

## **Zuni conservation project annual report**

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"The mission of the Zuni Conservation Project is to restore damaged Zuni lands and to protect and manage Zuni natural resources in a sustainable manner which ensures a livelihood for Zunis today without compromising the opportunity for future generations to do the same."

### **Project Leader's Introduction**

In the early 1970's the Zuni tribe sued the United States for lands that were damaged as a result of federal improprieties related to trust responsibilities. After over ten years of litigation the United States and the Zunis settled the case out of court by establishing a trust fund through the Zuni Land Conservation Act of 1990 to restore damaged lands and to plan and implement Zuni sustainable resource development. In 1992 the Zuni Conservation Project prepared the Zuni Resource Development Plan: A Plan of Action for Sustainable Resource Development and organized efforts to meet requirements of the Act and needs of the Zuni community. The Conservation Project began full implementation of the plan in 1994.

For thousands of years we Zunis have lived in a complex and delicate environment which has sustained our ancestors and which continues to bring great benefits to our people today. But with the continuing growth of our population and the increasing demand for limited natural resources, the time has come to decide what means we will use to ensure that the resources and benefits available to our ancestors will be available for future generations.

Today Zuni could probably be described as both a developing nation and a prosperous community. Our contemporary habits are approaching the patterns of the United States in general, but our culture and ways of life remain consistently and uniquely Zuni. We are faced with the enormous challenge of moving into the next century maintaining our traditions and values, yet needing the modern technical capability to deal with the conservation and development issues that confront us.

There is still an enormous amount of work to be done. While many members of the Zuni community are currently involved in the planning and implementing of

natural resource programs, there remains a large part of the population which needs to be informed and included in natural resource decision-making. Our work must be inclusive and equitable. The measure of our success will be in how the elected tribal representatives, the Zuni people, and relevant governments accept responsibility for the future.

James Enote, Project Leader  
Zuni Conservation Project and Department Head  
Department of Natural Resources

## 1996 Projects

### Watershed Restoration

The restoration of Zuni watersheds involves a multi-disciplinary approach to repair damaged lands. The watershed section has gathered and stored information on the current status of Zuni watersheds, created a prioritization system for treatment of watersheds, initiated dialogues with land users and in critical locations built structures to halt soil movement.

In 1996 a reevaluation of the four year old watershed restoration program showed that further effort is needed towards improving grazing policy and management. The reevaluation also introduced a new emphasis towards long-range land use policy.

By September of 1996, it was becoming clear that some livestock producers were not willing to cooperatively manage their permitted areas for watershed protection. In some cases livestock growers are grazing livestock without permits on areas that are disputed. In these areas, no grazing management will be realized until the disputes are resolved. Since grazing management in these areas is lacking, watershed efforts would be wasted there. Therefore, in September crews were directed towards agricultural and water development projects. Watershed work in 1996 included:

- Nutria watershed treatments
- Zuni Tribal Forest Unit treatments
- Repairs to damaged erosion control structures
- Resurvey and evaluation of Nutria erosion treatments
- Grand Canyon mediation project
- Zuni Peach Orchard rehabilitation
- Assistance to range section for constructing three water developments
- Protection and development of Kyakima spring at Dowa Yallane
- Assistance to Fish and Wildlife for wetland meadow development

## Hydrology

Water is needed in all aspects of Zuni life. The sustainability of Zuni society as a whole is dependent on adequate supplies of good quality water. Water within Zuni lands exists as rain, surface water, springs, and ground water and is most obvious as a resource during floods and drought. As the population of Zuni grows and the demand for water for agriculture, recreation, sanitation, industry, and urban development increases, the effect on social change and economics must be recognized and accounted for through integrated water resource planning and management. Many projects or situations arise on the reservation or surrounding areas which may impact the quantity or quality of surface or groundwater used by the Zuni tribe. Protecting these water resources requires varying degrees of involvement by Hydrologist, depending on the specific project. Hydrology work in 1996 included:

- Evaluation of watershed erosion controls
- Coordination of Flood Early Warning System
- Coordination of Pueblo Office of Environmental Protection activities
- Rangeland water development designs
- Assistance to Zuni Solid Waste Program
- Technical Support to Zuni Water Rights Program
- Assistance in sewage treatment and artificial wetland planning
- Proposal development and coordination of a Bureau of Reclamation grant
- Assistance with Nutria #3 spillway modification

## Geographic Information Systems

The Zuni Land Conservation Act requires that Zuni develop a computerized system of resource management. The Zuni Geographic Information Systems office provides the Conservation Project and other tribal programs with an essential computerized data base which includes many layers of information to compare environmental and developmental effects in a multitude of land use scenarios. GIS work in 1996 included computer maintenance, completion of specific jobs for programs and addition of information to the GIS library including:

- Nutria agricultural fields, irrigation system, upgraded with cropping history
- Pescado agricultural fields, irrigation system, upgraded with cropping history
- Ojo agricultural fields, Ojo irrigation system, upgraded with cropping history
- Tekapo agricultural fields, Tekapo irrigation system, upgraded with cropping

## history

- Zuni agricultural fields 50% completed
- Zuni irrigation system 50% completed
- Peach Orchards 75% completed
- Small watersheds in Burned Timber, South Burned Timber Canyons, and Blind

## Canyon

- Landfill and new transfer station
- Continuation of grazing unit mapping
- Digitizing bird survey
- Managing Data Files
- New land acquisitions (Arizona and Mazone lands)
- Declared underground water basin
- Wastewater and sewage treatment wetland project
- Regional information

## Range Conservation

In tandem with erosion control efforts, rangeland management, especially grazing of livestock, is an activity which requires improved management in order to reduce erosion at its source. The majority of Zuni grazing lands are fragile, semi-arid grass, shrub, and woodlands with high erosion potentials. If the Zuni heritage of livestock grazing is to continue in a sustainable manner, it is necessary to integrate Zuni ecologic, economic, social and religious requirements. Developing dialogues with livestock growers has helped the Project to better understand these needs. Developing water distribution was the primary tool for improving grazing management in 1996. Range Conservation work in 1996 included:

- Solar demonstration workshop
- Five range water developments
- Annual range vegetation surveys
- Continued mapping of grazing units
- Review of grazing policy
- Windmill repair
- Assisting with annual sheep shearing
- Assisted with completion of range carrying capacity information

## Sustainable Agriculture

Today, crops grown in irrigation districts are mostly- alfalfa, other forage crops and vegetable in small plots. There are also many gardens near houses in the Zuni village, for which water is hauled, usually in tanks in pickup trucks. However, most Zuni families with access to farm fields are not cultivating them for a variety of reasons. Lack of adequate water in irrigation districts, lack of equipment, land disputes, lack of time and pests were the most common problems listed in surveys of farming families. Nevertheless, many Zunis now have a renewed interest and commitment in revitalizing Zuni agriculture. The purpose of the Zuni Sustainable Agriculture Project is to support the community in increasing and improving farming and gardening at Zuni. ZSAP work in 1996 included:

- Assistance to Zuni Organic Farmers Cooperative
- Discovery and rehabilitation of old peach orchards
- Surveying and mapping four irrigation districts
- Developing gardens at four schools
- Maintaining Zuni Community Seedbank
- Maintaining Community Compost Project
- Publishing the newsletter - Zuni Farming for Today and Tomorrow
- Completion of annual crop surveys

## Community Forests

Forestry at Zuni follows conventional BIA Forest management guidelines. These guidelines are established primarily by interests of timber producing tribes in the Pacific Northwest. Forestry management at this scale is largely market driven and reflects and reacts to national and international demands. In Zuni however, the demand for forest products occurs at a community scale for use locally. Therefore, it is a challenge to reorient existing forest policy to consider or even to emphasize local needs such as fuelwood and the role nontimber forest products have in a larger social and cultural context. As part of the community forestry initiative in 1996, relevant Zuni forest information was gathered reviewed and the following documents prepared for redeveloping community forestry at Zuni.

- Zuni Forests and the Zuni Community
- Pinon-Juniper Ecology and Management: An Overview for Zuni Community Forestry
- Word search of forest information from the Zuni and the Courts CD-ROM

## Administration

The administrative leadership of the ZCP provides order to develop conscientious strategies for the future by integrating resources and taking into account the variability of Zuni values, perspectives and capabilities.

During the months of May through October the workload of the administrative staff increased substantially due to processing of paperwork for the watershed restoration crews. Personnel actions, travel authorizations and timesheets are prepared for these additional workers and purchases increase due to needed tools, fuel and oil for vehicles, vehicle maintenance and other necessities.

## Training

Human resource development is a requirement of the Zuni Land Conservation Act and is a key to sustainable development of Zuni natural resources. Without adequate training or capacity building it will be very difficult to maintain an authentically "Zuni" based program capable of handling 21st century

challenges. Training in 1996 was restricted due to a continuing freeze on travel. A relatively small number of staffs were able to attend training by using non-tribal funds or by traveling and paying for training at their own expense. The Zuni Land Conservation Act requires training of Zunis to implement the Zuni Resource Development Plan. Training in 1996 included:

- Community Organizing Workshop
- Midwest Regional Environmental Education Conference
- Trouble Shooting and Maintenance of IBM PC's and Compatibles
- NM Organic Farming Conference
- Southwest Indian Livestock Days
- Seed Saving Course

### Special Initiatives

Community forestry was probably the most outstanding new initiative in 1996. As a result of the community forestry project a rethinking of Zuni forestry began to take shape in time for the BIA led 10 year Zuni Forest Development Plan.

New Grants · Generally, new conservation and development initiatives are difficult to advance within the scope and budget of the Conservation Project Trust Fund. Therefore, support was sought from outside sources to initiate the following programs:

\$8,000 from the Angelica Foundation for Zuni Community Forestry  
\$30,000 from the Bureau of Reclamation for water management  
\$35,000 from the Lannan Foundation for Zuni Organic Farmers  
\$10,000 from the Seventh Generation Fund for Zuni Organic Farmers

### Internships and Volunteers

Ms. Margarita Provenzano from Antioch College in Yellow Springs, Ohio contributed her organizational skills by developing an index and data base to organize hundreds of documents within the Project. Stanford University Students assisted with construction of a seedhouse and greenhouse. Tyrall Kallestewa from Twin Buttes high school worked with the Project as part of a program of environmental education and service learning.

### Zuni Conservation Project Staff

#### Administration

James Enote, Project Leader/Dept. Head Natural Resources  
Carol Lamy, Administrative Assistant  
Stacey Cachini, Clerk Typist/Data Processor

## Hydrology, Watersheds and Flood Early Warning Systems

Kirk Bemis, Project Hydrologist  
Andres Cheama, Supervisory Hydrology Technician  
Albert Chopito, Hydrology Technician  
Sheldon Lallo, Hydrology Technician  
Watershed Restoration Crew Supervisors  
Gabriel Yuselew  
Darrell Quam  
Dewey Deysee  
Loretta Laweka  
Watershed Restoration Crew  
Tony Ahiyite  
Narren Bowannie  
Dennis Dewa  
Wilbur Johnson  
Randall Laconsello  
Stanford Lastiyano  
Marcus Lesansee  
Valery Lupee  
Orlind Naktewa  
Alfonso Penketewa  
Julius Othole  
Calvert Shashewannie  
Bryson Bobelu  
Antic Calavaza  
Darrell Dutukewa  
Jerome Kylestewa  
Leslie Lamy  
Michael Lementino  
Frederick Lorenzo  
Lewis Mateya  
Robert Nastacio  
Hendricks Peyketewa  
Alrick Seowtewa  
Norris Shebola  
Kollin Bobelu  
Andrew Cheeku  
Philander Gia  
Travis Laate  
Paul Lasiloo  
Averill Lesansee  
Defrades Luna  
Joel Nastacio  
Janelle Neese

Gerold Quam  
Dannie Seoutewa  
Joann Tshowna

#### Geographic Information Systems

Stanford Lalio, GIS Coordinator  
Quentin Lalio, GIS Technician II

#### Range Conservation

Wilbur Haskie, Supervisory Range Technician  
Darren Sanchez, Conservation Technician  
Michael Cheeku, JTPA Range Aid

#### Sustainable Agriculture

Andrew Lashty, Director  
Fred Bowannie, Jr., Assistant Director  
Patterson Peynetsa, Agriculture Technician  
Wilmer Quandelacy, Farmer Liaison  
Brian Edaakie, Field Worker  
Anson Lalio, Field Worker  
Addison Peynetsa, Field Worker  
Roman Pawluk, Farmer Knowledge Project Consultant

#### Community Forestry

Sharon Hausam, Forestry Coordinator

#### Interns

Margarita Provenzano, Antioch College  
Tyrall Kallestewa, Twin Buttes High School

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#### Notes to readers

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