



# **Native IMAGE**

Institute for Managing Applications  
of Geospatial Extension

---

Dr. Henry R. Lehrer, Director  
Jan Bingen, Assistant Director

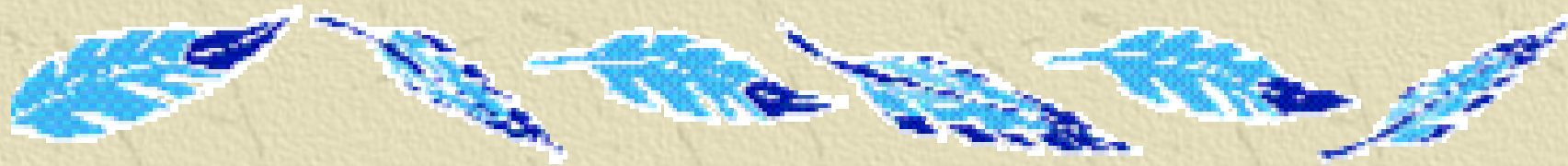
---



# Little Priest Tribal College







# Native IMAGE MISSION

---

- ✦ Coordinate the collection of extensive geospatial data for use at Little Priest Tribal College and within the Winnebago community
- ✦ Provide training to ensure the utilization of this geospatial data for both educational and commercial purposes
- ✦ Enhance public and education outreach initiatives



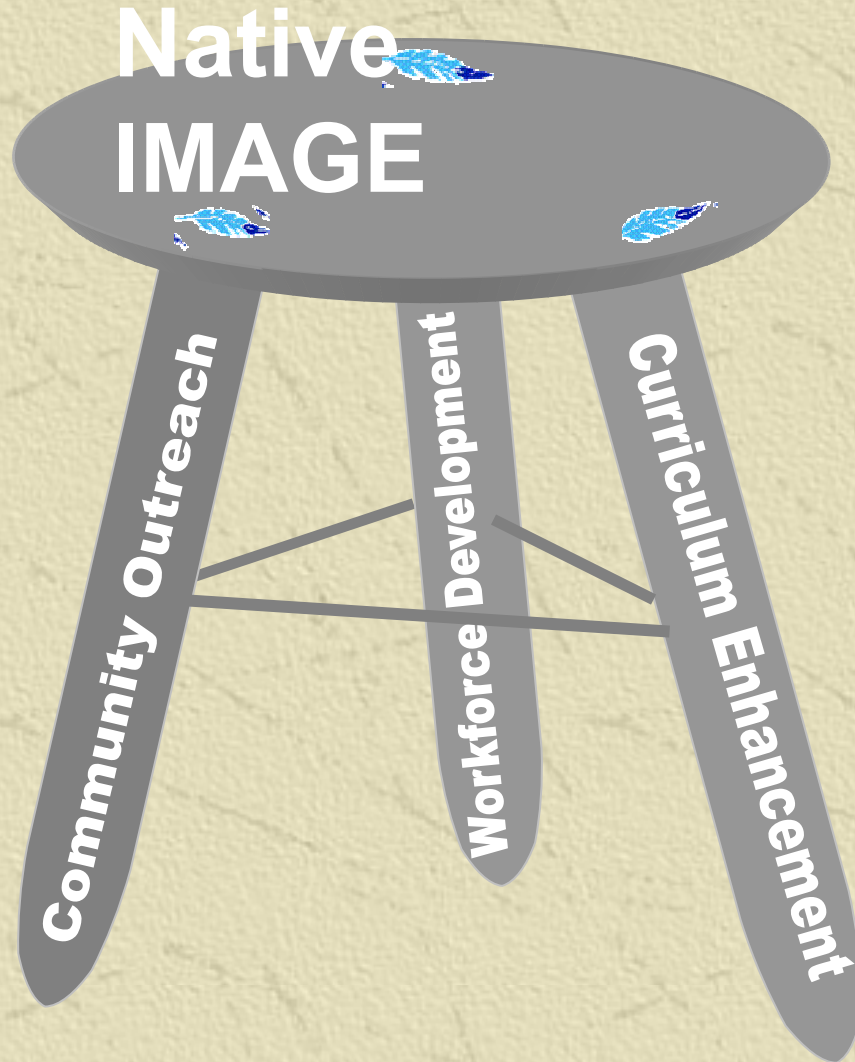
# Establish a Native Image Office

## January 2003





# The **Native IMAGE** VISION



# Community Outreach

---

## **Native IMAGE** will:

- ◆ Provide training on Geographic Information Systems and Remote Sensing,
- ◆ Supply the Winnebago community with informational resources regarding well-mapping, land-use, and precision agriculture,
- ◆ Support outreach endeavors that expose the community to new technology, and
- ◆ Develop strong linkages with the Winnebago Public Schools.



# Community Partnerships

---

## ✦ Geoscience Resource and Inventory Survey What resources/skills are already available?

- ✦ Tribal
- ✦ USDA  UNITED STATES DEPARTMENT OF AGRICULTURE
- ✦ Bureau of Indian Affairs 
- ✦ State & County Extension Agents
- ✦ Citizens or other stakeholders with interest or experience in Geoscience



# Native IMAGE Team

---





# The "Team" at work





# Community Outreach

---

✠ Family Geoscience

✠ Community Geoscience Open House Nov. 2003

- LPTC
- Dinner
- Lectures by GS Experts
- Hands-on activities



# Family Geoscience (FGS)

---

- ✦ Originated with Aeronautical Science activities with 5 & 6 graders and their parents
  - ✦ These have been extremely successful
- ✦ Focus is grades 7 & 8
- ✦ Will occur initially at Winnebago Public Schools (WPS)
- ✦ Exported to other reservation schools in successive years



**Recent Geoscience Night**



# Typical GIS Projects





# Geospatial Data Samples

---



Color Infrared Images of Nebraska's Winnebago Reservation  
Captured September 6, 2002

A NASA Nebraska EPSCoR & UNL CALMIT Collaborative Effort



# LPTC GIS Curriculum Enhancement

---

- ✦ As much integration of Geoscience in the STEM program as possible
- ✦ ArcView and GPS modules in Computer Science courses
- ✦ Remote Sensing and GPS in Prairie Grass Restoration Project
- ✦ Use of GIS in cultural and historical cataloguing



# Educating the Masses

---

- ✦ Summer fellowships
- ✦ Workshop attendance
- ✦ Research mentoring
- ✦ Instructional design assistance
- ✦ STEM alignment
- ✦ Technology integration



**Grant Writing  
Workshop Attendance  
Fall 2002**



# Geoscience Bridge Program

---

- ✦ Little Priest Tribal College and Winnebago Public School would benefit from a stronger bridge
- ✦ We are collaborating on Geoscience curriculum (K to 14) with both the Winnebago Public and St. Augustine Mission schools
- ✦ Building the bridge pipelines are life-long projects



# Our First Project





# Model Bison Pasture Development



Louis LaRose





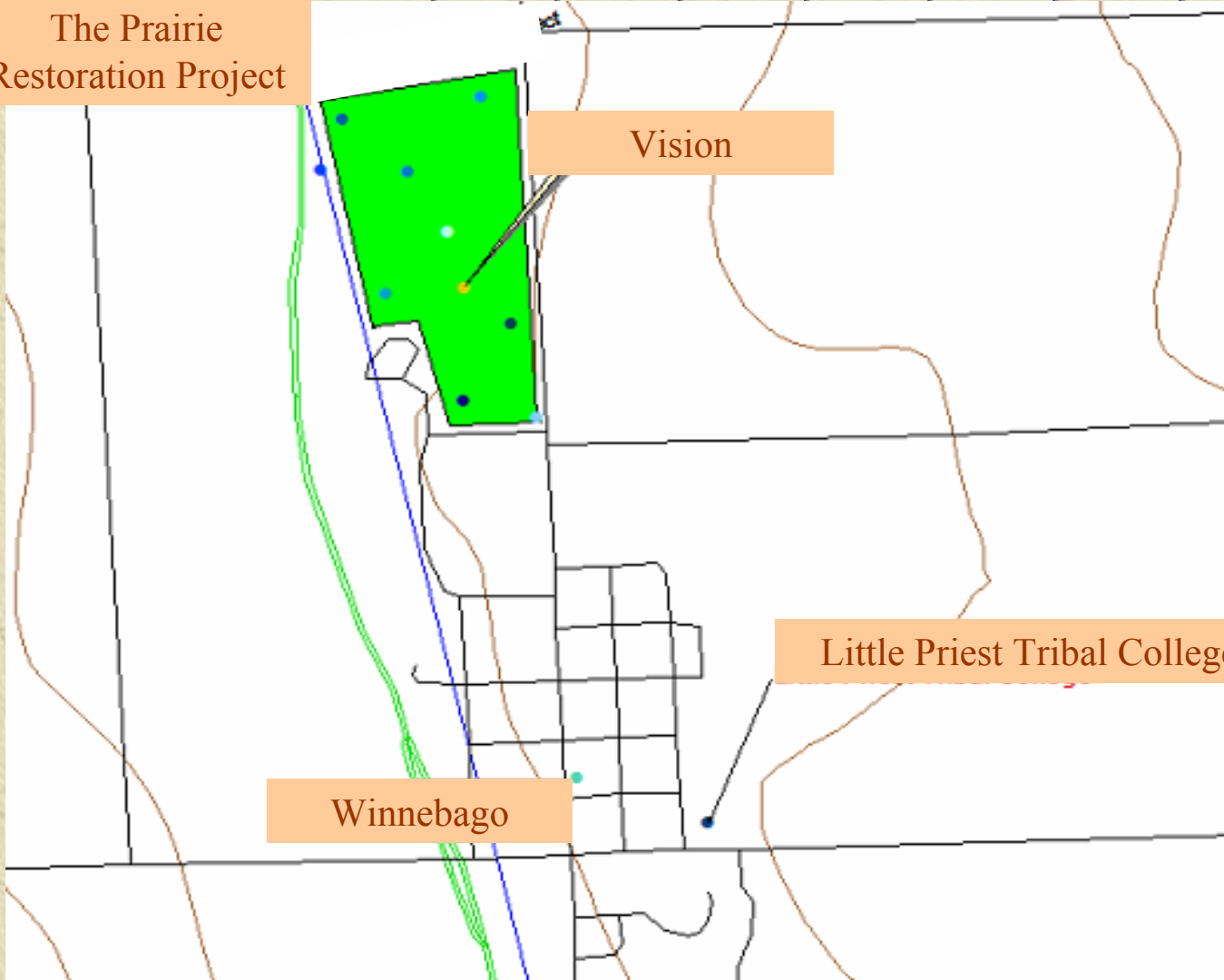
# Our First Project ... in ArcView

The Prairie  
Restoration Project

Vision

Little Priest Tribal College

Winnebago





# The Vision ...





# Workforce Development – Step #1

---



Native IMAGE #1

Native IMAGE #2



# Workforce Development

---

## ✦ Student Interns

- Paid position -- Summer and school year





# Community Involvement

## -- UNL Extension

---

### ✦ Geoscience Club

- ✦ LPTC-based including Winnebago Public School students and teachers
  - A Saturday program
  - Little Priest Tribal College Extension Assistant led
  - USDA funded
- ✦ Field trips and field research
- ✦ Other special Little Priest Tribal College events



# LPTC GS Technical Advisory Committee

---

- ✦ Academics (UNO, UNL, or Wayne State)
- ✦ Industry and Employers
- ✦ Governmental Officials
- ✦ Geoscience Experts (EROS, CALMIT, ESRI)
- ✦ Other tribal college Geoscience personnel (Such as: Sinte Gliska, Salish Kootenai, Dine ...)

# What we know ...

---

- ✦ We have much to do -- but we have started
- ✦ The response received from everyone has been heart-warming and extremely supportive
- ✦ We are newcomers to the Geoscience arena, if Native IMAGE can be of help, do not hesitate to ask!





# Native IMAGE

...the  
beginning