

ENVIRONMENTAL ASSESSMENT
UPPER CANADIAN RIVER WATERSHED GPA
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:

There is a need in the Upper Canadian River Watershed to reduce brush invasion(juniper, salt cedar), improve rangeland health, and reduce the spread of invasive weeds. The purpose is to improve the watershed health increase ground water recharge, improve wildlife habitat, and increase the rangeland similarity index.

BACKGROUND:

The Upper Canadian River Watershed Geographic Priority Area lies in the North East corner of New Mexico and includes 5,695,656 acres in parts of Union, Colfax, Harding, Mora, and San Miguel counties. The primary resource concerns identified by the Local Work Group are: 1. Brush invasion (juniper, salt cedar), 2. Rangeland health, 3. Increase in invasive weeds(non-native). The GPA is 95% rangeland and 5% cropland. Elevation ranges from 4500 feet to 6600 feet with some volcanic peaks up to 8500 feet. The GPA is located in the central plains (CP) and high plains (HP) resource areas. Average annual precipitation averages 15-16 inches per year, coming mostly as rainfall during the growing season. Growing season ranges from 150 to 180 days going from west to east. Soils are generally several feet deep. In general soil conditions are good and sustainable. Vegetation consists of short and mid grasses, with areas of juniper and cactus species. Drainages are being invaded by salt cedar. The western fourth of the GPA has an increasing amount of invasive(non-native) weeds, such as Bull, Musk, Canadian and Scotch Thistle, Russian, Diffuse, and Spotted Knapweed, Yellow Toadflax, Leafy Spurge and Hoary Cress(White Top).

ALTERNATIVES

Alternative 1. No Action

Alternative 2. Proposed Action:

Use NRCS Environmental Quality Incentives Program(EQIP) authorities to assist producers

in the Upper Canadian River Watershed Geographic Priority Area(GPA) to apply conservation systems that include brush control(chemical, mechanical, fire), prescribed grazing including fence, pipelines, ponds, troughs, wells, range seeding, and pest management including chemical control of invasive weeds, and upland wildlife habitat management.

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 a meeting on April 25, 2001 of a special local work group responsible for recommending proposed EQIP actions. No controversy about the need for action or the actions themselves was raised during these meetings, and no resources or issues of concern were identified during the meeting or by NRCS or other Federal, State and Tribal agencies but those discussed in this EA.

Threatened and Endangered Species and Species of Concern: A record search shows the southwestern willow flycatcher is a species listed as endangered under the ESA. It lives in large salt cedar trees along drainages. It has not been determined that the flycatcher is present. As individual practices are planned in this habitat, a survey will be made to determine the suitability of habitat and flycatcher presence or lack of before practice application. If the southwestern willow flycatcher is present, NRCS will initiate consultations with FWS. The black tailed prairie dog is present in the GPA in scattered towns. All prairie dog towns will be avoided with soil disturbing practices. The black tailed prairie dog and occupied habitat will not be affected by this proposed action.

All other species on the county lists will not be affected.

Cultural Resources and Historic Properties: NRCS completed a search of cultural resource records and found 1,746 sites listed. 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.

Wetlands: There are wetlands scattered throughout the Upper Canadian River Watershed GPA. Ground disturbing practices will avoid any wetlands. NRCS has determined that none of the wetlands will be affected by any alternatives or action considered in this EA.

IMPACTS AND EFFECTS OF ALTERNATIVES

Alternative 1. No Action

Alternative 2. Proposed Action

Use NRCS Environmental Quality Incentives Program(EQIIP) authorities to assist ranchers in the Upper Canadian River Watershed Geographic Priority Area(GPA) to apply Ranch Conservation Systems that include brush management on juniper, and salt cedar, prescribed

grazing with livestock water development including wells, pumping plants, pipelines, troughs, storages, and ponds, upland wildlife habitat management, range seeding, ponds, fences, and pest management.

Prescribed Grazing –Is defined as 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 maintain or improve health and vigor of selected plants to achieve a stable and desired plant community and to provide grazing for livestock and food, cover, and water for wildlife.

Upland Wildlife Habitat Management –Retaining, creating, or managing habitat for wildlife. The objective is to improve wildlife habitat to a Wildlife Habitat Evaluation Guide rating of 0.6 or better for deer and antelope on the treated areas.

Brush Management –The removal, reduction, or manipulation of non-herbaceous plants. Brush management on junipers is to be accomplished in one of three methods. Chemical - applying an approved chemical spray to individual trees or by aerial application of pelleted chemical. No treatments will be done in wet areas or on frozen soils. No more than 5 % of the watershed would be treated and no more than 70—90% of the trees in any given area would be killed. All chemicals will be applied according to the label. All operations will comply with all local, state, and federal laws and regulations. The result will be to restore the natural plant community and to manage invading woody plants. Mechanical –pushing the juniper trees out of the ground with a bulldozer or similar machine. The trees are either windrowed to be used for firewood or burned in place. Some trees will be left where they fall for wildlife cover. The end result is the same as with chemical control.

Prescribed Fire –is the other method of juniper control. Fire plans are to be written and all responsible persons and agencies notified of the proposed action. It is estimated that no more than 65% of the intended species would be killed in any given burn area. The method of application for all prescribed fires will be by means of installing two mineral lines each 10 feet wide and spaced 80 feet apart by blading the lines around the windward side of each burn. The area between the mineral lines would then be (burned) in order to take out that combustible material. When the main burn is ignited, it is intended that it would burn until it comes to the “black line” whereas it runs out of combustible material to consume and 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 safe burn are felt to be compromised. Prescribed burns will avoid bird nesting season, April through June. It is felt that all birds and large mammals will have ample opportunity to flee the area. It is expected that no more than 7,500 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, 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 by human populations.

Salt Cedar control is accomplished by wetting the entire tree by hand treatment or by aerial application with an approved chemical specifically labeled for control of salt cedar. Care will be taken so as to not chemically spray any other species not intended to be treated. All chemicals will be applied according to the label. Salt cedar is a non-native invasive species that can completely eliminate all desirable native species. It is intended that when control is complete, the native species would have the opportunity to repopulate the area. It is estimated that approximately 750 acres will be treated each year. No adverse effects are expected by this activity.

Pest Management is utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance. Some such species are listed by New Mexico as invasive and include Bull, Musk, Canadian and Scotch Thistle; Russian, Diffuse and Spotted Knapweed; Yellow Toadflax, Leafy Spurge and Hoary Cress. It is estimated that 2,000 acres would be applied each year.

Pipelines will be constructed of poly-vinyl chloride(PVC) or high density polyethylene(HDPE). They will be installed 30 inches deep by either trenching or machine laid(ripping). An area 8 foot wide will be disturbed during installation. It is estimated that 20 miles of pipeline will be installed each 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, and 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, and then 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 trough when they are being constructed. All disturbances are very temporary. It is estimated that 25 troughs or storage tanks will built each year.

Wells are machine dug to a maximum depth of 500 feet. Wells provide water for livestock, wildlife, and 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, temporary disturbance may occur because of other traffic in the area from support vehicles. It is projected that no more than 10 wells would be completed per year.

Pumping plants for extracting water out of wells are typically one of three types - Electric submersible pump, Solar pumps, or Windmills. Electric pumps require either an electric transmission line close to the source of water or have 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 depend on a steady supply of prolonged wind activity. It is anticipated that no more than 10 pumping plants would be installed per year.

Ponds or dam - earthen dams are constructed for erosion control and/or to provide livestock water. Typically they are constructed by earth moving equipment with large rubber tires or track machines. Ponds can vary in size from a few hundred yards in size (500-800 cubic yards) to over 6-8 000 cubic yards. All areas of disturbance are to be seeded back to native perennial grasses after completion. It is estimated that 5 of these will be completed each year.

Fence - fences are constructed to provide a barrier to livestock. There generally 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 brush 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 areas requiring this and only on soils and terrain that is not prone to erode. It is estimated that no more than 5% of the fence constructed will have a 12 foot right of way cleared of brush. This practice is applied as part of a conservation management system to facilitate the application of conservation practices that treat soil, air, plant, animal, and human resource concerns. It is estimated that 10 miles of fence would be constructed per year.

Range seeding is establishing adapted perennial native plants to reestablish the ecosystem on land to be used as native grazing land. 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. Range seeding is typically completed on previously farmed cropland. The 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 reduced soil loss can be realized when cropland is seeded to native grass. It is estimated that up to 500 acres would be seeded per year.

Table 1, ALTERNATIVE 2

	Treatment with NRCS EQIP Assistance	Treatment by Landowner Initiative, other Agency Assistance and NRCS Cumulatively
Prescribed Grazing	625,000 acres	635,000 acres
Upland Wildlife Habitat Management	635,000 acres	635,000 acres
Brush Management	71,000 acres	71,000 acres
Prescribed Fire	30,000 acres	35,000 acres
Livestock Pipeline	528,000 linear ft	533,280 linear feet
Troughs	125 each	125 each
Wells	50 each	60 each
Pumping Plant	50 each	60 each

Pond	25 each	30 each
Fence	264,000 linear ft	290,400 linear feet
Range Seeding	500 acres	550 acres
Pest Management	10,000 acres	10,100 acres

Estimated cost for implementation of this alternative is \$1,250,000 for a five year program.

The prime farmland is all irrigated cropland and will be maintained to sustain continued use.

Other effects were considered in the discussions, but the effects in Table 1 relate to the needs and are the only ones used for comparison to make the final decision.

***Comparison of Alternatives
Effects of Need***

Alternatives	Brush Invasion Ac	Range Health Ac	Invasive weeds Treated Ac	Installation Cost
1. No Action	700	10,000	100	0
2. System with land improvements	71,000	625,000	10,000	1,250,000

PERSONS AND AGENCIES CONSULTED:

Colfax Soil and Water Conservation District hosted the local work group and attendees at an April 25, 2001 meeting where this proposal was discussed and formulated. See list of participants and minutes attached as Appendix A.

A letter was sent out asking for public comment on the draft Environmental Assessment to the list of people attached as Appendix B.

REFERENCES:

NRCS Field Office Technical Guide, Section III, Quality Criteria

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

NRCS National Range Handbook

NRCS Range Site Handbook

USFWS Endangered Species List

SHPO data

FINDING OF NO SIGNIFICANT IMPACT FOR THE
IMPLEMENTATION OF EQIP IN THE UPPER
CANADIAN RIVER WATERSHED GPA

INTRODUCTION

The Upper Canadian River 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
245 Park Ave
Raton, New Mexico 87740

The Environmental Assessment (EA) is attached for reference.

DETERMINATION OF SIGNIFICANCE

CONTEXT	INTENSITY	REASON FOR NON-SIGNIFICANCE
Brush Mgt.- up to 70,000 acres brush treated	Grasslands permanently returned to their native state of perennial grasses.	Only .012% of watershed treated.
Prescribed grazing with land improvements	Similarity index increased on 625,000 acres.	Not all of watershed treated. Less than 1% of watershed.
Pest Management control invasive weeds.	10,000 acres of invasive weeds treated.	Less than 10% of the need treated.

Table 1 Determination of Significance of proposed action.

Other considerations related to context and intensity is discussed as follows: Ranches are similar in the GPA and are not unique compared to other ranches 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 ranchers interested in this proposal are going to participate in the first round. There will be no impact to National Register of Historic Places or cultural resources. Impacts to endangered species will be avoided or mitigated through consultation with the US Fish and Wildlife Service. 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 one, 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.



ROSENDO TREVINO
State Conservationist

December 20, 2001

Date