

## Project Narrative

Name of Project: Natural Resources Conservation and Preservation On The Colorado River Watershed

Is This a New Project or Request for Continuation?: New

Geographic Area of the Project: Edwards Plateau on San Saba/Concho/Colorado River Watersheds

Name of Principal Investigator (s): Billy Kniffen, Scott Edmonson, Michael Palmer, Marc Tucker

County (s) and/or TAEX Department (s): Menard, Concho, Irion, Schleicher Counties

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Amount of Funding Requested: \$8,550

### Project Description

The watersheds of the Colorado River and the watersheds of the Concho and San Saba Rivers which feeds the Colorado River have seen 10 years of severe drought. Vegetation has died, land has been over grazed, erosion is increasing, plant diversity is decreasing, wildlife habitat is threatened, ag production and economics have severely threatened viability of the family ranch, new absentee landowners are unaware of accepted agriculture practices and our homeowners, families and youth need a better understanding of mechanics of conservation landscaping and water management.

The San Saba and Concho River watersheds are under consideration for a water master. Urban and non-agriculture interests have brought suit over riparian rights and maintaining water flow in the San Saba River which has ceased to flow at certain locations along the river. The small amount of irrigation is under scrutiny in the manner it is used and the use of an irrigation ditch built a hundred years ago along the San Saba River in Menard has been challenged. There has been little education done to encourage conservation of water in homes and landscape. And the next generation of ranchers and new urban based land owners need assistance in managing the land that is watersheds to these rivers. This includes re-establishment of suitable vegetation, ripping to provide better water infiltration and seed bed development; grazing management; wildlife habitat improvement; and, riparian area and watershed management. Our irrigators need to learn water conservation techniques, production practices to reduce water usage and find alternative crops requiring less water demand.

Land is being fragmented and high fenced by new landowners inexperienced in managing rangeland, livestock or caring for wildlife or their habitat and unaware of how this management affects the health of the land or water.

Fortunately, most new landowners have purchased land to enjoy rural life including the natural surroundings, wildlife, clear springs, streams and rivers, scenic views and pure refreshing atmosphere. There are expertise, techniques and tools available to enhance these rural attributes and getting this knowledge transferred to these landowners is better served before abuse of the land, soil and habitat occurs mistakenly by overgrazing, brush and habitat destruction. But it is important at any stage of land development to prevent soil, water and habitat loss.

This project proposes to develop an educational program to demonstrate and promote the use of natural resource conservation techniques as a tool for improving watershed health, wildlife habitats and forage supply for livestock and wildlife while reducing erosion, pollution, evaporation and runoff from rangeland watersheds attributed to the drought, overgrazing, brush encroachment, poor land management decisions and new land and home ownership. And to educate youth and homeowners on good landscape, home and watershed management practices.

In 2002-03 natural resource goals include:

- 2 watershed runoff paired plots, one pair addressing grazing management and one addressing effects of mesquite/cedar and their removal.
- Develop and distributed a brochure for new landowners titled “Code of the West” which will provide resources and management tips for new ranch owners and include: goal setting, watershed management, farm animals, landscape and wildlife.
- Build 3 portable rain simulators with a maximum of 4 compartments showing any of the following: managed range, over-grazed land, turf area, mulched plants, wetland area and impervious area which could represent a parking lot or roof for rainwater collection. Billy Kniffen has designed, built and demonstrated the simulator at over 60 field days and educational events in the past 4 years in many county and several state and national programs . Plans have been perfected and sent to several sates and counties in Texas.
- Build and demonstrate use of water guzzlers for wildlife utilizing rainwater collection.
- Hold an irrigators conference for homeowners and agriculture producers.
- Build 2 rainwater harvesting systems for 2 different grade schools in the 4 counties. One has already been established at the Menard ISD collecting 1,000 gallons of water to use for wildlife and native landscape educational area.
- Hold a mini-natural resource camp for participating counties
- Built a root development display to evaluate effect of moderate and heavy grazing on little bluestem.
- Put in place 3 small (3'x7') watershed paired plots for school education projects (one is already established at Menard ISD).
- Travel for specialists Dr. Allan McGinty and Dr. Larry White to establish paired watershed plots and ripped plots
- Develop rainwater collection material and information. (Billy Kniffen has given presentations on rainwater harvesting in Victoria, Abilene, New Braunfels, Arlington, College Station and San Angelo within last year)
- Demonstrations at Extension offices and selected sites using rain monitors, brush sculpting techniques, native plant seed production, rain water collectors and guzzlers, grazing cages, photo-markers, range ripping, seeding, grazing study and wildlife habitat improvement.
- Signs to identify and explain demonstrations
- Assist Edwards plateau Prescribed Burn Association efforts in participating counties (over 25 landowners already EPPBA members in Menard and Schleicher Counties)

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

- \_ Water management and conservation
- \_ Land management related to soil and water conservation
- \_ Soil management
- \_ tillage practices
- \_ Cropping systems and rotations
- \_ Crop water requirements
- \_ Conservation buffer strips
- \_ Conservation practices economics
- \_ Irrigation efficiency
- \_ Mulching
- \_ Riparian zone management
- \_ Brush control for soil, water and wildlife management
- \_ Resource management
- \_ Conservation practices economics
- \_ Soil quality/soil health
- \_ Youth education programs about water conservation
- \_ Wetlands management
- \_ Carbon sequestration

### **Collaboration**

Texas Agricultural Extension Service - County Extension Agents in Menard, Concho, Irion, Schleicher Counties are co-principal investigators

Texas Agricultural Extension Service - Specialists from the Department of Rangeland Ecology and Management, Soil and Crop Science, Horticultural Sciences, and Wildlife and Fisheries Sciences will provide technical expertise and guidance

Texas Parks and Wildlife Department at Ft. McKavitt will use paired plots in educational program

Natural Resource Conservation Service - assist with planning and technical assistance

Local Soil and Water Conservation Districts assist with planning and technical assistance

Animal Damage Control will provide technical assistance and programming

County Commissioners Court will provide monetary assistance and guidance

Local Chamber of Commerce will provide assistance in reaching targeted audiences

Schools in Menard, Concho, Irion, Schleicher Counties will assist in teaching and transporting youth to sites

Local Underground Water Districts will provide technical and programming assistance

Edwards Plateau Prescribed Burn Association will supply technical and mechanical assistance

Native Plant Society of Texas will provide plants and technical expertise

Submitted by \_\_\_\_\_  
Billy Kniffen P.I.

Approved for submission \_\_\_\_\_  
Scott Durham, District Extension Director, District 7

**Soil and Water Conservation Project  
Proposal**

**Natural Resource Conservation and Preservation  
on the Colorado River Watershed**

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