

Pueblo of Taos Environmental Management System Project

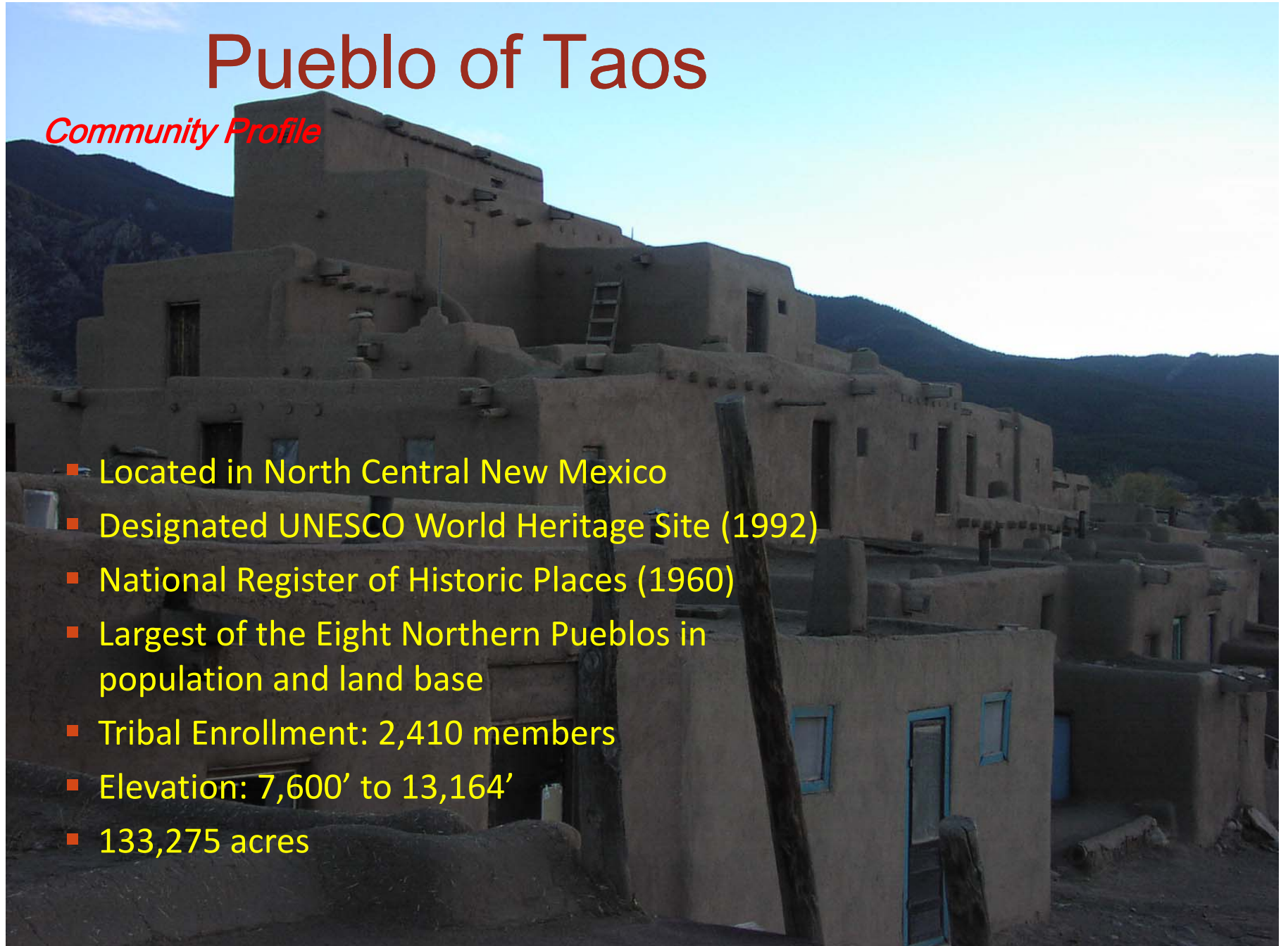


Building TCU - EPA Partnerships
Robert Gomez, Environmental Programs Manager
Albuquerque, NM • June 28, 2011

Pueblo of Taos

Community Profile

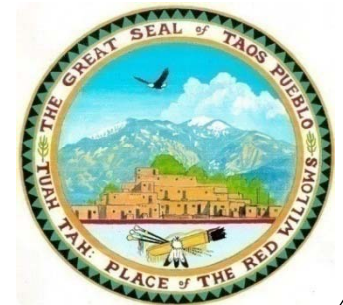
- Located in North Central New Mexico
- Designated UNESCO World Heritage Site (1992)
- National Register of Historic Places (1960)
- Largest of the Eight Northern Pueblos in population and land base
- Tribal Enrollment: 2,410 members
- Elevation: 7,600' to 13,164'
- 133,275 acres



Environmental Management Systems

A VOLUNTARY EFFORT TO:

- create a set of processes and practices that enable your organization to reduce its environmental impacts and increase your operating efficiency
- Practice a continuous cycle of planning, implementing, reviewing and improving your processes and actions to meet your business and environmental goals
- **Plan, Do, Check, and Act**



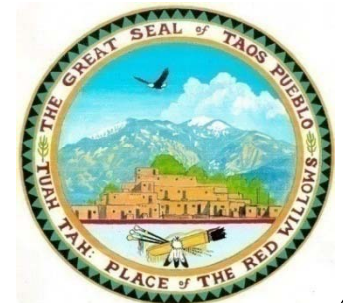
Environmental Management Systems

Plan

- Define your organization's Goals and Targets for EMS
- Form **Green Team** & secure Top Management commitment

Do

- Establish baseline waste/recycling Amounts and related Costs
- Conduct on-site assessments
- Prepare feedback reports & draft EMS document



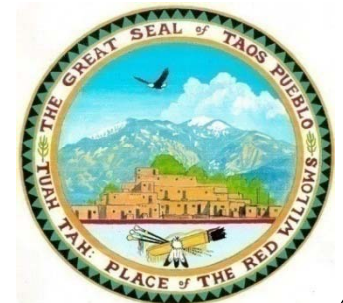
Environmental Management Systems

Check

- Maintain all assessment records
- Organize continuous internal audits

Act

- Finalize EMS document (based on feedback)
- Deliver staff training on EMS
- Continuous reporting & Management Reviews





Pollution Prevention

- A nationwide effort to reduce waste at its source
- “source reduction” “waste minimization”
- An alternative to “waste management”
- Focuses on waste segregation and recycling, reduced packaging, **green** purchasing, composting





Why an EMS?

- **Materials improperly managed create expensive disposal costs**
- **Adopting an EMS will reduce costs (by avoiding disposal costs) and liability (reducing Workman's Comp Claims)**
- **Reduce, Reuse, and Recycle makes economic sense and creates good will among employees and visitors**

**Disposal runs into
big \$\$**



Links Between Pueblo EMS and Solid Waste Planning

- Integrated Solid Waste Plan currently being developed by Tribe
- Increased recycling, composting and hazardous waste collection
- EPA and State grant awards
- EMS relates directly to continuing efforts to close and cleanup illegal dump sites





Core Challenges

- **Paying more to dispose of trash**
- **Narrow funding base – Tribal Government subsidy, energy tax**
- **Costs will rise – they are controlled by others**



Benefits of the Pueblo's **Green** Activities

- Will Result in Direct Services for the Community – for example, Household Hazardous Waste Collection
- Promotional Opportunity to link World Heritage Site designation and **Green Pueblo** in tourism guides, professional publications and with professional associations
- Possible designation by EPA as first tribal community in New Mexico with an EMS



How do we begin?

- Select two Tribal facilities for pilot projects
- Form **Green Teams** and conduct environmental assessments with recommendations
- Grab opportunity for management to implement and promote a high profile program with goals, systematic approach and results



On-Site Assessment Taos Head Start and Day School



- Conducted preliminary walk-thru with entire **Green Team**
- Identified all waste streams (input/output)
- Interviewed staff to get the “real” picture
- Initiation of daily food-scrap composting at Red Willow Center



Benefits of Assessments and EMS Program

- ability to measure output, increase waste diversions, establish baselines and reduce costs
- educational opportunities for students and community members
- Reinforce Cultural Traditions and Philosophy on Protection and Preservation of the natural world and resources

Pueblo of Taos Food Scrap Composting Project



Identifying Environmental Aspects

- The Pueblo Environmental Office formed a “Green Team” in 2009 with the assistance of New Mexico State University’s Institute for Energy and the Environment (IEE). The Team identified the following environmental aspects to be considered in a tribal Environmental Management System:
 - Solid Waste
 - Recyclables
 - Organic Waste
 - Energy and Lighting
 - Water and Wastewater

Objectives and Targets

Objectives	Targets	Achievements
Reduce production of solid waste through diversion of recyclables/ Compostable items	Reduce solid waste amounts by 20% by 2011	Significant amounts Diverted
Increase recycling of paper, cardboard, plastic, metal and glass	Increase diversion of recyclables by 50% by 2011	Additional bins placed throughout Tribal Offices; Recycling trailer located at transfer station
Implement composting of cafeteria food scraps	Initiate food scrap composting program in 2009	3500 pounds of food scraps composted at Red Willow Center in 2009

General Goals

- Increased diversion of recyclables/ compostable materials out of tribal waste streams,
- Comprehensive tracking of waste streams, recycling and composting streams, and associated costs and cost-savings,
- Initiate organic composting operation from all kitchens

Recommendations

- Initiate segregation of compostable prep waste from kitchens
- Locate compostable cans in kitchens and at loading dock for daily pick-up and transport to Red Willow Center for composting
- Initiate cardboard, can and plastic recycling in kitchens
- Information on composting and recycling to be presented to all staff at TDS, Headstart, and Senior Center.

Pitching the Project

- Meetings were held with the various Division Directors and Principals.
- The benefits of the project were diversion saves space in the landfill, lowers the risk of contamination of the groundwater, lowers the amount of greenhouse gasses produced by transporting wastes to the dump and by the decomposition of waste in the landfill

- Beginning in January 2009 a Food Scrap Diversion Program was implemented at the Taos Day School (K-8), and the Taos Pueblo Headstart.



Taos Day School Composting Pilot Project

- Divert Organic Waste from Day School Kitchen and Cafeteria through source separation
- Only Non-meat organic items and shredded paper are to be diverted



Process

- Only non-meat organic food scraps will be placed in composting bin,
- **Vegetables/fruit/cheese/bread and baked goods/cereals/eggs/coffee grounds,**



Successes in Indian Country

- As of **March 2011**, the Pueblo has diverted about 3500 pounds of school food-scrap waste from a landfill into a community composting project
- Pueblo's EMS calls for increased food scrap composting from offices and senior center
- The food scraps are turning into valuable fertilizers that will be used to grow food crops at Red Willow, and we envision that we could use compost in a program to grow native trees and plants in a program to restore degraded riparian areas.



Finished Product



Outcomes and Findings

- The children of Taos Day School were enthusiastic participants in the project.
 - All grades participated
 - Contamination of food scraps was a re-occurring issue, meats, dairy, condiment wrappers, plastic milk jugs, cutlery.
 - We diverted almost 2 tons of compostable food scrap from the waste stream

Outcomes and Findings

- Organizational Issues -
 - Due to small staff, (1 GAP, 2 Water Quality/NPS) scrap pickup was inconsistent due to competing demands for time,
 - Tribal Utility operates transfer station, 1 operator. 7 days per week

Logistics

- It took a person about an hour every day (M-F) to collect and transfer material at Taos Day School/Headstart to Red Willow Center about 2 miles away. Labor plus fuel
- Use of plastic bags and frequently sorting food scraps added to waste stream and time in the field.

Project Status

- We found that have a dedicated person solely responsible for solid waste issues would greatly facilitate the advancement of the program consistency.
- A key member of the Environmental Staff was appointed into tribal government for 2010, increasing demands and administrative burden on remaining staff.

Recommendations

- Place composting bins or facility near school,
- Enlist kitchen staff manually separate green waste to avoid contamination issue
- Identify Composting Champion within the TDS to assist in the gathering of food scraps
- Seek grant funds to subsidize the operation of school based composting program,
- Engage tribal decision makers, educate school community about the outcomes and benefits of project.

Failure is Not an Option





Resources

- Pueblo of Taos Environmental Office
 - Regulatory compliance and community outreach
 - 575.751.4601 rgomez@taospueblo.com
- NMSU/IEE Resources Center
 - Free on-site assessments and feedback reports
 - 505.843.4251 chriscam@nmsu.edu
- New Mexico Environment Department
 - Pollution Prevention & Green Zia Program
 - 505.827.0677 michelle.vattano@state.nm.us
- New Mexico Recycling Coalition
 - County-by-County listings of recycling resources
 - 505.983.4470 www.nmrecycle.org





THANK YOU



Robert Gomez,
Environmental Programs Manager
Taos Pueblo Environmental Office
PO Box 1846
Taos New Mexico, 87571
(575) 758-7824 x.114 Direct
rgomez@taospueblo.com