facilitated in three main ways: the *Earth Medicine* newsletter, a library repository, and the HERS Home Page.

Earth Medicine newsletter

Earth Medicine is a bi-monthly newsletter published by HERS. The newsletter's purpose is to keep the NAOMI Consortium updated on the NAOMI seminar program and other NAOMI and HERS activities. Recently, *Earth Medicine* also has published interviews with a NAOMI Consortium student and a HERS Advisory Board member. *Earth Medicine* is sent free of charge to a mailing list of nearly 1,700 individuals. The mailing list includes tribal offices, tribally-controlled colleges, HSRC Consortium members, EPA regional offices, and individuals.

Library repository

NAOMI Seminar Program videotapes are available for use in the library of Haskell Indian Nations University. Seminar videotapes are also available nation-wide through interlibrary loan from Farrell Library at Kansas State University in Manhattan, Kansas.

Mountain Hazardous Substance Research Center, headquartered at Kansas State University, it has not been subjected to the agency's peer and administrative review and, therefore, may not necessarily reflect the views of the agency. No official endorsement should be inferred.

HERS home page

The Natural and Social Sciences Department (NASS) at Haskell Indian Nations University is constructing its own home page on the World Wide Web. HERS has its own home page at this location. Information at this site includes HERS and NAOMI Program descriptions and information on upcoming events. The site is still under construction. Expansion plans include access to the *Earth Medicine* newsletter and links to other environmental and tribal sources on the World Wide Web. The address for the HERS Home Page is <http://www.nass.haskell.edu/HERS/HERS.html>.

CONCLUSION

Through the NAOMI Program and various other programs, HERS has created a center for research, education, and communication at Haskell Indian Nations University. The goal of the center is to enhance the levels of research, education, and communication at Native American academic institutions, with respect to hazardous substance research and other environmental issues affecting Indian Country. The programs developed and administered by the center have begun and seek to continue that process.

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