

**ENVIRONMENTAL ASSESSMENT  
TRAMPEROS CREEK WATERSHED  
GEOGRAPHIC PRIORITY AREA**

**2002 EQIP**

**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 of 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**

There is a need in the Tramperos Creek Watershed Geographic Creek Watershed Priority Area (GPA) to improve native grazing lands in terms of both plant composition as well as rangeland trend, especially the invasion of pinon-junipers on native grazing lands. There is a need to address riparian infestations of both Russian Olive and Salt Cedar (both non-native, invading species) in order to reduce water usage and improve wildlife habitat and watershed health. There is a need to address the declining irrigation aquifer in order to prevent further decline of the aquifer in order to sustain the viability of irrigated cropland in the watershed. In addition, an educational process needs to be set in place in order to inform landowners of the true potential of their grasslands.

**Background**

The Tramperos Creek Watershed lies in southern Union County and extreme northeastern Harding County. The watershed area totals 612,000 acres. Land holdings are 100% private and state, with no federal land holdings within the watershed. The watershed is bounded on the East by Texas and on the South by Quay County. It joins the Carrizo Creek Watershed on the north and east and the Ute Creek Watershed on the south and west.

Land use within the GPA is 100% grazing and farmland devoted to livestock operations and the production of livestock feed and forage.

Cropland – 27,750 acres irrigated; 11,500 non-irrigated  
Hayland – 4,000 acres irrigated; 200 acres non-irrigated  
Pasture – 1000 acres irrigated  
Rangeland – 563,450 acres  
Wetland – 500 acres  
Riparian Land – 3000 acres  
Lakes and Streams – 600 acres  
TOTAL – 612,000 acres

Soils are derived from either igneous or sedimentary parent material. Soil textures range from clay loams to sandy loams and loamy sands, with depths from a few inches to several feet in

thickness. In general, soils conditions are good and sustainable. Elevation ranges from about 6,000 feet to about 4,300 feet.

Both surface and ground water can be found in the GPA. Surface water is mostly confined to the main channel of the Tramperos and Pinabetes Creeks and some of the tributaries. Saltcedar and Russian Olive trees are invading and robbing the surface waters along drainages. Surface flow is estimated to be diminished by 40% during the summer months.

Ground water is obtained with deep well drilling into varied formations but most commonly the Ogalalla and Dakota Formations are encountered. Water yield varies from less than one gallon to as much as 1000 gallons per minute in the irrigated area. The ground water aquifers used for irrigation are declining at a rapid rate. At the present rate of decline, irrigation has a very limited life within the watershed. Estimated vary from 5 to 20 years until adequate water for current rate of irrigation depleted. There are two PL-566 structures in operation and maintenance through Ute Creek SWCD within this GPA.

Water resources are generally sufficient for domestic, wildlife and livestock uses. Water quality is generally good, however turbidity and some small areas of salinity are concerns in surface water. Quality of ground water is exceptional and something to safeguard. Sealing of abandoned wells has been identified as a need.

The air resources are mostly clean and pure. Wind velocities of 60 mph to even greater are not uncommon especially in the winter and spring. During these frequent windstorms, airborne dust is not uncommon, however the land managers are acutely aware of the hazard of wind erosion. The continuation of the Conservation Reserve Program, keeping dry cropland in permanent cover, has caused a tremendous reduction in air borne particulates.

Grazing lands are dominated by short to mid grasses. In areas within the watershed, dense stands of one seed juniper have developed. It is estimated the juniper stand has increased ten fold in plants per acre in the last 30 years. The area effected is continually enlarging. Along the riparian zones following drainages, saltcedar and Russian Olive are steadily increasing. These invasive plants are replacing the native species, such as cottonwoods and willows. The wildlife habitat is greatly diminished by replacing the native species with saltcedar. One study found more total birds and bird species in 98 acres of native riparian than in 49,000 adjoining acres of saltcedar. There are no known threatened or endangered plants within the GPA.

Animal species, other than livestock, include many indigenous birds, both game and non-game, mammals, both prey and predator, some limited fish species. Two animals of special consideration to the LWG are mule deer and scaled quail. Both species are significantly depleted compared to historic populations. The most noteworthy threatened species is the bald eagle, which uses this GPA as winter range. This area is used by ducks and geese to winter and is year-round habitat for the golden eagle. There are no confined livestock operations in the GPA.

The climate is semiarid, with the greater portion of the rainfall occurring May through October. Temperatures are mostly moderate, with the annual mean of 53 degrees. The range of mean temperatures is from 33 degrees in January to 74 degrees in July. The average annual precipitation is about 15 inches. Harsh winters with blowing snow; blizzards and extreme wind chills are always a concern.

## **Alternatives**

Alternative # 1. No action.

Alternative #2. Proposed Action: Use NRCS Environmental Quality Incentives Program (EQIP) authorities to assist landowners in the Tramperos Creek Watershed GPA to apply conservation systems that include fences, wells, pipelines, troughs and storages, both fire and chemical controls for upland pinon and juniper treatments, chemical application for riparian brush species, sprinkler conversions, installation of irrigation systems – trickle, conservation cropping systems, crop residue management, nutrient pesticide management, and ponds.

### **Alternatives Considered But Not Studied In Detail**

One alternative considered was to use NRCS EQIP authorities to assist landowners to apply irrigation systems that included flood systems. This was rejected because of high installation costs, high water requirements, slopes, soil textures and low system efficiencies.

### **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 concerns during a meeting of the Local Work Group on December 7, 2000, and of various monthly meetings of the Ute Creek and Northeastern Soil and Water Conservation Districts. No controversy about the need for action or the actions themselves was raised during these meetings. No other resources or issues, but those discussed in this EA, were identified during the meetings or by NRCS or other Federal, State and Tribal agencies.

**THREATENED AND ENDANGERED SPECIES AND SPECIES OF CONCERN:** A record search showed that there are seven species listed as endangered under the ESA. These include the Bald Eagle and the Mountain Plover. The Black-Tailed Prairie Dog is a candidate species but is not listed as threatened or endangered at this time. The Bald Eagle likely utilizes the Tramperos Creek and Pinabetes Creeks for fishing during the winter. All of the actions in the GPA should make more water available for all creeks and streams within the treatment area. Because the entire area is used as a wintering ground for the Bald Eagles, the U.S. Fish and Wildlife Service will be consulted so that none of the actions will have an adverse affect for this species.

There is some Prairie Dog colonies within the GPA. The Black-tailed prairie dog is a candidate for listing under the ESA. The NRCS has determined that it will not be affected by any alternative or action considered in this EA. The candidate species, Swift Fox, is actually quite common in the area. The swift fox will not be affected by these actions.

The Mountain Plover is listed as Threatened. This species is closely associated with the Black-tailed prairie dog. NRCS has determined that it will not be affected by any alternative or action considered in this EA.

The Lesser Prairie Chicken, Whooping Crane and Black-footed Ferret are not found in the area, consequently no actions or alternatives will effect either species.

**CULTURAL RESOURCES AND HISTORIC PROPERTIES:** NRCS has completed a search of cultural resource records and the density of such sites is low in the GPA. 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. Records search shows that their approximately 60 recorded cultural and historic sites found within the project area.

**WETLANDS:** It is estimated that are approximately 500 acres of wetlands in the Tramperos GPA. No conservation practices are to be applied that would alter any of the wetlands.

## **IMPACTS AND EFFECTS OF ALTERNATIVES**

Table 3 compares the overall effects of each of the alternatives discussed below.

### **Alternative # 1. No Action**

Landowners and other agencies will apply practices including fencing and livestock water developments on a limited basis. Brush management on juniper will be done sparingly, however the rate of invasion of juniper will far exceed the rate of control. It is estimated that the total acreage completed without the benefits of the EQIP program is less than 100 acres per year. Riparian areas will continue to be invaded by salt cedars and Russian olives causing declining surface water quantities. It is felt that there would be little or no control of salt cedars and Russian olives without the EQIP program. There will be conversions to more efficient irrigation sprinkler systems, however at a much slower rate, perhaps less than 15 per year. It is estimated that without the EQIP program that no Irrigation Systems by Trickle would be applied. Ground water supplies in the aquifer will continue to diminish at the current rate of decline. Similarity Index's currently are 26-50 with a downward trend. It is estimated that there are 600 acres of Salt Cedar infestations and that each acre of infestation uses 10-acre feet of water annually. At the present rate of decline of water in the aquifer irrigation has a very limited life within the watershed. Estimates vary from 5-10 years until adequate water for current rate of irrigation is depleted.

### **Alternative # 2 Proposed Action**

## **CROPLANDS**

There are over 43,000 acres of irrigated and dry cropland with potential to benefit from the application of conservation systems. Conservation systems on croplands include irrigation water management, conservation crop rotation, crop residue management, irrigation system - trickle , irrigation system – sprinklers, and irrigation pipelines.

**Irrigation Water Management–** Irrigation Water Management is determining and controlling the rate, amount, and timing of irrigation water in a planned and efficient manner. It is anticipated that all cropland enrolled in the EQIP program would be required to have irrigation water management scheduled in the contract. The effect of this would be that irrigation water would be

used more efficiently and timely thus having an overall savings of water. There can be as much as a 30 to 60 % in water savings by utilizing irrigation water management.

Conservation Crop Rotation – Is the growing crops in a recurring sequence on the same field. The result of this would be a reduction of sheet and rill erosion; irrigation induced erosion, and a reduction of soil erosion from wind. It would also maintain or improve soil organic matter content and provides food and cover for wildlife.

Crop Residue Use – The purpose of this is to use plant residues to protect cultivated fields during critical erosion periods. This will result in conserving soil moisture, increasing soil infiltration, reducing soil loss and improving soil tilth. Soil erosion losses can be reduced by as much as 60 tons per acre by utilizing this practice.

Sprinkler Irrigation Systems – This is a planned irrigation system in which all necessary facilities are installed for efficiently applying water by means of perforated pipes or nozzles operated under pressure. The conversions from the existing sprinklers to new more efficient systems requires little more than installing additional, longer hoses that emit the water closer to the ground and the intended crop. The result of this is that canopy evaporation losses are virtually eliminated and soil surface evaporation losses are cut by more than 50%.

Trickle Irrigation Systems – This is a planned irrigation system in which all necessary facilities are installed for efficiently applying water directly to the root zone of plants by means of applicators (orifices, emitters, porous tubing, perforated pipe) operated under low pressure. The applicators can be placed on or below the surface of the ground. The installation of this type of system requires much trenching and tractor traffic however this is all to be done on previously established crop fields. Temporary dust during installation may be encountered. The net result is the most efficient irrigation system designed to date. The efficiency of this type of this system may be as high as 95 to 98%.

Irrigation Water Conveyance – Pipelines, - These are generally plastic pipelines and related appurtenances installed in an irrigation system. These are installed in order to prevent erosion or loss of water or damage to the land, to make possible proper management of irrigation water, and to reduce water conveyance losses. A trench will be excavated on grade to receive the pipeline. There will be soil disturbance in the trench area, and temporary dust and noise can be expected during installation.

## GRASSLANDS

There are over 563,000 acres of grazing land in the GPA. Conservation systems on grazing land will include prescribed grazing, brush management on juniper, and salt cedar, livestock water developments (including pipelines, troughs, wells, pumping plants, ponds) upland wildlife habitat management, range seedings, and fences.

Prescribed Grazing – Is the controlled harvest of vegetation with grazing animals, managed with the intent to achieve a specified objective. When this is applied, prescribed grazing is expected to improve or maintain health and vigor of selected plants to achieve a stable and desired plant community and to provide or maintain food, cover and shelter for animals of concern.

Brush Management - The removal, reduction, or manipulation of non-herbaceous plants. Brush management on junipers is to be accomplished in one of two ways. One method is by applying an approved chemical applied to each individual tree to be treated. This assures that only that intended tree is killed. No treatments will be done in wet areas or on frozen soils. No more than 25% of the watershed would be treated and generally no more than 70 % of the trees in any given area would be killed. All label precautions will be followed and operations will comply with all local, state and federal laws and ordinances. The result will be to restore the natural plant community and to manage noxious, invading woody plants.

The other method of juniper control is by use of prescribed fire. Fire plans are to be written and all responsible persons and agencies are to be notified of such an action. It is projected that no more than 65% of the intended species would be killed in any given burn area. Precautions are to be taken to protect any area, site, tree or trees that would want to be protected. The method of control for all prescribed fires will be by means of installing mineral as well as black lines around the parameter of the main burn. Two mineral lines each 10 feet wide and spaced 80 feet apart are to be bladed around the windward side of each burn. The area between the mineral lines would then be black lined (burned) in order to take out that combustible material. When the main burn is to be ignited, it is intended that it would burn until it comes to the "black line" whereas it simply runs out of combustible material to consume and in effect puts itself out. All necessary men, equipment, fire trucks etc. will be in place before any fire is ignited. All activity will be shut down whenever any of the parameters of a safe burn are felt to be compromised. It is felt that all birds and large mammals will have ample opportunity to flee the area. It is expected that no more than 2000 acres would be completed in any given year. There will be some dust whenever the mineral lines are being installed. Some erosion may also be encountered within the mineral lines the first spring season until revegetation occurs. Smoke from the fire can be considerable, however all areas where prescribed burning is to be completed are all very sparsely populated.

Salt cedar control is accomplished by wetting the entire tree with an approved chemical specifically labeled for control of that species. Each tree, between 3 and 12 feet tall (ave. 6 feet tall), must be individually treated in order to kill that individual. Care will be taken so as to not chemically spray any other species not intended to be treated. Salt cedars are a non-native, invasive species that can completely eliminate all desirable native species. It is intended that when the control is complete that the native species would have the opportunity to repopulate the area. It is intended to treat no more than 100 acres in any given year. No adverse effects are expected by this activity.

Pipelines will be constructed of poly-vinyl chloride (PVC) or polyethylene (PE). They will be installed under the ground line by either trenching or is machine laid (ripping). We project that no more than 2 miles of pipeline will be installed in any given year.

Troughs or storage tanks are constructed of steel with concrete bases, fiberglass or recycled large equipment tires. Troughs made of steel with concrete bases are constructed by excavating the base in the soil, welding or bolting the ends of the steel sheets together in a circle, then embedding four inches of steel in concrete. Fiberglass tanks are molded in a factory, then brought to the site for installation. Where the tank is to be set, an area the circumference of the tank is excavated to a depth of 6-8 inches. The tank is then set in the excavated area and backfill is placed around the tank on all sides in order to anchor the tank. Large equipment tires are

recycled by removing the sidewall and bead from one side, then is placed with the remaining bead down and a concrete plug is poured in the bottom bead in order to form a watertight seal. The only areas disturbed are immediately around the troughs when they are being constructed. All disturbances are very temporary. It is anticipated that no more than 5 wells would be completed in any given year.

Wells are machine dug to a depth of up to 500 feet. Wells provide water for irrigation, livestock, wildlife or recreation. During construction, an area of approximately 30 feet in circumference is disturbed while the well drilling rig is set in place. Some other light disturbance may occur because of other traffic in the area from support vehicles. It is projected that no more than 5 wells would be completed in any given year.

Pumping Plants for extracting water out of wells are typically one of three types. 1) Electric submersible pumps, 2) Solar Pumps and 3) Windmills. Electric pumps require either an electric transmission line close to the source of water or having a portable generator produce the electricity to power the pump. Solar pumps require an adequate supply of sunshine for prolonged periods in order to power its pump and of course windmills are dependent on a steady supply of prolonged wind activity. It is anticipated that no more than 5 power plants would be installed in any given year.

Dams - Earthen dams are constructed for a number of reasons. Two of the most common reasons would be for erosion control and or to provide livestock water. Typically they are constructed by earth moving equipment of large rubber tire tractors or track machines (caterpillars) They can vary in size from just a few hundred yards in size (400-800 cubic yards) to over 6-8000 cubic yards. All areas of disturbance are to be seeded back to native, perennial grasses after completion. It is anticipated that no more than 5 of these will be completed in the entire GPA.

Fences are constructed to provide a barrier to live stock. There generally there is little or no soil disturbance if fences are to be constructed in level terrain on good soils. If a fence is to be constructed in brushy terrain, it is common to have a tractor blade a lane that transverses the fence line in order to physically construct the fence. These will be done only in the areas requiring this and only on soils and terrain that is not prone to erode. It is anticipated that no more than 3-6 miles of fence would be constructed in any given year. This practice is applied as part as a conservation management system to facilitate the application of conservation practices that treat the soil, air, plant, animal, and human resource concerns. It is projected that 2-3 miles of fence would be constructed in any given year.

Range Seedings – Range seedings are establishing adapted plants by seeding on native grazing lands. This is done in order to prevent excessive soil and water loss and improve water quality, produce more forage for grazing or browsing animals on rangeland or land converted from other uses, and to improve the visual quality of grazing lands. These are typically completed on previously farmed croplands. This result of this activity will be to reduce soil erosion and to improve water quality and quantity. As much as 25-60 tons per acre can be realized in erosion losses when croplands are seeded to native grasses.

NRCS expects to treat only about 15% of this acreage or 92,000 acres with conservation systems funded by EQIP under this alternative because of the limited amount of EQIP funding available.

**Table 1, Alternative 2 - Cumulative Impacts**

	Treatment with NRCS EQIP Assistance Alone	Treatment By Landowner Initiative, Other Agency Assistance and NRCS Cumulatively
Irrigation Water Management	2,000 acres	20,000 acres
Conservation Crop Rotation	2,000 acres	20,000 acres
Crop Residue Management	2,000 acres	20,000 acres
Irrigation System Trickle	55 acres	55 acres
Irrigation System Sprinkler	16 each	30 each
Prescribed Grazing	35,000 acres	38,000 acres
Brush Management - Juniper	2,500 acres	3000 acres
Brush Management - Salt Cedar	500 acres	500 acres
Well	8 each	12 each
Pipeline	10 miles	12 miles
Troughs	25 each	30 each
Pumping Plant	25 each	30 each
Fence	15 miles	18 miles
Dam, Diversion	5 each	7 each

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 discussion, but the effects in Table 3 relate to the needs and are the only ones used for comparison to make the final decision.

TABLE 2. Comparison of Alternatives

Comparison of Alternatives EFFECTS on NEEDS		
Needs	Alternative 1 - No Action	Alternative 2 - System with grazing land improvements
Restore native grass lands, improve plant composition and trend	Continued invasion and increase of juniper densities on 60,000 acres of grass lands	Restore grassland plant community on 1,600 acres. Restore Savannah type on 7,000 acres.
Improve or Enhance Riparian Zone	Continued Infestation of Riparian Areas & declining free flowing water	Infestation of non-natives reduced by 60% with re-establishment of indigenous native species
Educate the ranching community on grazing management and potential of rangelands	Maintain or declining Similarity Index on 563,000 acres Continued Downward Trend on 300,000 acres	Enhance knowledge and understanding of grazing land management to improve Similarity Index on 75,000 acres Improves To Upward Trend on 90,000 acres
Reduce rate of decline of irrigation aquifer	Continued Rate Of Decline	Rate Of Decline is Lessened By 5-10%

**PERSONS AND AGENCIES CONSULTED:**

Northeastern and Ute Creek SWCD's hosted a meeting of the local work group on December 7, 2000 in Clayton, New Mexico. Minutes and list of attendees is maintained in a file in the Clayton NRCS office and is available upon request.

**References:**

NRCS Field Office Technical Guide, Section III, Quality Criteria

NRCS Field Office Technical Guide, Section IV Standards and Specifications

NRCS National Range Handbook

Personal Conversation with Union County Extension Agent

NRCS Range Site Handbook

NRCS Irrigation Field Manual - Irrigation Guide

**FINDING OF NO SIGNIFICANT IMPACT  
FOR THE IMPLEMENTATION OF EQIP IN THE  
TRAMPEROS CREEK WATERSHED GPA**

**INTRODUCTION**

The Tramperos Creek Watershed 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  
Clayton Field Office  
Clayton, New Mexico

The Environmental Assessment (EA) is attached for reference.

**DETERMINATION OF SIGNIFICANCE**

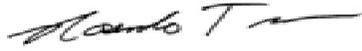
Table 1. Determination of significance of Proposed Action.

<b>Context</b>	<b>Intensity</b>	<b>Reason for Non-Significance</b>
Restore native grass lands – Up to 8600 acres treated for juniper control	Grass lands returned to their native state of perennial grasses on treated sites	Only 1.4% of watershed treated. There is estimated to be over 350,000 acres of similar conditions throughout county
Improve riparian zone – 30-40% reduction in salt cedar infestations	Permanent change on treated sites	Not all areas treated in watershed. Many more areas are inaccessible.
Elevate grazing land management	Grazing lands improved to the next level of condition	Not all producers will participate. Most of area will remain the same as before
Reduce rate of decline of irrigation aquifer	Permanent improvements for the life of the management plan.	Rate of decline is lessened by less than 5%

Other considerations related to context and intensity are discussed as follows. Farms and ranches are similar in the watershed and through out the county and are not unique. 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 is low. There will be no impact to National Register of Historic Places or cultural resources. A determination of may affect but not likely to adversely affect the silvery minnow has been made, therefore no more consultation is necessary. 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 three, I find that the alternatives 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.



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ROSENDO TREVINO  
State Conservationist

*December 20, 2001*

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Date