

ENVIRONMENTAL ASSESSMENT

Jicarilla Apache Nation Geographical Priority Area 2002

INTRODUCTION

This environmental assessment (EA) is being prepared by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) to comply with the requirements of the National Environmental Policy Act of 1969 and implementing regulations at 40 CFR Parts 1500-1508. The EA will assist NRCS in determining whether the proposed action will have a significant impact on the quality of the human environment and therefore requires preparation of an Environmental Impact Statement.

NEED FOR PROPOSED ACTION:

Purpose of and Need for Action: There is a need in the Jicarilla Apache Nation Geographic Priority Area (GPA) to improve range land health, develop a better understanding of effective livestock grazing management through producer education, reduce soil erosion, and enhance forage diversity.

Background:

The Jicarilla Apache Reservation GPA comprises approximately 870,566 acres in northwestern New Mexico in Rio Arriba and Sandoval Counties. The Reservation is situated in the headwater region of the San Juan and upper Rio Grande Rivers. Abundant in natural resources, the Reservation's geography ranges from high desert elevations of 6,400 feet to mountainous terrain exceeding 10,000 feet. Rich reserves of oil and gas resources, wildlife, forestry, and water resources have enabled the Jicarilla to firmly establish their sovereignty and cultural identity. Tribal headquarters and the population are centered around the community of Dulce located in the northeast portion of the Reservation.

Livestock production is the principal agricultural endeavor on the Reservation. Approximately 780,686 acres (371,621 acres of woodland grazing and 409,247 acres of open rangelands) of the Reservation are utilized for livestock grazing. The north half of the Reservation is used for summer range and the south half for winter range. The area consists of 92 range units with cattle being the predominant livestock. Grazing permits on these units are issued for a period of five (5) years.

The livestock carrying capacity on the Reservation has been reduced approximately 30% due to declining range conditions. The loss in productive range land health is directly attributed to a heavy infestation of brushy plant species (primarily big sagebrush), areas where critical erosion is occurring, and poor grazing management practices. Since the completion of a soil and range inventory in 1969, sagebrush and other woody species have increased by 60%. Production of perennial grass species has decreased by 28% and annual species 26%.

Approximately 244,500 acres of the Reservation's open rangelands are adversely impacted by continued spread of big sagebrush and accelerated erosion. A survey initiated by the BIA in 1990 ascertained that approximately 192,000 acres have sagebrush canopy of 26-40%, and realize a forage production of only 25 to 40% of the sites' potential. Another 52,500 acres represent canopy cover in excess of 40%. In their present condition, the latter are virtually worthless as grazing lands for both livestock and wildlife. About 75,000 acres of range lands are undergoing erosion at a critical rate in the form of gully, sheet, or rill erosion which are visible in the form of gullies, pronounced pedestalling, or visible expansion of arroyos. Moderate erosion affects approximately 148,600 acres, however has not yet reached an accelerated rate.

Current range conditions are estimated to vary from low to fair with approximately 50% of suitable range sites being underutilized by livestock. An absence of effective fencing patterns and livestock water development greatly contribute to this downward trend in range health.

A secondary area of concern lies along the Navajo River's riparian corridor north of Dulce. Approximately 1,600 feet of stream bank is being affected by sloughing and accelerated erosion, affecting water quality and fisheries habitat in the river.

ALTERNATIVES:

Alternative 1. No Action

Alternative 2. Proposed Action: Use NRCS Environmental Quality Incentives Program (EQIP) authorities to assist livestock producers and Tribal natural resource enterprises within the GPA.

Rangeland practices will be comprised of the following:

Prescribed Grazing, Water Development, Fencing, Erosion Control, Brush Management (scalping, shredding, mowing) Prescribed Burning (by BIA), Pest Management and Range Planting, Planned Grazing systems, Upland Wildlife habitat Management, Windbreaks. Stream bank protection practices will consist of using proven methods to mitigate the problem.

Forage Harvest Management on irrigated land will comprise the following:

Prescribed Grazing, Fencing, Pasture Planting, Pasture & Hay land Management Structures for water control, Stream bank and shoreline protection and irrigation water management and Crop Residue Use.

ALTERNATIVES CONSIDERED BUT NOT STUDIED IN DETAIL.

One alternative was to use NRCS EQIP authorities to assist producers within the Jicarilla Apache Tribe GPA to address wildlife depredation issues. While some pertinent issues were voiced during the Local Work Group meeting, these issues are beyond the scope of the NRCS activities.

Another alternative considered was to use EQIP authorities to address forest management issues within the GPA. These concerns are within Tribal and BIA jurisdiction and not within the scope of the NRCS-EQIP authority.

A third alternative expressed by Local Work Group participants was to utilize EQIP authorities to mitigate severe non-point source erosion runoff resulting from extensive oil and gas

development on the Reservation. While these concerns are valid, their jurisdiction lies within the scope of Tribal and energy company officials.

SCOPING OF ISSUES FOR UNIQUE AND PROTECTED RESOURCES IN THE AREA:

NRCS conducted a review of the area to identify unique and protected resources and other special issues of concern. Members of the public had an opportunity to provide comments and identify concerns during the Local Work Group Meeting on November 17, 2000, at the Jicarilla Extension Service in Dulce. No controversy about the need for action or the actions themselves was raised during this meeting, and no resources or issues of concern were identified during the meeting or by NRCS or other Federal, State and Tribal agencies except those discussed in this EA.

Threatened and Endangered Species and Species of Concern: A record search shows there are two species listed as endangered under the ESA on the Jicarilla Apache Reservation. Bald Eagles and the Mexican Spotted Owl are the only endangered species found within the GPA. NRCS funding for the GPA will not affect these species. Prior to any construction, consultation and coordination with the Jicarilla Apache Tribe's Department of Game and Fish and/or US Fish & Wildlife Service will be undertaken to avoid any potential impacts.

The county list of Threatened and Endangered Species shows several other species, but NRCS has determined that none of these will be affected by any alternatives or action considered in this EA.

Cultural Resources and Historic Properties: NRCS completed a search of cultural resource records. There are 3,438 previously recorded sites within the GPA. The sites are comprised of lithic scatters, Gallina sites and pithouses, gravesites, traditional cultural properties, etc. Nonetheless, to ensure that unidentified sites are not adversely affected, consultation will be conducted with Tribal officials to avoid impacting traditional cultural properties. Site specific field surveys will be done and consultation will be conducted with the New Mexico State Historic Preservation Officer (SHPO) before NRCS implements any ground disturbing activities. During Local Work Group meetings Jicarilla Apache Tribal officials have been consulted about the alternatives and actions. No concerns have been expressed.

Wetlands: No wetlands will be affected within the GPA.

IMPACTS AND EFFECTS OF ALTERNATIVES:

Table 2 compares the overall effects of each of the alternatives discussed below.

ALTERNATIVE 1. No Action

Current practices will result in continued degradation of the resource base within the GPA. Grazing land conditions throughout the Reservation will continue to decline with the spreading of undesirable woody species, accelerated erosion rates exceeding the allowable soil loss per acre per year, a decrease in plant vigor and diversity, and a decrease in the land's carrying capacity for livestock and wildlife. Stream bank erosion in the Navajo River will continue at an accelerated rate.

ALTERNATIVE 2. PROPOSED ACTION:

Approximately 250,000 acres within the GPA will be affected with improved prescribed grazing systems, which will provide livestock producers a better understanding of effective grazing management. Brush management will be applied to approximately 25,000 acres of big sagebrush, or almost 3% of the Reservation's total acreage. Water development for livestock will focus on the construction of pit tanks (60), wells (20), pipelines (52,800 feet), and troughs (40). Cross-fences (105,600 feet) will be constructed to implement improved grazing patterns. Erosion control will employ grade stabilization structures (150), rock and brush dams (100) and net wire diversions (20,000 feet) to reduce soil loss, stabilize head cuts, and retard overland water flow. Range planting (1,500 acres) will convert poor-condition rangelands to increase plant diversity and reduce erosion. Stream bank protection along the Navajo River will utilize loose rock riprap (300 cubic yards) to construct vortex rock weirs. NRCS expects to treat only about 10% of the Reservation with facilitative practices under this alternative because of the limited amount of EQIP funding available

If Alternative 2 were implemented, there would be impacts to soil quality and erosion, water quantity and quality, air quality, quality of life and economics. As indicated above, steps would be taken on a site-specific basis to ensure no cultural resources or historic or traditional cultural properties are adversely affected. All necessary permits will be obtained from the Army COE, EPA, and New Mexico Surface Water Quality Bureau to ensure no water quality regulations are violated.

Range land: If alternative 2 is used, there would be impacts to soil quality and erosion, water quantity and quality with improved range conditions and diversified plant communities within the GPA. This can be accomplished by implementing the following practices:

- Prescribed Grazing
- Water Development
- Fencing
- Erosion Control
- Brush Management
- Range Planting

Prescribed grazing will enhance live stock distribution, forage utilization that will impact plant health and vigor along with plant diversity. Acreage being addressed with this practice is 250,000 acres of Rangeland (cumulative 500,000 acres).

Fencing within the GPA will impact grazing patterns resulting in better forage utilization and improved livestock distribution. Approximately 105,600 feet of fence (cumulative 300,000 feet) will be constructed within the GPA. NRCS EQIP funding for this practice will be approximately \$60,000. Minimal soil disturbance will be realized with fencing construction from hand installation and preparing fence lines mechanically.

Fencing considerations will address movement of wildlife through fenced pastures.

Erosion Control: Construction of practices will be installed on gullies, head cuts and any critically eroding area within the GPA.

Grade stabilization structures, rock and brush dams, net wire diversions, and bioengineering will be used to address this resource concern. NRCS EQIP funding will assist with approximately \$45,000 on these measures (cumulative \$120,000). With involvement from NRCS, Tribal and BIA funding potential soil saved through these efforts would be approximately 3 tons/acre/year. This tons/ac of soil saved are situated specifically within the GPA. With efforts expended by NRCS alone, approximately 1 to 1 1/2 tons/acre/year would only be saved. This tons/acre of soil saved are situated specifically within the GPA.

Brush Management will be applied to those areas with sufficient big sagebrush and oak brush cover (>25%). Brush management will reduce soil erosion and promote plant health, vigor, and diversity. Types of practices to be used would be:

Plowing, windrowing, EPA approved chemical application, prescribed burning, disking, and scalping. Air quality will be affected during the installation of these practices. Water utilization by native grasses will be enhanced with the removal of brush, resulting in increased plant diversity.

Approximately 25,000 acres will be treated with NRCS EQIP funding. Involvement from NRCS, Tribal and BIA funding, the potential total acres that can be treated would be 100,000 acres. Approximately \$375,000 of NRCS EQIP funds will be used for brush management practices. Tons of soil saved through brush management would be 3T/ac/yr. Air quality would be adversely affected by prescribed methods. Water quality may be affected with the chemical application. Chemicals will be applied according to label instructions to ensure the environment is protected.

Water Development will be accomplished within the GPA to improve livestock distribution. Practices to be implemented will include live stock pit/pond development, livestock wells and pipelines, and drinkers (troughs). Approximately 60 pit/ponds will be constructed within the GPA (cumulative 250 pit/ponds), 20wells (cumulative 50), 52,800 feet of pipeline (cumulative 100,000 feet), and 40 troughs (cumulative 80). NRCS EQIP funding will be approximately \$425,000. Impacts on air and water quality will occur during construction. Grazing distribution will be enhanced with the installation of these water development practices.

Range Planting will be accomplished using native vegetative, or approved species within the GPA. Approximately 500 acres will be treated (cumulative 1000 acres). NRCS EQIP funding will be provide approximately \$ 40,000.00. Range plant diversity will be improved by drilling seed into the soil. During installation of the range planting practice air and water quality will be affected. Approximately 3T/ac./yr. of soil saved will be realized with range planting due to less exposed soil and increased cover.

Riparian Area (Navajo River): If Alternative 2 were implemented, there would be some impacts to water quality and cold-water fisheries habitat in the Navajo River north of Dulce. This will be implemented by installing the following practice:

Stream bank and Shoreline Protection

Vegetative and/or structural measures (loose rock riprap) will be installed to protect the bank from the erosive action of the river. NRCS EQIP funding will assist with approximately \$5,600 for the placement of 300 cubic yards of suitable rock material for this practice. All necessary permits, such as 404 and 401 will be obtained prior to the installation of this project.

TABLE 1, ALTERNATIVE 2.

Facilitative Practices Needed for the Treatment of Identified Resource Concerns on the Jicarilla Apache Reservation	Treatment with NRCS EQIP Assistance Alone	Treatment by Landowner Initiative, Other Agency Assistance and NRCS Cumulatively
Rock and Brush Dams	100 no.	200 no.
Grade Stabilization Structures	150 no.	200 no.
Net Wire Diversions	20,000 feet	50,000 feet
Pit/Ponds	60 no.	250 no.
Prescribed Grazing	250,000 acres	500,000 acres
Fencing	105,600 feet	300,000 feet
Erosion control	1.5 T/ac./yr.	3T/ac./yr.
Brush Management	25,000 acres	100,000acres
Wells	20 no.	50 no.
Range Planting	500 acres	1000 acres
Troughs	40 no.	80 no.
Livestock Pipeline	52,800 feet	100,00 feet
Stream bank Protection	300 cu. yd. (rip rap)	1000 cu. yd.

No prime farmland is involved in this GPA. Unique farmland will be maintained and improved to sustain continued use.

Other effects were considered in the discussions, but the effects in Table 2 relate to the Need for Proposed Actions and are the only ones used for comparison to make the final decision.

Comparison of Alternatives.

Table 2.

<i>Comparison of Alternatives</i>			
Effects on Need for Proposed Action			
Alternatives	Rangeland	Riparian	Costs
1. No action	Eroding at		0
Range land	3T		
Riparian		Loss of 350 cy soil/yr	0
2. Improved	85,000 ac.	Eroding at 1.5	\$995,00
Range land/	treated	ton/ac.	0
Forage Diversity			
Riparian		1,600 feet of stream bank stabilized	\$5,600

PERSONS AND AGENCIES CONSULTED:

Upper Chama Soil and Water Conservation District Board and attendees at November 17,2000 meeting. See minutes, attached as Appendix A.

Jicarilla Apache Nation Department of Game and Fish, Dulce, NM

Jicarilla Apache Nation Department of Agricultural Services, Dulce, NM

Jicarilla Apache Nation Division of Natural Resources, Dulce, NM

Jicarilla Apache Nation Cattle growers Association, Dulce, NM

Jicarilla Apache Nation Environmental Protection Office, Dulce, NM

Jicarilla Apache Nation Extension Service, Dulce, NM

Bureau of Indian Affairs, Dulce, NM

Conservation Officer, NM Department of Game and Fish, Chama, NM

US Fish and Wildlife Service, Albuquerque, NM

NM State Historic Preservation Office, Santa Fe, NM

REFERENCES:

NRCS Field Office Technical Guide, Section II, USLE.

NRCS Field Office Technical Guide, Section III, Quality Criteria.

NRCS Field Office Technical Guide, Section IV, Standards and Specifications.

US Fish & Wildlife Service
Endangered Species List for Rio Arriba County

USDA-Carson National Forest
Canjilon District

NMED, Surface Water Quality Bureau,
Santa Fe, NM

NM State Forestry
Los Ojos, NM

NMED, Ground Water Quality Bureau
Santa Fe, NM

Rio Arriba County Commissioners

NM Extension Service
Alcalde, NM

BLM Taos District
Taos, NM

**Finding of No Significant Impact
For the Implementation of EQIP
In the Jicarilla Apache Nation GPA**

INTRODUCTION

The Jicarilla Apache Nation GPA is a federally assisted action under the Environmental Quality Incentives Program (EQIP), with assistance from the Natural Resources Conservation Service (NRCS). An environmental assessment was undertaken in connection with the development of this proposed action. This assessment was conducted in consultation with Local, State and Federal agencies. Data developed during the assessment are available, upon request, from:

U. S. Department of Agriculture
Natural Resources Conservation Service
Chama Field Office
Chama, New Mexico

The Environmental Assessment (EA) is attached for reference.

DETERMINATION OF SIGNIFICANCE

Table 1. Determination of Significance of Proposed Action.

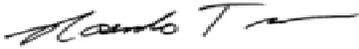
<i>CONTEXT</i>	<i>INTENSITY</i>	<i>REASONS FOR NON-SIGNIFICANCE</i>
Stream bank Stabilized – 1600 Ft. treated will save 355 cy soil/year	Permanent soil savings each year—fisheries habitat improved.	Stream quality will only be noticeable in normal years. Annual Precipitation is beyond the control of NRCS.
Rangeland (1.5 tons/acre saved on acres treated)	Soil savings will be maintained throughout the life of the practices.	Soil loss per acre remains at greater than T. *
Cumulative impacts –10% of agricultural area will be affected by facilitative practices.	Increased grazing efficiency and soil reductions on treated acres will continue for life of practices and management is permanent.	Cumulative actions by others are less than 5%.
* T value = allowable soil loss in Tons/ac/yr		

Other considerations related to context and intensity is discussed as follows: Grazing units are similar throughout the area and are not unique compared to other livestock operations in the state. No issues or concerns have been expressed at any public meetings, so controversy is small. Results of actions are known from past experience in the area, thus uncertainty and risk is low. Precedent for future action will be very limited because nearly all operators interested in this proposal will participate in the first round of funding. Traditional cultural properties, cultural resources, and historic properties in the GPA do exist and will require consultation and

coordination between the NM State Historic Preservation Office and Jicarilla Apache Nation officials. This program will not impact endangered species. No national, state, local or tribal laws will be violated by this action.

Finding of No Significant Impact:

This finding is based on the evidence presented in the environmental assessment of impacts and alternatives for this geographic priority area. Based on the assessment and the reasons given in Table two (2), I find that alternative two, analyzed in the EA, will have no significant impact on the quality of the human environment. Therefore, an environmental impact statement will not be prepared.



ROSENDO TREVINO
State Conservationist

February 8, 2002

Date