

**ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP)
BLACK RIVER/DELAWARE RIVER GEOGRAPHIC PRIORITY AREA**

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 Black River/Delaware River Geographic Priority Area to restore the native plant communities by noxious weed control, reducing the amount of invasive woody vegetation, reduce erosion and minimize sedimentation to spring and rivers, improve soil tilth and compaction on cropland, and ensure a sustainable resource base.

Background:

The Black River/Delaware River watersheds are defined drainage systems that originate in the Guadalupe Mountains and drain east, flowing into the Pecos River. This GPA is located in Southwest Eddy County, New Mexico and joins the New Mexico-Texas line. The area is in the Southern Deseric Basins, Plains and Mountains, and the Pecos-Canadian Plains and Valleys Major Resource Areas and is located in the Northern end of the Chihuahuan Desert. There are a total of 441,505 acres in the GPA with 2,920 acres of cropland, 340 acres of wetland, riparian, and water areas, 3,051 acres of wildlife land and 42,000 acres of other land. The balance is rangeland and recreational use land. The land is under mixed ownership with 42% under federal control and the remainder under private and state control. The water quality is declining due to sediment and natural element contamination. As water supply declines the concentration of elements such as salt and sulfur increase. Erosion rates are increasing as the herbaceous vegetation declines causing sediment pollution. Water supplies are being depleted by an ever-increasing stand of woody vegetation. Reduced ground cover has allowed sheet and rill erosion to increase on most of the area. Heavy stands of woody vegetation have developed in the swales and arroyos causing flood water to concentrate and create gullies. The soils on farms are left unprotected when they are placed in the State's water leasing program and become susceptible to wind erosion. Soil tilth is sometimes a problem when soils become compacted and low in organic matter. The GPA is home to a wide variety of wildlife, domestic animals, and native plants. The habitat for these species needs improvement to ensure future survival. Livestock numbers on this area have declined significantly because the changed plant communities can no longer support large numbers. This has had a negative impact on the economy of the area.

Alternatives:

Alternative 1. No Action

Alternative 2. Proposed Action: Use NRCS Environmental Quality Incentives Program (EQIP) authorities to assist agricultural producers apply conservation systems that include brush

management (chemical, mechanical, and prescribed burning), erosion control structure, spring development, prescribed grazing (grazing management), upland wildlife habitat management. Fencing and water development (pipelines, troughs, storage tanks, and wells) are facilitating practices needed to implement prescribed grazing and upland wildlife habitat management. Also, Irrigation Land Leveling, Conservation Crop Rotation, Pest and Nutrient Management, Irrigation Systems, IWM, and Spring Development.

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 Local Work Group Meeting, hosted by the Carlsbad Soil & Water Conservation District on: Wednesday, November 8, 2000, 6:30 P.M. at 3219 S. Canal Street, Carlsbad, New Mexico. This group is responsible for recommending proposed EQIP actions. No controversy about the need for action or the actions themselves was raised during this meeting. NRCS or other Federal and State agencies identified no issues of concern during the meeting.

Threatened and Endangered Species and Species of Concern: A record search of U.S. Fish and Wildlife Service (FWS) and New Mexico Department of Game and Fish data bases show a number of species that potentially occur in the area. NRCS has determined that most species from the record search will not be affected. [There are six species which may be affected by practices used in the GPA. Gypsum wild buckwheat, southwestern willow flycatcher and aplomado falcon are shown on the federal list of endangered species. The Baird's sparrow, Varied bunting and the common ground-dove are shown on the state list for New Mexico.

Gypsum wild buckwheat is threatened and found on nearly pure gypsum soils in Eddy County at 3,000 to 5,000 feet elevation. It is not economically feasible to treat this area with brush control, seeding, or other habitat manipulations. The only possible effects could come from a livestock pipeline if desired by an applicant. In this case NRCS will survey the proposed route of the line and design the route to avoid any impacts to the plant.

This GPA does not contain any critical habitat for the endangered Southwestern willow flycatcher. Salt cedar control could disturb the bird if done in suitable, occupied habitat. NRCS will make a determination on suitability of the habitat. If unsuitable a no effect determination will be made. If the area is suitable, however, NRCS will survey for the bird according to current protocols. If the bird is found to be absent from the area, a no effect determination will be made by NRCS. The landowner may want to leave the area for future habitat for the bird on a voluntary basis, which would contribute to the recovery. If the flycatcher is found to be using the area, a consultation with the FWS will be initiated by the NRCS prior to implementation. The southwestern willow flycatcher recovery plan will be the NRCS guide along with recommendations from FWS during this consultation.

Aplomado falcons are federally endangered, and known to use grasslands containing shrubs such as yucca, mesquite and acacia. Brush control in these areas may effect the falcon. NRCS will determine the suitability of the habitat and use by the falcon. If the area is unsuitable, a no effect determination will be made. If the falcon is found to be using the area a consultation with the FWS will be initiated prior to implementation.

The Baird's sparrow, a species of concern and listed as threatened by New Mexico, uses grasslands containing mesquite and acacia in the fall during migration. Brush control in these area will be done to avoid the fall migration period from August through November.

The Varied bunting and common ground-dove are listed by New Mexico and are in the mesquite, acacia scrub habitat. Brush control in this habitat will be done to avoid nesting season from April through July.

If the area to be treated with brush control is the same for Baird's Sparrow, varied bunting, and common ground-dove, work will be done only from December through March.

Cultural Resources and Historic Properties: NRCS completed a record search with the Archeological Records Management System and has determined that there are over 500 previously recorded sites within the GPA. The recorded sites range from historic ranches, artesian well drill sites, stone remains of army camps, prehistoric Archaic campsites and Jornada Mogollon habitation sites as well as numerous mescal roasting pits associated with both prehistoric and historical use. To ensure that unidentified sites are not adversely affected, site-specific field surveys will be conducted and consultation with the New Mexico State Historic Preservation Office (SHPO) will be undertaken **before** NRCS will implement any ground disturbing activities.

Wetlands: Section 404 permits will be obtained for any practice that comes under the jurisdiction of the Clean Water Act (33 USC 1344) and Federal regulations 33 CFR 323.4 and the wetland provisions of the 1985 Food Security Act as amended.

Prime Farmland: The area contains no prime farmland.

Impacts and Effects of Alternatives:

Alternative 1. No Action

Landowners and other agencies will continue farm and range conservation practices minimally without NRCS participation. Rangeland with low ecological site indexes will continue to deteriorate. Noxious weeds and brush densities will advance and rangeland health will continue to deteriorate. More soil erosion and sedimentation to springs and rivers will occur, the loss of habitat for wildlife and livestock will persist, as will the decline in water table. On-farm irrigation efficiencies will remain low and crop production will be unchanged.

Alternative 2. Proposed Action:

There are approximately 245,000 acres of rangeland in the area with potential to benefit from the application of conservation systems that would include brush management, erosion control structures, prescribed grazing, upland wildlife habitat management, and facilitating practices. Approximately 60% of the GPA are subject to sheet and rill erosion caused by overflow from intense rainstorms that create soil loss averaging 6 to 10 tons per acre annually. NRCS expects to treat approximately 80,000 acres through brush management, herbicides, fire, and grubbing. This will reduce sheet and rill erosion by 65%. Approximately 30% of the area are effected by gully erosion, bank cutting and the development of head cuts. Over 10 tons per acre of soil is lost annually. These gullies will be treated with small structures such as 10 debris basins, 15 rock and brush structures, and 15 erosion control dams. Prescribed grazing, water development

and other facilitating practices will also be incorporated. The result will be reduced gully erosion by 50% on the 30% of the GPA effected. Reduce sediment load by 35%. Increase water flow in the springs and rivers by 30%. It has been estimated that water supplies have declined in the GPA by at least 40%. Ground water has declined significantly but now appear to be stable. Improve irrigation system efficiencies as well as irrigation water management from 45 to 50% to 65 to 70%.

There are 1000 acres of cultivated cropland within the Geographic Priority Area with potential to benefit from the application of conservation systems that would include irrigation land leveling, irrigation systems, irrigation water management, conservation cropping system, pest management, and nutrient management. Farmland soil tilth and compaction have become a concern, causing impaired water percolation and restricted root zone development, and low organic matter. Improved crop management systems will be installed. The objective is to reduce tillage operations, improve production, and improve water use on 1000 acres of cultivated cropland.

If Alternative 2 were implemented, there would be impacts to soil quality and erosion, water quantity and quality, air quality, crop production, fish, wildlife and livestock habitat, wetlands, 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 properties are adversely affected.

This alternative included brush management (mechanical, chemical, & fire) to reduce heavy stands of undesirable woody vegetation such as mesquite, white thorn, catclaw, creosote, tarbush, salt cedar, and cholla, that have developed on Shallow, Loamy, Gyp Upland, Gyp Hills, Draw, Bottomland, and Limestone Hills range sites. Brush management will be done to restore native plant communities as shown on NRCS range site descriptions, to reduce competition for space, moisture, and sunlight for desired plant species. This will result in an improved habitat for domestic livestock, as well as, wildlife.

Using a dozer to individually grub trees does mechanical brush control. Mechanical brush management will disturb soils in areas where trees are grubbed. It will disturb 25 to 30 percent of the soil surface. Soil disturbance is extensive where pits are dug, with destruction of soil structure and compaction. Large pits are created where the root mass is removed. Erosion rates will increase slightly following treatment, but over a period of two to five years; perennial grasses will stabilize the area.

Water quantity will be impacted: brush control will improve precipitation efficiency. Areas treated will be changed from a plant community dominated by woody vegetation (high water use plants) to a plant community dominated by grasses (low water use plants). This change in plant communities will allow more precipitation to be available for ground water recharge.

Water quality will be impacted, for a short period following the use of mechanical brush management. Disturbed areas will contribute sediment to overland flow. This will persist for one to two years following treatment. Vegetation will stabilize the site.

Mechanical brush control will impair air quality; diesel smoke and dust will be a problem for a short period of time during the implementation period.

Mechanical brush control will change the plant community on the area to grassland. This will provide more herbaceous vegetation for livestock.

Brush management will be done to enhance habitat for wildlife. Areas along draws, rock out-crops, steep slopes and ridge tops will be avoided. Travel lanes will be left to provide movement of wildlife between habitat types.

Chemical brush control would be done by aerial application or hand application of herbicide. If chemical being applied is in the form of pellets, they will be applied prior to the rainy season. Precipitation will carry the chemical into the soil. The chemical is then taken up by targeted species. Chemicals applied directly to the plant will be assimilated through the leaves. It will take two or three growing seasons to completely kill the targeted species. Application of herbicides will be done according to the label, thus keeping affects of the chemicals within acceptable levels, as determined by the Environmental Protection Agency.

Application of herbicides does not disturb the soil; therefore, there will be no increase in erosion. Areas with perennial streams and springs will not be treated with chemicals. There are no shallow water tables in the work area. Water quality will not be affected. The affects on water quantity are the same as previously discussed. Chemicals being used are in a pellet or liquid form. There will be measures taken to assure no chemical drift will be associated with the practice. Air quality will not be affected. The application method, application rate, and herbicide selected for use will be specific to desired species targeted for control, in accordance with NRCS specifications. Non-targeted species should show little impact from the chemical. With GPS capabilities, areas with high concentrations of desirable plants can be avoided. Chemical brush management would be planned and carried out in a manner to enhance wildlife habitat. Areas along draws, rock out-crops, ridges and hilltops would not be treated. Travel lanes will be left along the draws to provide for movement of wildlife between habitat types. The brush management plan will plan for the creation of edge.

Fire has long been a component of the rangeland ecosystems of the Southwest. Prescribed fire is different than wildfire, since they are carried out under very specific climatic conditions and at specific times of the year, in order to provide effective control of brush with minimum impact on desired vegetation. Burning will significantly reduce the infiltration rate and increase the sediment yield of a site. This is due to the loss of the protective cover, which dissipates raindrop energy and obstructs runoff. Depending on the intensity of the rainfall event following a burn, these impacts can be minimal to severe. These impacts will be short lived, as the vegetation on the site recovers. Fire is an excellent tool for managing wildlife habitat, because fire seldom burns the entire area, a mosaic effect is created. This will greatly increase edge effect and create a stratified plant community.

Once the brush is removed, facilitating practices such as livestock pipelines, livestock water storage tanks, livestock drinkers, wells, and fences may be constructed to implement prescribed grazing.

If a pipeline and its associated drinkers and storages are installed, a trench will be excavated to receive the pipeline. The excavated trench will then be covered. This excavated area will be 4 to 6 feet wide and could be several miles in length. The excavation will be done with a dozer or grader.

The soil surface will be disturbed along the pipeline route. Soil erosion will increase slightly, but the area will grass over within one to two growing seasons. Ground disturbance for a pipeline one mile in length would be .6 tenths of an acre.

Construction of livestock pipelines will have little effect on water quality or quantity.

Construction of livestock pipelines will impact air quality during construction. Diesel smokes and dust will be a problem for a short period of time during implementation.

Construction of livestock pipelines will have a positive effect on plant communities. Grazing distribution and harvest efficiency can be improved for livestock and wildlife.

Pipelines construction will provide a permanent and readily available supply of water for livestock and wildlife year round.

If fencing is installed, a right-of-way will be cleared using a dozer. Right-of-ways will be cut by clearing woody plant species along a course of 10 to 15 feet wide, and could be several miles in length. Fencing will be used to control the duration of use and season of use for a pasture by livestock.

The soil surface will be disturbed during construction of the right-of-way. Soil erosion will increase slightly, but the area will grass over in one to two growing seasons. Ground disturbance for a fence one mile in length would be 1.8 acres.

Fence construction would have little effect of water quality or quantity and air quality.

Fences would provide managers the capability to control the length of time a pasture is grazed, as well as, the time of year it is grazed. Pastures could be deferred to better meet the needs of wildlife.

Prescribed grazing is the planned harvest of vegetation with grazing animals. Grazing is managed with the intent to achieve improved health and vigor of selected plants. It is used to achieve a stable and desired plant community and provide and maintain food, cover, and shelter for livestock and wildlife.

Short Term Effects: No short-term effects have been identified.

Long Term Effects: Soil Compaction will be reduced. Grazing sacrifice zones will be minimized. Health and vigor of the forage plants will be enhanced. Total forage production will be increased. Extra labor may be required to implement practice. Economic returns will be improved.

Upland wildlife habitat management is the creation, maintenance, or enhancing of areas for food, and cover for wildlife.

Erosion Control Structures will be installed where gullies and head cuts have formed. These will consist of small structures, such as debris basins, rock and brush structures, and ponds. During rainstorms, where concentrated water flow occurs, runoff is produced. In those areas where ground cover is diminished and only stands of woody vegetation are present have given way to gully erosion and the development of head cutting.

Rock and Brush structures will be installed to control erosion and stabilize the grade, and to prevent the formation or advance of gullies and head cuts. Material size, type and placement will be designed on a site-specific basis, as requirements for each particular structure will depend on drainage area and individual needs. Rock and Brush structures will have adequate hydrology

and hydraulic computations made to assure the stability of the structure for the proposed depth of flow over the weir, rock shape and size, and for the proposed side slopes. A good bond shall be obtained between the banks of the gully and the abutments of the structure by keying the structure into the banks a minimum of 2 feet with a keyway width of 2 feet. Brush used shall be from fresh cut, live evergreen trees, and shall have a maximum stem diameter of 1 1/2".

A complete layer of brush, not to exceed 6" compressed thickness, shall be placed against the foundation and abutments, with the brush butts alternating upstream and downstream.

Alternate layers of rock and brush shall be placed against the foundation, with the final layer being rock. Larger sized rock shall be placed on the weir crest, top and downstream faces of the structure.

The soil surface will not be effected by the installation. Short-term effects will be minimal, however, over a period of one to two years the structures should begin to trap sediment and sediment-attached substances carried by runoff. Erosion rates should decrease considerably following installation. As sediment is being trapped by these structures, reduction of sediment loads to springs and rivers are the results. Water quantity will be impacted. As erosion is stabilized, groundcover returns, allowing deep percolation and ground water recharge.

Air quality will be effected, as gullies and head cuts are healed, and vegetation becomes present, air quality will improve. The previous conditions contributed to air pollution in the form of blowing soil.

The structures will have an impact on plant life. The stabilized areas will provide opportunity for increased amounts of herbaceous vegetation.

Land leveling - Reshaping the surface of land to be irrigated to planned grades. A design will be provided which indicates where the cut and fill areas are located in the respective field, which is to be leveled. The soil will then be loosened by either disking, ripping or plowing or by a combination thereof and then scraped or hauled from the high areas to the low areas. The average earth moved during construction ranged from 100 to 300 cubic yards per acre.

Short Term Effect: The land leveling process pulverizes the soil, making it temporarily susceptible to wind erosion until water can be applied. Slopes are designed to a grade, which minimizes runoff. No short-term water quality problems are expected to occur during the installation. The noise and dust generated by equipment during installation may disturb some individuals in the vicinity. Other temporary effects, which may occur, include a reduction of fertility in the cut areas, dispersal of salts to other areas of the field, and soil compaction if the field is wet or damp when leveled.

Long Term Effect: Facilities ability of irrigator to apply irrigation water in a more efficient and uniform manner. Improved crop production. Reduced probability of degrading shallow water table or surface water from nutrient or pesticide intrusion or combination.

Concrete Ditch Lining and Appurtenances – A fixed lining of impervious material installed in an existing or newly constructed irrigation field ditch, irrigation canal, or lateral. Concrete ditch lining requires the construction of a graded ditch pad, which will be constructed according to the planned slope of the ditch and to the proper height, and top width, which will allow the contractor to construct the ditch according to NRCS specifications. The fill material needed to construct the ditch will either be taken from an adjacent field which is being leveled or another borrow area in the vicinity of the planned ditch. If the fill material is obtained off farm, the landowner will obtain the proper permits and permissions necessary to complete the job.

Short Term Effect: If the source of the fill material for the ditch comes from a leveling operation, the leveled area may become temporarily susceptible to wind erosion. This could apply to any borrow area to obtain fill material. No short-term effects on water quality and quantity are expected. Placement of the fill material may create dust because of the dirt moving process itself. Plant and animals are not expected to be impacted by the installation of this practice. The noise and dust generated by equipment during installation may disturb some individuals in the vicinity.

Long Term Effect: Facilitates ability of irrigator to apply irrigation water in a more efficient and uniform manner. Crop production is improved. Reduced probability of degrading shallow groundwater from nutrient or pesticide intrusion or contamination.

Irrigation Pipelines and Appurtenances installed in an irrigation system. All pipelines will be plastic (PVC) pipes. Installation of an irrigation pipeline requires that a trench be excavated at a depth deep enough to allow the placement of 30 inches of cover over the top of the pipe. The depth of the trench may vary depending on the planned diameter. It may be necessary to install cement thrust blocks underneath the soil surface if design considerations indicate they are needed.

Short Term Effect: Effects may include dust and noise generated by the equipment used during the installation period. It is not expected that any increase in soil erosion rates will occur or that any impairment to water quality or quantity will take place as a result of installation.

Long Term Effect: Facilitates ability of irrigator to apply irrigation water in a more efficient and uniform manner. Improved crop production. Reduced probability of degrading shallow groundwater from nutrient or pesticide intrusion or contamination.

Structures for Water Control – A structure in an irrigation, drainage or other water management system that convey water, controls the direction or rate of flow, or maintains a desired water surface elevation. Minor structures for water control such as ditch turnouts with metal pull gates, ditch checks, drop structures and canal gates may be planned and constructed in existing ditches. Installation of these minor structures will involve a minimal amount of disturbances to the adjacent soil. Most of the work will be in a respective existing ditch or underground irrigation pipeline.

Short Term Effect: Effects may include dust and noise generated by the equipment used during the installation period. It is not expected that any increase in soil erosion rates will occur or that any impairment to water quality or quantity will take place as a result of the installation.

Long Term Effects: Facilitates ability of irrigator to apply irrigation water in a more efficient manner. Improved crop production. Reduced probability of degrading shallow groundwater from nutrient or pesticide intrusion or contamination.

Forage Harvest Management –The timely cutting and removal of forages from the field as hay, green chop, or silage. This practice does not require the application of any structural or land disturbing practices. Successful implementation of this practice may be dependent upon the application of several other practices including IWM, Pest management and Nutrient management.

Short Term Effect: No short-term effects have been identified.

Long Term Effect: Soil tilth improved. Increased organic matter content. Improved health and vigor of respective crop. Improved crop production. Increased economic returns to producer.

Conservation Crop Rotation – Growing crops in a recurring sequence on the same field. This practice does not require the application of any structural or land disturbing practices. Successful implementation of this practice may be dependent upon the application of several

other practices including IWM, Pest management and Nutrient management. High residue soil improving crops will be grown in rotation with soil depleting crops in order to maintain or improve soil organic matter content. The number of years of continuous soil improving or depleting crop production will depend on the respective soil type.

Residue Management (Seasonal) – Managing the amount, orientation, and disturbance of crop and other plant residues on the soil surface during part of the year, while growing crops in a clean tilled seedbed. Residues will be left on the surface until it is time to prepare the soil surface for the next year' crop. Either plowing or disking or a combination will incorporate residues thereof.

Short Term Effect: Normal tillage may create dust simply because of the tillage operations itself. The noise generated during the tillage operations may disturb some individuals.

Long Term Effect: Soil tilth improved. Increased soil organic matter content.

Irrigation System (Surface and Subsurface) – A planned system in which all necessary water control structures have been installed for the efficient distribution of irrigation water surface means, such as furrow, borders, contour levees, or contour ditches, or by subsurface means. All structural practices, which will be applied in order to reorganize an irrigation system within the Black River/Delaware River GPA, have been addressed in an earlier paragraph.

Long Term Effect: Application on irrigation system will make it possible to improve irrigation efficiencies from an average of 45 to 50% to a desired efficiency of 65 to 70%.

Pest Management – Managing agricultural pest infestation (including weeds, insects, and diseases) to reduce adverse effects on plant growth, crop production, and environmental resources. The planned integrated pest management program will include appropriate cultural, biological, and chemical controls singly or in any combination thereof to control the target pest. All pesticides will be applied with ground rigs. If a chemical pesticide is used, the label will be strictly followed. The potential pesticide loss to surface runoff and leaching will be evaluated and provided to the producer during the planning process. Pest management will be planned and applied according to NRCS specifications, in order to help insure that the resources located within the GPA remain free of pesticide contamination.

Short Term Effect: Some pesticides may emit an offensive odor when applied. Drip will be minimized because of ground rig application.

Long Term Effect: All pesticide application will be carried out according to its respective label as required by federal law. Potential for contamination of surface and/or ground water supplies is minimized. Crop production is enhanced when it is determined that pesticide application is needed and it is applied. Economic returns are improved. Beneficial insects may also be controlled.

Nutrient Management – Managing the amount, form, placement and timing of applications of plant materials. Nutrient application recommendations will be based on soil tests or recommendations provided by NMSU. Nutrient will be applied in either liquid or granular form. Granular fertilizers are generally broadcast using a pull type wheel driven broadcast fertilizer spreader or a power take off pull type broadcast spreader. Both types are calibrated prior to use. Nitrogen is recommended to be applied in 2 to 3 split applications. Liquid fertilizers are usually formulations of nitrogen and are applied to the irrigation water in split applications. Timing is dependent on the stage of growth of the crop.

Short Term Effect: Short-term spikes in nitrates may occur immediately following application of a nitrogen fertilizer.

Long Term Effect: The probability of ground and/or surface water degradation from nutrient applications to agricultural land is minimized. The health and vigor of the respective crop, which is fertilized, will be enhanced resulting in increased crop production. Economic returns are improved.

Land uses will not change as a result of implementing this alternative. Cash flow may increase for individuals, but investment requirements will increase with improvements. These systems should reduce labor requirements. Management knowledge and ability to manage these systems will need to increase. Risk of investment loss is moderate. Profitability may remain static. Overall, client and community well being will benefit as rangeland is returned to a more productive state.

TABLE 1 - ALTERNATIVE 2

	Treatment with NRCS EQIP Assistance Alone	Treatment by Landowner Initiative, Other Agency Assistance and NRCS Cumulatively
Brush Management	80,000	120,000
Erosion Control Structure	40	60
Spring Development	2	4
Prescribed Grazing	245,000	345,000
Upland Wildlife Habitat Mgt.	245,000	345,000
Fence	15,840	26,400
Livestock Pipeline	21,120	31,680
Trough	8	11
Storage Tank	8	11
Well	2	4
Irrigation Land Leveling	80	80
Conservation Cropping Sys.	1000	1000
Pest Management	300	600
Nutrient Management	300	600

COMPARISON OF ALTERNATIVES				
EFFECTS ON NEEDS				
ALTERNATIVES				
	EROSION CONTROL STRUCTURES (NO.)	GULLY EROSION (T/AC/YR.)		COST
NO ACTION	5	10		\$0.00
SYSTEM W/ALL CONS PRACTICES	40	7		\$48,000.00

	Brush Mgmt (ac) BRUSH MGMT (AC)	Sheet & Rill Erosion T/ac/yr EROSION T/AC/YR	Wind Erosion T/AC/YR	COST
NO ACTION	2400	6-10	3-5	\$0.00
SYSTEM W/ALL CONS PRACTICES	80000	4	2	\$750,000.00
	UPLAND WILDLIFE MGT. & PRESCRIBED GRAZING (AC)	SHEET & RILL EROSION T/AC/YR	WIND EROSION T/AC/YR	COST
NO ACTION	16000	6-10	3-5	\$0.00
SYSTEM W/ALL CONS. PRACTICES	245000	4	2	\$0.00
	IRRIGATION SYSTEMS & IRRIG. WATER MGT. (NO. & AC.)	IMPROVED EFFICIENCY	AC./IN. CONSERVED	COST
NO ACTION	2-100	45-50%	0	\$0.00
SYSTEM W/ALL CONS PRACTICES	12-1000	70-85%	2000	\$0.00
	IRRIGATION LAND LEVELING (AC)	IMPROVED EFFICIENCY	AC./IN. CONSERVED	COST
NO ACTION	35	45-50%	70	\$0.00
SYSTEM W/ALL CONS PRACTICE	80	70%	160	\$10,800.00
	CONS. CROPPING SYSTEM (NO. & AC.)	SHEET & RILL EROSION T/AC/YR	WIND EROSION T/AC/YR	COST
NO ACTION	0 no. - 1065 ac.	7	5-6	\$0.00
SYSTEM W/ALL CONS PRACTICES	5 no. - 2065 ac.	4	2-3	\$150,000.00

PERSONS AND AGENCIES CONSULTED:

Bureau of Land Management – Leslie Theis

U.S. Forest Service, Lincoln Natl. Forest – Mike Bacca

New Mexico State Land Office, Land Use Specialist – Jim Carr

Eddy County CES – Woods Houghton

Farm Services Agency, County Committee – Mike Carter

Farm Services Agency, CED – Janice Lowery, Acting
Carlsbad SWCD – Ridley Gardner

References:

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

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

NRCS Field Office Technical Guide, Section V, Conservation Effects.

U.S. Fish and Wildlife Service, Threatened and Endangered Species list for NM

New Mexico Fish and Game, BISON report

**Finding of No Significant Impact
For the Implementation of EQIP
In the Black River/Delaware River**

Introduction:

The Black River/Delaware River Geographic Priority Area 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 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
Carlsbad Field Office
114 S. Halagueno, Rm. 137 Federal Bldg.
Carlsbad, New Mexico 88220

The Environmental Assessment (EA) is attached for reference.

DETERMINATION OF SIGNIFICANCE

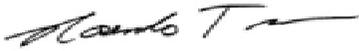
Table 1 Determination of Significance of Proposed Action

Context	Intensity	Reason for Non-Significance
Ground water recharge - 1% total GPA potential yield (2 acre feet)	Water recharge diminishing each year for the life of the project (50 years)	Dependent on available precipitation and continued management for the project life
Native plant community (woody species) Invasion of young trees	40% of GPA will be treated (150,000 acres)	Dependent on follow-up management during project life and beyond
Public health and safety (air quality) Less than 1% of the agriculture area will be disturbed	Practice construction will temporarily generate dust at scattered locations throughout the GPA. Implementation will take place throughout the year	Rural character of the area minimizes air quality problems at any one time
Cultural resources - 500 sites recorded	Medium density in the area shown in records search	Sites will be avoided if encountered
Water saved - 1% of total water used by agriculture (200 ac. ft.) is saved	Permanent water savings each year	Water savings are realized over 8-month irrigation season. There will be no reduction in flow in delivery system.
Ground Water Quality No detachable change in surface water quality will occur.	Probability of ground water degradation due to nutrient or pesticide contamination is minimized over the life of the practices.	Surface water quality will neither improves nor declines.
Public health and safety (air quality) smoke	Temporary smoke from burning (4 days/year) (40 acres)	Rural and remote locations, proximity to rural community, and acreage involved is <.05%
Surface water quality No detectable change in surface water quality will occur	Probability of surface water degradation due to nutrient or pesticide contamination is minimized over the life of the practices	Surface water quality will neither improve or decline

Other considerations related to context and intensity are discussed as follows. All agriculture operations in the area are very similar and the producers will be given the opportunity to participate depending upon individual need. No other issues or concerns have been expressed at any public meeting so controversy is small. These actions have all been performed in the past with known and acceptable results. Endangered species have been addressed in the EA and there is likely no effect on species considered and no further consultation is necessary. No national, state, or local laws will be violated by this action.

FINDING OF NO SIGNIFICANT IMPACT

This finding is based on the evidence presented in the EA of impacts and alternatives for this GPA. Based on the assessment and the reasons given in Table 1 above. I find 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