

# THE NAOMI PROGRAM AND HERS: WORKING TO CREATE LASTING LINKS

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## ABSTRACT

The Haskell Environmental Research Studies Center (HERS), located at Haskell Indian Nations University (HINU), has joined with the Great Plains-Rocky Mountain Hazardous Substance Research Center (GP-RM HSRC) to administer the Native American and Other Minority Institutions Program (NAOMI). The NAOMI Program was funded to involve minority educational institutions in research, training and technology transfer. HERS currently administers several programs. One primary element of the NAOMI Program is a Seminar Series that provides public education on hazardous substances and related environmental issues. Seminars are disseminated by the mailing of videotapes or through satellite downlinks. The NAOMI Program was able to provide funding for several individuals from participating institutions to attend the Tenth Annual Conference on Hazardous Waste Research in Manhattan, Kansas, on May 23-24, 1995. In addition, NAOMI was able to match six scholars from Native American and other minority academic institutions with HSRC research projects being conducted at other universities through the Summer Cooperation Program. HERS Staff, in association with the US Department of Agriculture, worked to coordinate "A Gathering of Nations," a program that was part of the twenty-fifth anniversary celebration of Earth Day in Washington, DC. The program brought together tribal leaders, Elders and scientists in a panel discussion of global change issues. HERS also received funds from the Department of Defense to provide certified training to students from tribally-controlled colleges as part of an ongoing curriculum development project. The first workshop under this program is scheduled for July 16-29 at Haskell Indian Nations University. HERS is hoping to provide training for forty participants. Finally, HERS has been able to act as an information clearinghouse. HERS has distributed other agencies' grant solicitations to participating institutions where applicable. NAOMI Seminar videotapes are available through the library of Kansas State University and can be obtained nationwide through interlibrary loan.

## KEY WORDS

Native American, minority, research, technology transfer, hazardous substances.

## INTRODUCTION

HERS (Haskell Environmental Research Studies Center) currently administers two programs: the NAOMI (Native American and Other Minority Institutions) Program and an Environmental Technology Education Program. The NAOMI Program was developed to serve all Native American educational institutions in the United States and other minority educational institutions

in U.S. Environmental Protection Agency (EPA) Regions VII and VIII. The mission of the NAOMI Program is to involve minority educational institutions in long-term and short-term research relating to key hazardous substance problems and information dissemination through training programs and various forms of media. This program is administered by the Great Plains-Rocky Mountain Hazardous Substance Research Center (GP-RM HSRC) and HERS, an out-

reach office of the GP-RM HSRC on the campus of Haskell Indian Nations University (HINU). The mission of the Environmental Technology Education Program is to develop a two-year curriculum in Environmental Technology for use in community colleges. This program is administered by HERS and Kansas State University (KSU). HERS's involvement in the program includes hosting a two-week workshop designed to introduce students from tribally-controlled colleges to the employment opportunities available in environmental technology. Program elements of these two programs are: (1) NAOMI Seminar Program; (2) NAOMI Conference Funding; (3) NAOMI Summer Cooperation Program; (4) Kansas State University/Department of Defense Environmental Technology Education Program; and (5) Information Dissemination. In addition to these program elements, HERS staff spent time during Summer 1994 working on a needs assessment of environmental issues in Indian Country. George Godfrey, HERS co-director, and Mike Tosee, HINU history instructor, visited several tribally-controlled colleges and Indian Nations seeking input on tribal needs as they relate to hazardous substance research and technology transfer. Outreach to tribally-controlled colleges and Indian Nations is an important aspect in building support from those groups for HERS and NAOMI.

## SEMINAR PROGRAM

One primary element of the NAOMI Program is an ongoing Seminar Series that provides public education on hazardous substances and related environmental issues. Its mission is to facilitate communication among faculty and students and to foster cooperation in hazardous substance research, training and technology transfer. Currently, the program has 79 participants, which include tribally-controlled colleges, other minority academic institutions, tribal offices, Kansas universities and EPA offices.

The NAOMI Seminar Program's first presentation was filmed in November 1994. The first seminar was titled "The NAOMI Program and HERS: New Opportunities in Environmental Research" and was presented by Dan Wildcat, Chair of the Department of Natural and Social Sciences at HINU and Co-director of HERS; George Godfrey, HERS Co-director and Natural Resources Instructor at HINU; and Stan Grant, Associate Director of the GP-RM HSRC at KSU. Their presentation provided an explanation of how HERS and the NAOMI program evolved, and it included a description of program goals and initiatives as well as a report on current environmental concerns in Indian Country. The second seminar was filmed only days later and was a presentation by Dan Wildcat, entitled "Comparison of Native American and European Worldviews: A Native American Viewpoint." This presentation was an exploration of Native American Worldviews and discussed the possible effectiveness of Native American viewpoints in solving current environmental and social problems. This seminar was the first of a series that focuses on comparing Native American and European Worldviews and which will culminate in a roundtable discussion.

The Seminar program also included more traditional presentations on hazardous substances such as "The Environmental Impacts of Gold Mining Operations near the Fort Belknap Reservation," by Rose Main, Environmental Protection Manager on the Fort Belknap Reservation and "PCB's in Our Environment—The Legacy Continues," by Mitch Erickson, Group Leader for Environmental Chemistry at the Argonne National Laboratory. HERS, in association with the U.S. Global Change Research Program, sponsored a satellite uplink from "Gathering for the Earth," an event that celebrated the twenty-fifth anniversary of Earth Day in Washington, DC. The program brought together tribal leaders, Elders

and scientists in a panel discussion of global change issues.

Videotapes of the seminars are mailed to NAOMI Seminar participants after post-production. Several requests to participate in the seminar program have been made via a survey included in the December issue of *Earth Medicine*, the bi-monthly newsletter published by HERS.

## CONFERENCE FUNDING

The NAOMI Program was able to provide funding for six faculty members and two students from NAOMI Consortium institutions to attend the Tenth Annual Conference on Hazardous Waste Research in Manhattan, Kansas, on May 23-24, 1995. This is the annual conference of the GP-*RM* HSRC. Assistance ranged from reimbursement for conference fees to funding 80% of total conference attendance costs. Conference fundees were from several institutions throughout the United States. These institutions include Alabama State University, Elizabeth City State University, Haskell Indian Nations University, New Mexico State University, United Tribes Technical College, and the University of Texas at El Paso. Funding conference attendance is a priority for the NAOMI Program because NAOMI Consortium members are given the opportunity to make connections with faculty at larger institutions with historically successful research departments. Several conference fundees are either participants in the NAOMI Summer Cooperation Program or will be submitting full research proposals to the HERS Advisory Board in August 1995. Attending the Tenth Annual Conference on Hazardous Waste Research gives the individuals participating in these programs the opportunity to meet with the HSRC Consortium members they will be working with through the Summer Cooperation Program or with whom they will be submitting joint research proposals.

## SUMMER COOPERATION PROGRAM

The NAOMI Summer Cooperation Program attempts to build links between NAOMI Consortium faculty and investigators at major research universities. The goal of the Summer Cooperation Program is to assist faculty at minority academic institutions develop their research capabilities. For Summer 1995, NAOMI was able to match six scholars from Native American and other minority academic institutions with research programs being conducted at other HSRC Consortium universities. Those scholars and the institutions they will be working with are

- Dr. Nagalingam Balakrishnan from United Tribes Technical College in Bismarck, North Dakota, will be working with Dr. Doug Cameron of the Montana College of Mineral Science and Technology. Dr. Balakrishnan will work with Dr. Cameron on two projects. One project, "Development of a Gas Chromatography/Mass Spectrometry (GC/MS) Method for the Chemical Speciation of Arsenic and Selenium Compounds," will focus on improving the efficiency of the extraction and elution portion of the analysis. The second project, "Metal Ion Removal from Acid Mine Wastewaters by Neutral-Chelating Polymers," will synthesize electrically conducting polymers that will contain (electrically) neutral chelating groups.
- Jamison Bear from Haskell Indian Nations University in Lawrence, Kansas, will be working with Dr. Kathy Banks of Kansas State University. Mr. Bear will work with Dr. Banks to assess the impact of moisture content on the degradation of non-aqueous phase liquids. Information obtained from this research may be used to optimize bioremediation strategies in the field.

- Dr. Andrew Hargrove of Norfolk State University in Norfolk, Virginia, will be working with Dr. Ken Klabunde of Kansas State University. Dr. Hargrove will work with Dr. Klabunde on a project that focuses on the destruction and immobilization of hazardous substances using nano-scale metal oxide particles as reagents.
- Dr. Zohrab Samani from New Mexico State University in Las Cruces, New Mexico, will be working with Dr. Sam Ghosh of the University of Utah. Dr. Samani will work with Dr. Ghosh to develop microbial cultures in the presence of biochemicals that stimulate the synthesis of metal-complexing biopolymers, to study the mechanisms of metal-biopolymer complexation, and to develop process kinetic models to describe metal-removal rates and efficiencies.
- Dr. Ravi Sinha from Elizabeth City State University in Elizabeth City, North Carolina, will be working with Joan McLean of Utah State University. Dr. Sinha will work on existing projects related to the use of phytoremediation on heavy metal contaminated soils. Dr. Sinha and Ms. McLean hope that their collaboration this summer will result in the submission of a joint proposal to the HSRC.
- Dr. Youvraj Sohni from Alabama A&M University in Normal, Alabama, will be working with Dr. Larry Erickson and Dr. Lawrence Davis of Kansas State University. Dr. Sohni will work with Drs. Erickson and Davis in addressing microbial questions relative to the use of vegetation in contaminated soils.

Participants have the option of working on projects for up to eight weeks during the summer months. Host institutions are not required to allocate any extra funds for the

participants. Participants are granted a salary and travel stipend by the NAOMI Program.

## ENVIRONMENTAL TECHNOLOGY EDUCATION PROGRAM

HERS also received funds from the Kansas State University/Department of Defense Environmental Technology Education Program to provide certified training to students from tribally-controlled colleges. This is part of an ongoing workshop and curriculum development project. The workshop, Technologies in Clean-up and Compliance, is a two-week event designed to provide training in environmental clean-up, technology and environmental law, and regulation compliance. The workshop also includes Hazardous Waste Operations and Emergency Response (HAZWOPER) training, a forty-hour workshop that is the national standard of training and is required by many industries. The HAZWOPER workshop will emphasize the prevention of hazardous waste accidents and the human and ecological health and safety aspects of handling hazardous waste. The Technologies in Clean-up and Compliance workshop will provide participants with certification of having completed ninety-six hours of training in the field of environmental technology. The workshop is scheduled for July 16-29 at Haskell Indian Nations University. HERS is hoping to provide training for forty participants from the twenty-seven tribally-controlled colleges.

## INFORMATION DISSEMINATION

### Earth Medicine

Seminars are announced and profiled in Earth Medicine, a bi-monthly newsletter produced by HERS. Earth Medicine also is used to update consortium members on HERS and NAOMI activities. Earth Medicine is sent free of charge to tribal offices, tribally-controlled colleges, HSRC Consor-

tium members, NAOMI Seminar Program participants, EPA Regional Offices, environmental research and consulting firms, and individuals. Earth Medicine is currently distributed to well over 1500 people.

### Grant opportunities

#### Environmental justice pollution prevention solicitation

The Center distributed information regarding grant money available from the EPA for pollution prevention programs for community groups and tribal governments to approximately thirty-three NAOMI participants.

#### Environmental justice community/university partnership grants solicitation

The Center distributed information regarding grant money available from the EPA for the formation of partnerships between university and community members to address issues of environmental justice to approximately thirty-three NAOMI participants.

### Library repository

NAOMI Seminar videotapes are available for use in the library of Haskell Indian Nations University. Seminar videotapes are also available nationwide through interlibrary loan from Farrell Library at Kansas State University.

### CONCLUSION

The NAOMI Program and HERS have worked to create linkages with faculty from Native American and other minority institutions. The use of several different program elements has aided in the realization of this and other program objectives. The NAOMI Program is currently in the process of applying for second-year funds, with the hopes of continuing to build relationships between NAOMI and HSRC Consortium faculty.

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