

# Rocky Mountain Elk Foundation

## Big Game Account Project Proposal

### *Project Title: Northeastern Elk Population and Recruitment Study*

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**Project start and completion dates by State Fiscal Year:** June 01, 2015 to November 30, 2017

**California Department of Fish and Wildlife Region and location of proposed project:** Region 1

#### **Issue/Problem Statement:**

This proposal aims to provide a better understanding of population dynamics and habitat use of the Egg Lake elk herd. Specifically, the results will help to determine the relative abundance, distribution and herd composition of a portion of the Egg Lake elk herd on 27,000 acres within the Northeastern Elk Management Zone.

Elk population and herd composition information in the NE Elk herds are essentially non-existent. Vegetative cover and topography has made aerial surveys somewhat difficult to use in determining elk population levels. In addition, over the past three years (2012-2014), at least eight dead elk have been found on the 27,000 acre area. Despite apparent high cow:calf ratios, the herd in this area does not appear to be growing as would be expected in such a lightly hunted population. Anecdotal information reports that the population is declining. Currently no information is available to determine annual survival rates and recruitment of young individuals into the population.

#### **Project Description:**

RMEF will contract with Roseburg Resources to organize and lead a team of retired biologists who will conduct the study. The team will donate their time for the field work as an in-kind contribution to the project.

Approximately 20 remotely triggered cameras will be purchased to capture elk use of meadows and water sources throughout the course of the summer and fall. The deployment of cameras at water sources and meadows where herds of elk can typically be seen will provide visual record of elk use throughout the property and provide documentation of the number of cows and calves for a period of time. More than one camera may be placed at a given water source to better capture information on herd composition. Cameras will be installed as soon as snow melt allows access to the areas. They will be checked once every two weeks to change memory cards, check battery levels. Prior to the first major

snowfall, the cameras will be removed or turned off for the winter. It is expected that the survey period will be from approximately June 1 until November 15 each year.

Detections per camera days will be grouped into 2 week periods at each camera station between June 1 and Nov. 15<sup>th</sup>. Relative Abundance Index models will be used to provide information on elk distribution and abundance on the property. In addition, cow:calf information will be assessed within each 2 week period and the ratios monitored for the study period.

**Expected Benefits:**

- Determining cow:calf ratios over a three year period will allow for comparisons of whether the number of calves is increasing, remaining the same or decreasing.
- Collection of data over the three year period will provide temporal comparisons of abundance and distribution on the property. This data will be used to establish baseline information on population, distribution and herd composition on this portion of the Egg Lake elk herd.
- Over time this information can be used assess potential recruitment into the population and to track changes in herd composition and population size.
- Inform management decisions, and if declines are noted in this baseline inventory, recommend additional studies to assess the causes for decline.
- Contribute to the emerging science of monitoring animals with camera traps, which is proving to be a cost-effective, safe, and reliable method.

**Proposed Budget:**

<b>Project Title      NE California Elk Herd Composition</b>						
<b>Budget Line Item #</b>	<b>Work/Item Description</b>	<b>Count</b>	<b>Units</b>	<b>Cost/Unit</b>		
<b>Labor</b>						
1	Installation, maintenance of cameras	200	hours	@	\$25.00	\$5,000.00
2	Photo analysis and archiving	120	hours	@	\$25.00	3,000.00
	<b><u>Labor Subtotal</u></b>					<b><u>\$8,000.00</u></b>
<b>Operating Expenses</b>						
3	cameras, security boxes, cable locks	20	cameras		\$600	\$12,000.00
4	memory cards	40	16 gig SD card		\$30	\$1,200.00
5	batteries	320	AA lithium batteries		\$1	\$320.00
6	mileage	2000	miles	@	\$0.56	\$1,120.00
	<b><u>Operating subtotal</u></b>					<b><u>\$14,640.00</u></b>
<b>Project Cost</b>						<b><u>\$22,640.00</u></b>