CDFG Large Mammal Advisory Committee

Project Concept Form

Clear Form

Project Title: Population Assessment and Health Monitoring of Bighorn Sheep in the Peninsular Mountain Ranges

Contact Person (First, Last): Randy Botta
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Proposed Start Date: 7/1/2012
Proposed Duration: 1 Year
Does Project Require Helicopter Use? Yes

Collaborator(s): U.S. Fish and Wildlife Service, CA Dept. of Parks and Recreation, Bighorn Institute

DFG Region (check all that apply):

- ☐ Northern Region
- ☐ North Central Region
- ☐ Bay Delta Region
- ☐ Central Region
- ☑ South Coast Region
- ☐ Inland Deserts Region
- ☐ Statewide

Project Theme (check all that apply):

- ☑ Resource Assessment
- ☐ Population Enhancement
- ☐ Habitat Conservation
- ☐ Regulatory Program
- ☑ Monitoring/Assessing Population Health

County (leave blank if statewide): San Diego, Riverside and Imperial Counties

Budget Overview (Estimated):

Category	Estimated Costs
Personnel	$0.00
Equipment/Operating	$55,000.00
Total Estimated Cost:	**$55,000.00**

Budget Detail (Estimated):

Fiscal Year (July 1 – June 30)	Amount	Fund Source
FY 12/13	$55,000.00	Nondedicated F&G Preservation Account
FY 12/13	$0.00	Big Game Management Account
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Need Statement (a BRIEF outline describing the need for the concept, the objectives and how the effort will be conducted):

Despite recent increases in population size and distribution the Peninsular Ranges bighorn sheep population remains extremely vulnerable to predation, demographic and environmental stochasticity, habitat loss and fragmentation, disease, and human disturbance. A scientifically credible population assessment and health monitoring program using VHF/GPS radiocollar technology and aerial surveys designed to determine and track population status, distribution, recruitment and survival rates, and mortality factors has been in place since 1992. Continued implementation of this program remains crucial to the development and refinement of management and recovery strategies and achieving established recovery objectives. The Department conducts ground and aerial telemetry monitoring and uses aerial helicopter surveys to derive abundance estimates through use of mark-resight estimation using individually marked (radiocollared and ear tagged) female bighorn sheep.

Goals of this project are: 1) capture and radiocollar adult bighorn sheep; and 2) implement aerial and/or ground monitoring and population surveys. Objectives include: 1) determining population status, dynamics, and trends so that the success of recovery efforts can be evaluated; 2) determining population abundance to generate estimates of abundance for individual recovery regions as well as for the entire population; 3) monitoring recruitment to determine lamb production so results can be compared among recovery regions; 4) maintaining and restoring habitat connectivity; 5) determining road crossing patterns and investigating potential solutions to reduce collisions with vehicles; 6) researching habitat use/selection and dispersal behavior; and 7) researching disease and development of diagnostic and potential treatment protocols.

LMAC Tracking Number: