

## **PROJECT NARRATIVE**

Name of the Project: **Rangeland Rehabilitation through Water Conservation/Concentration**

Is this a New Project or Request for Continuation? New Project

Geographic Area of the Project: Texas Cooperative Extension Far West District 6

Name of Principal Investigator(s): Alyson McDonald and Charles Hart

County(s) and /or University Department(s), TAEX, or Unit: Rangeland Ecology and Management, Texas Cooperative Extension

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Amount of Funding Requested: \$6,348.00

### **Project Need, Description and Expected Outcomes**

Rangeland ripping/furrowing demonstrations have been implemented on ranches in Pecos, Val Verde, Glasscock, Crockett, Ector, and Presidio Counties. A tractor or bulldozer was used to simultaneously rip and furrow along elevational contours in effort to concentrate limited precipitation, enhance infiltration, reduce soil loss, and ultimately increase plant production at the sites. Paired watershed plots were installed in Val Verde and Crockett Counties to complement and document the benefits of the demonstrations. Additional plots will be installed in Presidio County. Rainfall intensity, runoff volume and sediment loss from each pair of plots will be measured for two years. A rip/furrow treatment will be applied to one of the plots while the other will serve as a control. Soil physical and chemical properties such as particle size distribution and organic matter content may affect plot response to treatment. Therefore, soil morphology descriptions and physical and chemical analyses are essential to the evaluation of treatment success and for selection of additional treatment sites.

The funds requested in this proposal will be used to purchase equipment for soil descriptions and physical analyses, chemical analyses, student salary, and travel expenses to the demonstration sites. A year-end report will be published locally to highlight progress and results.

### **Specific Soil and Water Conservation Issues Addressed**

The following conservation issues are addressed by the Rangeland Rehabilitation through Water Conservation/Concentration project:

Soil quality/soil health

Resource management

Land management related to soil and water conservation

## **Collaboration**

<b>Name</b>	<b>Position/ Agency</b>	<b>Function</b>
Alyson McDonald	Extension Assistant, TCE	Plot installation, sample collection, soil analysis, data analysis
Charles Hart	Associate Professor, Extension Range Specialist, TCE	Project coordinator
Darrell Ueckert	Professor, TAES	Rangeland ripping consultation
Joe Petersen	Senior Research Associate	Rangeland ripping consultation
Larry White	Professor, Extension Range Specialist, TCE	Watershed demonstration consultation
John Allen	Val Verde CEA, TCE	Plot establishment, data collection, clientele programs
Roy Walston	Crockett CEA, TCE	Plot establishment, data collection, clientele programs
Double T Ranch	Landowner/ Cooperator	Provide access to study site
James Steen	Presidio CEA, TCE	Plot establishment, data collection, clientele programs
Hubbard Ranch	Landowner/Cooperator	Provide access to study site
Bill Zuberbueler	Landowner/Cooperator	Provide access to study site