

USGS Educational Outreach Event Report

Attendees: Mark Barber (EDC), Carrie Jucht (EDC), James Rattling Leaf (SGU), Joseph Kerski, (USGS-RMMC).

Other Attendees: Jhon Goes In Center (SGU)

Event Date(s): November 2-6, 2002

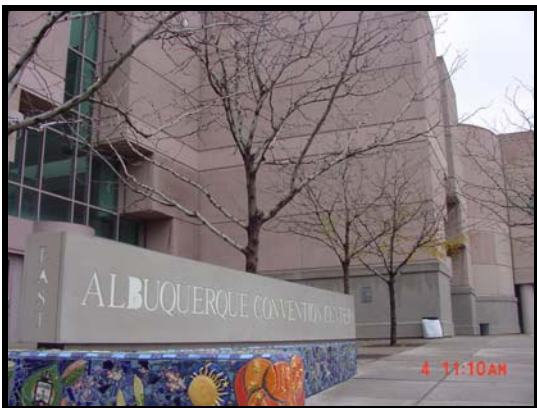


Figure 1: Albuquerque Convention Center, home of the 2002 National Indian Education Association (NIEA) Convention.



Figure 2: NIEA featured 249 exhibitors, including universities, grant programs, educational programs, tribal journals and newspapers, jewelers, and computer vendors. Other federal exhibitors included NASA, BIA, and the U.S. Department of Education.



Figure 3: Some of the participants analyzing earthquakes and Native American population in the GIS workshop hosted by Joseph Kerski, James Rattling Leaf, Esther Worker, and Jhon Goes In Center.

Goals of Event: (1) Operate USGS exhibit and share USGS educational materials with Native Americans attending National Indian Education Association (NIEA) Conference. (2) Conduct USGS-SGU hands-on GIS workshop.

Outreach Focus Area Covered by This Event: Education and Native American Outreach

Summary: Staff from the USGS EROS Data Center have participated in this event since 1998. NIEA is a nonpartisan nonprofit professional society founded in 1969. Their mission is to improve education for all American Indians, Alaska Natives, and Native Hawaiians through advocacy, technical assistance, and communications. NIEA serves as an educational organization for delivering future technologies, outreach strategies, and solid solutions to the Native American community. NIEA serves and represents tribal administrators, researchers, educators, and students nationwide in an effort to share best practices and the latest tools in providing educational services.

Audience: Native American educators, guidance counselors, recruitment officers, tribal elders, college and university presidents, school principals, curriculum developers, researchers, teacher trainers, and students.

Personnel expertise required: Experience working with Native Americans and educators with knowledge about:

- USGS educational materials
- USGS partnerships with Tribal Governments and universities
- USGS subject experts in biology, geography, water, and geology related to use in K-12 and college education
- USGS products and services.

We displayed the following:

- Two 8' x 10' featherlite backdrops; one highlighting the USGS partnership with Sinte Gleska University, and the other featuring USGS imagery, vector data, programs, and materials with the focus of "Making a World of Difference."
- NAPP photo of Albuquerque
- Landsat 7 Image of Albuquerque
- Poster on Two Strike Community on the Rosebud Sioux Reservation
- Easels with poster advertising the GIS workshop that we conducted
- Photographs marking the MOU signing between SGU and USGS
- Partnership Success Stories poster highlighting GIS workshops and online course taught at SGU during summer and Fall 2002
- Landsat image and DOQ-DRG of St. Francis wildfire on

the Rosebud Sioux Reservation, which occurred in August 2002.



Figure 4: Carrie Jucht fills a USGS bag with educational materials for a conference attendee at the USGS – SGU exhibit.

We handed out 100-200 of each of the following materials and information:

- USGS pencils
- USGS EDC Landsat 7 trading cards
- EarthExplorer cards
- Most useful USGS websites page
- USGS bookmarks
- EDC business cards "Earth Science for Everyone" including websites of all USGS disciplines
- USGS lighting mouse
- USGS Information Sources (Fact Sheet # 043-00)
- USGS WWW Information (Fact Sheet # 037-00)
- Appalachian Mountains USGS video and booklet
- Volcanoes and Volcanoes of the US
- USGS GeoData
- Historical Landsat Comparison Booklet
- Science, Society, Solutions: An Introduction to the USGS

- Map Mysteries Activities
- How to Get Information from USGS
- Teaching with Topographic Maps Guidelines
- Terraserver download guidelines
- GIS in Education Information Sheet
- GIS Day flyer and GIS Posters

Workshop:

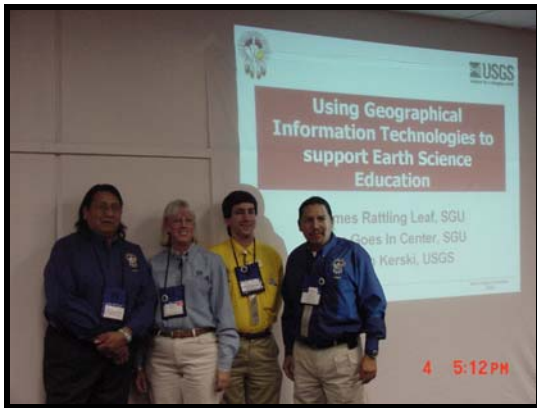


Figure 5. (l. to r.) Jhon Goes In Center, Esther Worker, Joseph Kerski, and James Rattling Leaf prior to the start of their hands-on GIS workshop. We conducted the workshop twice during the conference.

At the 2001 NIEA convention in Billings, Montana, James Rattling Leaf, Jhon Goes In Center, and Joseph Kerski conducted a GIS presentation. We wanted to build on this presentation for the 2002 convention with a hands-on GIS workshop. By hosting a hands-on workshop, our goal was to have the participants see for themselves the capabilities of spatial analysis and how to incorporate GIS into their curriculum. Several hours of data loading and set up was required to prepare for the hands-on component, but the participants rated the workshop highly on the evaluations. It was also important that the presenters represented the partners discussed in the workshop: SGU, USGS, and ESRI.

The workshop began with a partnership presentation by James Rattling Leaf, followed by a demonstration of the spatial data CD of the Rosebud Sioux lands with Jhon Goes In Center and James Rattling Leaf, and ending with hands-on work with ArcGIS, facilitated by Joseph Kerski. The hands-on work featured analysis of USGS earthquake data, analysis of the number and distribution of Native Americans by county, and 1900 to 2000 population change by county.

At the workshop, we distributed GIS education material and data from the USGS and ESRI, as well as large USGS thematic maps.



Figure 6. Esther Worker and Joseph Kerski discuss the differences between analyzing the Earth with paper maps versus GIS.

Special Thanks:

USGS success at NIEA wouldn't have been possible without the support of the following individuals:

Esther Worker, ESRI, who obtained and shipped the laptop computers;

Mary Wadding, for materials support;

James Rattling Leaf and Jhon Goes In Center, for their support and partnership.



Figure 7. James Rattling Leaf discusses partnerships between SGU and the USGS, and his vision for spatial technologies in tribal governments, schools, and universities.

Recommendations:

This was the 5th consecutive year that the USGS exhibited at this conference. This event showed once again how well a partnership between two centers works—in this case, between EDC and RMMC. The two centers worked on planning for the conference and also working together during the conference on the exhibit and workshops. It also demonstrated how successful our USGS partnership with Sinte Gleska University is, not only evidenced by programs resulting from the 2000 MOU between the two organizations, but even in operating our joint exhibit booth and workshops.

NIEA 2002 was larger than the 2001 conference, but we had a bit of difficulty obtaining information this year from the conference organizers. The location of our exhibit was in aisle 400 near the end of the exhibition floor, but the exhibit hall was well lighted and we received a great deal of traffic on Sunday when we were distributing the maps. Traffic was sporadic during the remainder of the event. The exhibits run for four days, which might be one day too long, given the lightness of the traffic during some of the presentations.

If we want to do more hands-on workshops in the future, the USGS should invest in about 10 laptop computers in 2 shipping cases for this purpose. This is exactly what ESRI has done for all their off-site workshops, and it would serve us well for all of the conferences and training events that we conduct outside of our own facilities. Our data and products are best explored in a hands-on mode. Frankly, it is often difficult to get people interested in spatial analysis in any other way than hands-on workshops.

We came up with an idea toward the end of the conference—to include a geocoded map in next year’s conference booklet and NIEA web page that indicates where conference attendees are from. This would demonstrate the value of GIS, be of interest to the association and to conference attendees, and increase the NIEA’s awareness of GIS.



Figure 8. Mark Barber listens to a conference attendee discuss educational and environmental issues.

By far, the most popular product that we distributed was the large thematic maps. These included several types of Indian lands maps and a surface water-watershed map of the USA. We handed out all of these maps –several hundred

total—on the first day that the exhibit hall was open.

Given the increasing emphasis on USGS partnerships with Native Americans, as well as our continued work with Sinte Gleska University and tribal governments in training, recruitment, and spatial data use, we should exhibit and conduct at least one workshop at the NIEA 2003 conference. It will be held 2-5 Nov. 2003 in Greensboro, North Carolina. Thanks for allowing us to exhibit on behalf of the USGS.



Figure 9. Jhon Goes In Center demonstrates the multimedia spatial data application CD for the Rosebud Sioux lands.



Figure 10. Several of us attended a forum led by Lionel Bordeaux, President of Sinte Gleska University, focusing on Native American education issues for the

21st Century. James Rattling Leaf spoke at the forum about spatial technologies.



Figure 11. NIEA features many excellent ceremonies throughout the conference from a number of different tribal groups, with both children and adults. It also includes a large annual Pow-wow.

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