Large Mammal Advisory Committee

Approved Project

QUARTERLY PROGRESS REPORT

Project Name: Translocation Feasibility and Status of Desert Bighorn Sheep in the Northern Central Region

Quarter: (April/ 2014)

Feasibility Project Objective:

The goal of the Northern Central Bighorn Sheep Feasibility study is to determine whether suitable habitat conditions and connectivity still exists in the Northern Central Region of the Sierra Nevada Mountains. This feasibility study will attempt to map and evaluate historical and currently available habitat in order to identify potential summer, winter, and lambing ranges for an evaluated desert bighorn sheep relocation effort. A criteria known as the Habitat Evaluation Procedure (HEP) will be used to identify these bighorn sheep ranges and habitat though the use of GIS spatial analysis on raster data.

This project will determine and identify key locations of where bighorn sheep can and not persist within a winter and summer home range. A minimum viable population (MVP) will be evaluated in reference to the area of seasonal habitat. This seasonal habitat will be evaluated upon suitable surface area and its connectivity to one another. Furthermore, knowing that ridge connectivity and habitat patchiness is a concern in the Central Sierras, the study will take an unbiased approach at acknowledging habitat stressors and potential disease areas of livestock that are known to be a threat to Desert Bighorn Sheep (*Ovis canadensis nelsoni*).

Work Performed:

Due to the lack of precipitation and snow pack in the Northern Central Sierras, the March 2014 winter reconnaissance flight was canceled as the lack of snow pack data from this past winter alone would not suffice in an accurate winter range habitat model. The idea of performing a winter reconnaissance flight could have enhanced the knowledge of the winter range by locating the south facing, wind-swept peaks and could have identified key locations where pockets of snow with less than 25 cm are found. This is key to our study as research has indicated that bighorn sheep will seek out small nutrient rich areas that have less than 25 cm of snow. Since these efforts were abandoned, the study will need to use GIS spatial analysis expertise in order to evaluate the average annual snow pack levels within consecutive years for the winter study range model report.

A model building plan for a habitat evaluation procedure (HEP) is being put together by a scientific aide that will identify the following research criteria needed per habitat range: 1) type of specific raster layers needed to build each range within the model, 2) criteria tools needed to to follow protocol, and 3) produce the spatial habitat model. Further, GIS Analysis is needed to peform these raster spatial models of these seasonal ranges as they will look at average snowpack levels and perform raster algebra in order to locate these habitat suitability sites based on feasibility rank in the Central Sierras.

Budget Detail Sheet:

Project Name: North Central Desert Bighorn Sheep Feasibility Study

4th Quarter

	4th Quarter		Total to Date
001 Salaries – Permanent			
033 Temp Help	$3,557.46		$13,536.82
083 Overtime	$300		$300
Total Salaries & Wages	$3,857.46		$13,836.82
101 Staff Benefits			
TOTAL PERSONAL SERVICES	$3,857.46		$13,836.82
* 201 General Expenses			$1,770
501 Other Items of Expense	$331		$1,288
523 Special Items of Expense			
TOTAL OE & E			
TOTAL	$4,188.46		$16,894.82