

# Rangeland Ecology and Management

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## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Rangeland Ecology and Management

## V(B). Program Knowledge Area(s)

### 1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
121	Management of Range Resources	88%		88%	
125	Agroforestry	12%		12%	
<b>Total</b>		100%		100%	

## V(C). Planned Program (Inputs)

### 1. Actual amount of professional FTE/SYs expended this Program

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	0.0	0.0	4.4	0.0
<b>Actual</b>	0.8	0.0	2.0	0.0

### 2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	71229	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	1095859	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	262575	0

## V(D). Planned Program (Activity)

### 1. Brief description of the Activity

- Conduct Research Experiments.
- Develop Models and Protocols
- Conduct GIS analysis
- Develop Products, Curriculum, Resources.
- Assessments.
- Partnering. - - team development

**2. Brief description of the target audience**

- peers
- ranchers
- land managers
- policy makers.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	5500	23300	125	11050
2007	250	1250	10	100

**2. Number of Patent Applications Submitted (Standard Research Output)**

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007:	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	4	4

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

SCHOLARLY excellence in referred articles, book chapters, and books; participation on professional boards and panels, as well as science panels.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	10

**Output #2**

**Output Measure**

EFFECTS ON AND PROTECTION OF ENVIRONMENTAL HEALTH AND ECOLOGY - State-and-transition models developed for riparian zones that incorporate different ecological processes than upland models. - Knowledge of functional groups and a functional group key for meadow riparian systems developed - Awareness of riparian relationships and issues associated with livestock grazing - Develop and utilize new techniques, technology, and models to characterize sagegrouse habitat, e.g., a new and simpler global positioning system as well as techniques integrating infrared wavelengths of light for more accurate classification algorithms, and on the landscape modeling side, a kinetic resource and environmental spatial systems modeler (KRESS modeler 3.0) developed in 2006 will allow predictions of the suitability of locations on landscapes for either plants or animals. - Understand the floral components and landscape features that contribute to insect biodiversity - Evaluate conservation efforts through long-term trends in population dynamics of insects and discover species previously unknown and interact with taxonomists in getting these species described

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	10	10

**V(G). State Defined Outcomes**

O No.	Outcome Name
1	<p>Informed decision-makers and citizenry - Understand threshold concepts within riparian systems as they relate to channel morphology, water table and plant community dynamics - Greater awareness of watersheds/invasive species/animal behaviors/watershed conditions. - Enhance awareness of potential problems associated with riparian grazing. - Improved monitoring and management of rangelands and forest lands, including modeling for preservation and expansion of native ungulates in North America and Asia. - New knowledge about ecology of a variety of insect species and the dynamics of multi-hundred species assemblages in forested habitats</p>
2	<p>Informed policy-making and management Develop and improve successful monitoring and restoration techniques utilizing the knowledge gained from water-table, channel morphology, soil relationships and the associated response in vegetation (functional groups instead of species level data).</p> <ul style="list-style-type: none"> <li>• Application of new knowledge to the development of strategies to diminish the negative impacts of grazing riparian areas. Influence policy within land management agencies on management of riparian systems through an understanding of ecological processes driving maintenance and/or restoration. Improve environmental conditions of riparian systems within the West through promotion of appropriate management decisions based on sound ecological knowledge. Increased land use and management practices to prevent encroaching species such as juniper and <i>Potentilla rect</i> More acceptance of properly managed livestock on wildland watershed. Establish and or modify existing conservation practices including monitoring protocols for biota Indices developed for understanding biodiversity.</li> </ul>
3	<p>In the long run:</p> <ul style="list-style-type: none"> <li>• Improved management of rangelands worldwide</li> <li>• Watersheds managed for soil stability, clean water production, and grazable grasslands for both a quality environment and a sustainable resource production base presents itself.</li> </ul>

**Outcome #1**

**1. Outcome Measures**

*Not reporting on this Outcome for this Annual Report*

**2. Associated Institution Types**

**3a. Outcome Type:**

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
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**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

Natural Disasters (drought, weather extremes, etc.)

Appropriations changes

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

**Brief Explanation**

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

Other (peer process)

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}