

Outreach Event Report

Name of Event: GIS/Internet Institute, InterTribal Environmental Professionals (ITEP)

Northern Arizona University

USGS Participant: Joseph Kerski

Location: Flagstaff AZ – Northern Arizona University (NAU)

Dates: 8 – 14 August 1999

Background



Joseph Kerski and high school teacher Steve Wanner conduct GIS/GPS segment of workshop.

The Institute for Tribal Environmental Professionals (ITEP), located at Northern Arizona University in Flagstaff, Arizona, is engaged in a variety of activities that support native-student environmental research projects, nationwide training for tribal environmental staffs, and communication and outreach with tribes on resource-protection issues. ITEP is located at: <http://www.cse.nau.edu/~itep/> Mansel Nelson was the POC for this institute.

ITEP provides assistance to Indian tribes and other public and private groups in promoting effective environmental-resource management on Indian lands. This assistance is provided through education, training, information services, intergovernmental relations, and environmental program development. ITEP is supported in part by a grant from EPA.

NAU and EPA signed a memorandum of understanding in 1993. This agreement established a partnership between EPA and NAU which supports environmental training and technical assistance for tribes and encourages Native American students to choose professional environmental careers. ITEP also has a memorandum of agreement with the U.S. DOE whereby ITEP and Lawrence Livermore National Laboratory are able to work together to provide educational opportunities for tribal people.

ITEP acts as a catalyst among tribal governments, research and technical resources at NAU, various federal, state, and local governments, and the private sector, in support of environmental protection of Native natural resources.



Participants in the ITEP workshop. Participants included Paiutes from NV, Salish-Kootenai from MT, Rosebud Sioux from SD, Choctaw from MS, Pojoaque Pueblo from NM, Hopi from AZ, 3 Alaska Native Villages, Yakama from WA, and others.

Reasons for Attending and Recommendations

1) GIS education is an excellent outreach opportunity for the USGS because of our strength in geographic technology, because of its high publicity, links to NSDI (there is an educational geospatial NSDI node), because of its links to educational reform, and because of the high demand for our expertise in GIS and technology related to science. We can and have conducted training, have been on TV, and have written articles in publications particularly because of our work in this area of educational outreach. I was invited to this conference by ITEP and the potential for much more is vast, as more teachers implement GIS, GPS, and remote sensing technology in the classroom.

Executive Order 13021 stipulated that Federal Agencies need to be working with tribal governments and in other ways with Native Americans. This opportunity was an excellent mechanism for pursuing this goal. ** The unique opportunity with ITEP is that it brought together the educators and the tribal professionals together.

Other involved organizations include DOE, EPA, and NASA. I spoke with the NASA representative, the educational outreach person from Stennis Space Center. Materials were provided by the USGS, ESRI, and ITEP. Links exist here with the GLOBE program, with AISES and the Intertribal GIS Council.

Future opportunities: A professor from Xavier University in New Orleans wants me to conduct another institute for Native Americans in 2000. She is one of the funders of the ITEP program. Thus, this institute provides an excellent bridge to other organizations with the possibility of a long-term partnership. I recommend we continue to support and expand these activities.

Agenda

The agenda of this workshop included two days of Internet / WWW training, and three days of GIS and GPS training. We began with GIS mapping sites on the Internet, where the user can build maps with a simple WWW browser. Next, we used ArcVoyager and also ArcView GIS. I included exercises to bring in GLOBE data and GNIS data because preservation of the environment and the Native Languages are both important to the group. I did this with a high school teacher which provided a good team approach and represented the GIS from a data producer/user standpoint and an educator. At the end, participants shared presentations of how they plan to implement these technologies in their schools and tribal governments. Also included was a discussion on classroom implementation, research and development to facilitate the use of technology in the curriculum, partnerships, and funding opportunities. ** It was incredible to realize that one of the participants had only been using a computer for two months, yet by the time of the institute's end, had done some WWW development, PowerPoint presentation, and GIS. Never underestimate what a motivated educator or GIS professional can accomplish!

ITEP Goals:

Education --- Generate interest and awareness among Native American students to pursue careers in environmental science and technology.

Training --- Conduct workshops and other formal training for tribally oriented professionals on environmental-program management in air quality, water quality, waste management, and land/forest management.

Outreach --- In cooperation with tribal governments, promote environmental awareness and action on Indian lands through public education programs.

Information Services --- Operate the Tribal Environmental Resource Center (TERC), a clearinghouse of information pertinent to Tribal environmental concerns.

Intergovernmental Relations --- Assist tribal governments and federal, state and local governments in developing cooperative agreements and other mechanisms to address air-quality and waste-management issues.

Program Development --- Work with tribal governments in developing cost-effective and efficient environmental management programs.

The Environmental Education Outreach Program supports the efforts of tribal schools (K-12) and tribal colleges to improve their mathematics, science, and technology programs. The goals of EEOP include improving environmental science education for all Native American students and recruiting Native American students for environmental careers. They also encourage collaboration between tribal communities and schools to help students to prepare for their future.

They are actively involved in expanding the use of GIS applications for educators and tribal

environmental professionals in tribal communities. They have previously collaborated with Dine' College on encouraging dissemination of GIS applications in tribal high schools. They have also conducted GIS workshops for tribal educators in Arizona and Louisiana. They are very interested in continuing our efforts to support expansion of GIS in tribal communities because of the high demand for skilled GIS operators in tribal communities. The EEOP also supports the implementation of GLOBE, a program that can be enhanced by GIS applications.

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