

**Conservation Implementation Strategy Hereford Natural Resource  
Conservation District Grasslands Restoration Effort 2018-2019**



PHOTO 1: JACK LADD EVALUATING BRUSH MANAGEMENT AND SEEDING AREA

## **Introduction**

The purpose of the Hereford Natural Resource Conservation District Grasslands Restoration Effort is to provide landowners with the opportunity to improve rangeland condition on their private and leased lands, decrease excessive sediment and nutrient runoff, improve livestock feed and forage quality and quantity and improve wildlife habitat. The primary goal of this effort is to reduce woody species encroachment into the grasslands by implementing brush management techniques along with the needed infrastructure which will make prescribed grazing management and grazing deferment possible. This goal will attempt to effect over 14,000 acres of the rangeland within the project area in the next year.

## **Background**

The project area, as shown in Map 1, covers approximately 389,000 acres throughout the Hereford NRCDC boundaries. This focus area was chosen for multiple reasons as follows, primarily due to its specific needs related to brush encroachment, sedimentation going to the San Pedro River and the available land status and ownership. This area is composed of the rangeland portions of the District, minus Fort Huachuca and areas that don't have brush management concerns, or about 65% of its entirety. The project area represents the upper most section of the San Pedro River watershed that is in the United States. Water quality standards were exceeded in three areas in the San Pedro River. These reaches are impaired due to elevated levels of E. coli, nitrate and copper. Localized nitrate contamination near St. David is being remediated as part of the Superfund Program. There are hundreds of owners in the focus area although the number of ranches controlling enough acreage to support cow/calf herds, is a much smaller number. The total number of producers on the rangeland is not certain currently.

The District has a long history of livestock grazing both on private and public lands. When properly managed, livestock are an important tool for resource management, helping improve habitat and decrease fire hazards. Most ranches within the Conservation District include federal and/or state grazing permits. The U.S. Forest Service (USFS), Bureau of Land Management (BLM) and the Arizona State Land Department (A.S.L.D.) administer about 290,500 acres in the Hereford NRCDC that are grazed by livestock. Livestock grazing should continue to be managed to benefit human health, historic culture and economic well-being.

The Hereford NRCDC would like to help maintain sustainable grazing consistent with historic land use and ranching practices.

The District believes that any grazing restrictions or conservation measures that are implemented through a grazing permit should be based solely on the conditions and science, specific to that permitted grazing allotment.

Allotment management changes must be tailored to address specific problems when the cause of the problems is determined using the best available science including the flexibility to change the number of livestock the designated period of time and season of use.

Large rangeland portions of the District have been subdivided into smaller parcels of land. Many of these smaller land owners graze some livestock, oftentimes horses. These small parcels have many of the same resource concerns typically found on larger ranches in the District including; the need for rangeland seeding, erosion concerns both sheet and gully, prescribed grazing concerns and wildlife habitat improvement needs. The District would like to be able to help these smaller landowners address their concerns through individual consultation visits, workshops and the availability of cost share programs such as EQIP.

Local work group meetings held by the District and attended by District cooperators, board members and advisors and the District's partners have been held recently. This group worked to set goals and priorities for the District's Conservation Strategy. The Hereford NRCD has cooperated with the NRCS in identifying its priority resource concerns. Their focus for this Conservation Implementation Strategy is an outcome from their 2013-2018 Long Range Plan and from the Hereford NRCD Conservation Strategy 2015.

It is important that this implementation strategy be carried out because of the critical nature of the identified resource concern. Based upon past success, there is a ready and willing customer base and a good working relationship between the various partners.

### **Problem Statement**

The primary resource concern in the Hereford NRCD Grassland Restoration Effort area of concern is degraded plant condition which is expressed in excessive plant pest pressure. Due to a variety of factors and influences, most rangeland conditions found in the Hereford NRCD today are not as productive as they were when they were first documented by explorers and pioneers from the mid-1800's. Over large expanses of the project area, shrubs and trees have increased over the uplands, competing with grass production and reducing overall cover on the ground. These factors include but are not limited to; excessive grazing pressure in the late 1800's, lack of periodic fires in the grasslands and a general down cutting of the San Pedro River bottom. Grazing management alone cannot address the problem of the excessive shrub/tree completion with the grasses. Many areas do not produce enough herbaceous cover to allow for the introduction of fire as a tool against the shrub encroachment. The financial returns associated with livestock production in these semi-arid grasslands today do not allow for the capital necessary for the land manager to absorb all of the cost of brush management. The positive returns that result from brush management go well beyond simply a benefit to the rancher and his cattle. Improved watershed conditions are reflected in less erosive flows and cleaner water returning to the San Pedro River along with a higher level of infiltration recharging the high water table which permits this portion of the river to stay perennial.

### **Goals and Objectives**

The desired outcome of this effort is to have large areas of productive grassland cover contributing to a healthier watershed for the San Pedro River, improving its water quality and even its water quantity over time. The overall effect will improve riparian growth along the

river, improve wildlife habitat both within the river corridor and in the uplands and increase the forage base for livestock production.

The specific goals are to:

- Implement over 14,000 acres of brush management using both mechanical and chemical treatment methods according to NRCS standards and specifications.
- Install both fencing and/or water developments which will directly aide in creating deferment and prescribed grazing for the treated brush management areas.

## **Alternatives**

There are two alternatives that were considered:

- No action.
- Largescale infrastructure improvement to achieve prescribed grazing.
- Proposed solution.

### **No Action**

No action will result in conservation practices being implemented somewhat randomly across the Hereford NRCD with practices which may not have high priority for the District. Monies available through the NRCS would be significantly less than the goals being requested in this effort. In a sense, this is how funds are currently being distributed within the District for conservation. For the last few years, the District has been averaging around 2,000 acres of brush management per year, along with associated infrastructure needed to implement prescribed grazing.

### **Largescale Infrastructure Improvement to Achieve Prescribed Grazing**

In order to achieve prescribed grazing on a ranch, the fencing and water developments have to be in place in order to be able to design a rest/rotation system so that the manger is able to meet prescribed grazing specifications. Prescribed grazing allows for proper grazing use levels across the ranch alongwith reasonable stocking rates and good grazing distribution. The amount needed to improve the grazing infrastructure for the typical ranch in the District is difficult to calculate. Ranch conservation practice needs are identified as part of the nine-step conservation planning process. Assuming two conservation plans a year in the District, typical conservation practices installed could amount to; 2 livestock wells, 2 pumping plants, 16 miles of livestock pipeline, 4 storages, 8 troughs and 14 miles of fence. This would amount to approximately \$300,000 in cost share monies from the NRCS to the District.

### **Proposed Solution**

It must be noted that prescribed grazing management alone will not solve resource concerns brought about by excessive brush species. Most ranches in the District have

areas with excess brush and poor rangeland ecological site condition. The concerns brought about through poor herbaceous cover help to account for the high sediment and coliform loads in the San Pedro River. Concentrating most of the cost share monies on brush management will more rapidly address the poor water quality found in the San Pedro. The minimal infrastructure needed that is associated with brush management to achieve deferment and prescribed grazing will help to put most of the funding towards the greatest and quickest effect which is brush management. This proposal differs from past expenditures of EQIP monies in the area because; it focuses upon a limited area within the District, it concentrates upon a single resource concern and it greatly reduces the potential conservation practices to be implemented.

The main practices that will be used in order to implement this effort will be;

- Brush Management (mechanical & chemical)-314
- Fence-382\*
- Grade Stabilization Structure-410\*
- Livestock Pipeline-516\*
- Prescribed Grazing-528
- Pumping Plant-533\*
- Grazing Land Mechanical Treatment-548
- Range Planting-550
- Watering Facility-614\*
- Water Well-642\*

In an attempt to assure that the majority of cost share monies will be concentrated towards the primary goal of achieving improved rangeland conditions through brush management, caps will be placed on the structural practices indicated above with an asterisk. Practices will be capped per contract as such: fence (382) \$20,000, grade stabilization structure (410) \$15,000, livestock pipeline (516) \$50,000, pumping plant (533) \$5,000, watering facility (614) \$20,000 and water well (642) \$25,000.

### **Partnerships**

The Hereford Natural Resource Conservation District will partner with land owners and private organizations, and coordinate with Federal and State agencies, county and local governments to carry out this effort. Currently, the Sentinel Landscape Restoration Partnership (SLRP), consisting of 25 entities, meets and coordinates on a regular basis to try to organize conservation efforts in this area of concern. The following are the partners who have worked with the Hereford NRCD in the past and could also be involved in this effort; Arizona Association of Conservation Districts, Arizona State Land Department, Arizona Game and Fish Department, Arizona Department of Environmental Quality, Cochise County, City of Sierra Vista, Tombstone High School FAA, Arizona Antelope Foundation, Freeport McMoran, Iroquois Foundation, University of Arizona Department of Agriculture, Douglas Field Office, NRCS,

Cochise County Fair, Tucson Field Office, BLM, Sierra Vista Ranger District, USFS, Walnut Gulch, Agriculture Research Service, USDA, Cochise Area Network for Therapeutic Equestrian Resources (C.A.N.T.E.R.), Cascabel Ranch & Consulting, American Stewards of Liberty, Sierra Vista Herald and Fort Huachuca.

### **Implementation**

The planned strategy would take advantage of NRCS's Environmental Quality Incentives Program (EQIP) as the main source of funding. Another source of funding could include a Joint Chief's Landscape Restoration Partnership agreement which is currently being considered for funding. This is a joint NRCS/FS effort. (This proposal is projected out through the next 3 years and is requesting over 4.7 million dollars). For this CIS request, it is anticipated that there will be from 5 to 7 EQIP contracts in the Fiscal Year which will require anywhere from \$580,000 to \$815,000 of funds.

The ranking criteria, to prioritize EQIP funding, have been developed (see Appendix A). Priority will be given to the projects that will have the highest positive impact to surface water quality and rangeland plant condition. Low ranked projects are those that do not address any of the resource concerns listed in the strategy.

### **Monitoring Details**

The success of this CIS plan will be determined through monitoring. Monitoring for detection of improved rangeland condition will be accomplished by comparing vegetative transects installed in the brush management polygons, over time. Details regarding where transects occur and the availability of the data will be decided individually with each land owner or lessee. If, through monitoring and evaluation, it is determined that objectives are not being met, this CIS plan will be reevaluated and altered by the Working Group. Because it is a one-year plan, changes will be simple to implement as needed on a federal fiscal year basis.