

**ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP PROGRAM
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**

PROJECT INFORMATION	
Project Title: Capture of Desert Bighorn Sheep in Unit 22 and Unit 24B for Supplemental Release into Unit 37B (Mineral Mountains)	Project No. 11-612
Region/GMU: Region VI /Unit 22 and Unit 24B	HPC: Payson
Project Type: Bighorn Sheep Capture	
Project Description: Thirty bighorn sheep will be captured for release into the Mineral Mountains in Region VI. Approximately 22 females and 8 males (or a ratio of about 3 females to 1 male if fewer than 30 sheep are captured) will be captured. Fifteen of these sheep will be captured from Unit 22 and 15 from Unit 24B. Population surveys will be conducted in Unit 22 and Unit 24B during October 2012 to determine population characteristics and feasibility to allow removal of bighorn sheep through capture and translocation. Letters of support will be obtained from the Mesa Ranger District of the Tonto National Forest for capture efforts and the Gila District Tucson Field Office for release in Unit 37B Mineral Mountains.	
Wildlife Species to Benefit: Desert Bighorn Sheep	
Possible Funding Partners: ADBSS	
Implementation Schedule: Beginning: November 2012 Completed: November 2012	NEPA Compliance: (if applicable) Completed: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Projected Completion Date: November 2012
PROJECT FUNDING	
SBG Funds Requested: \$ 40,000	
Cost Share Funds: \$	
Total Project Costs: \$ 40,000	
PARTICIPANT INFORMATION	
Applicant: Dustin Darveau – Game Specialist (please print) Telephone: 480-324-3555	Address: 7200 East University Drive, Mesa, AZ 85207
AGFD Contact and Phone No. (If applicant is not AGFD personnel)	
Coordinated with: Game Branch, Region IV, ADBSS, USFS	Date: October 3, 2011
Applicant's signature: Dustin Darveau	Date: October 3, 2011

SEND COMPLETED APPLICATIONS TO:

**Game Branch
AZ Game and Fish Dept.
5000 W. Carefree Highway
Phoenix, AZ 85086**

WAS PROJECT PRESENTED TO THE LOCAL HPC? YES _____ NO X

The nearest HPC for this project is the Payson Natural Resource Committee and members of this committee are aware of the project even though it was not formally presented.

HAS PROJECT BEEN SUBMITTED IN PREVIOUS YEARS? IF SO WAS IT FUNDED?

This project is a subsequent capture and release effort to the one completed in November 2010 in which 30 desert bighorn sheep were captured in Unit 22 and Unit 24B and released into Unit 37B using SBG tag funds.

NEED STATEMENT/PROBLEM ANALYSIS:

The Mineral Mountains area has been identified in AGFD and BLM documents for the last two decades as a priority area to establish a population of desert bighorn sheep. In 2000, AGFD conducted a statewide bighorn sheep habitat analysis using the Cunningham/Hansen Habitat Evaluation Model (Lee et al. 2000), and the Mineral Mountains area rated as the highest currently unoccupied bighorn sheep habitat. This project proposal will facilitate bighorn management objectives related to translocations across the state as it may serve as the final release of bighorn sheep into the Mineral Mountains.

PROJECT OBJECTIVES:

The purpose of initial translocation of bighorn sheep into the Mineral Mountains area was:

- Establish a viable population of bighorn sheep in suitable but mostly unoccupied bighorn habitat,
- Increase and diversify the resource values of public and State Trust land,
- Increase the number of bighorn in AGFD Region VI and in the state (once the population expands to carrying capacity of the new habitat),
- Increase the opportunity for the public to view bighorn sheep, and
- Increase the opportunity to hunt bighorn sheep, if the population expands to harvestable levels.

For this proposal the objectives are:

- Following aerial surveys in October 2012, and if population characteristics allow, capture up to 30 bighorn sheep from Unit 22 and Unit 24B
- Captured bighorn sheep will be used to meet bighorn sheep management objectives listed above for the Mineral Mountains

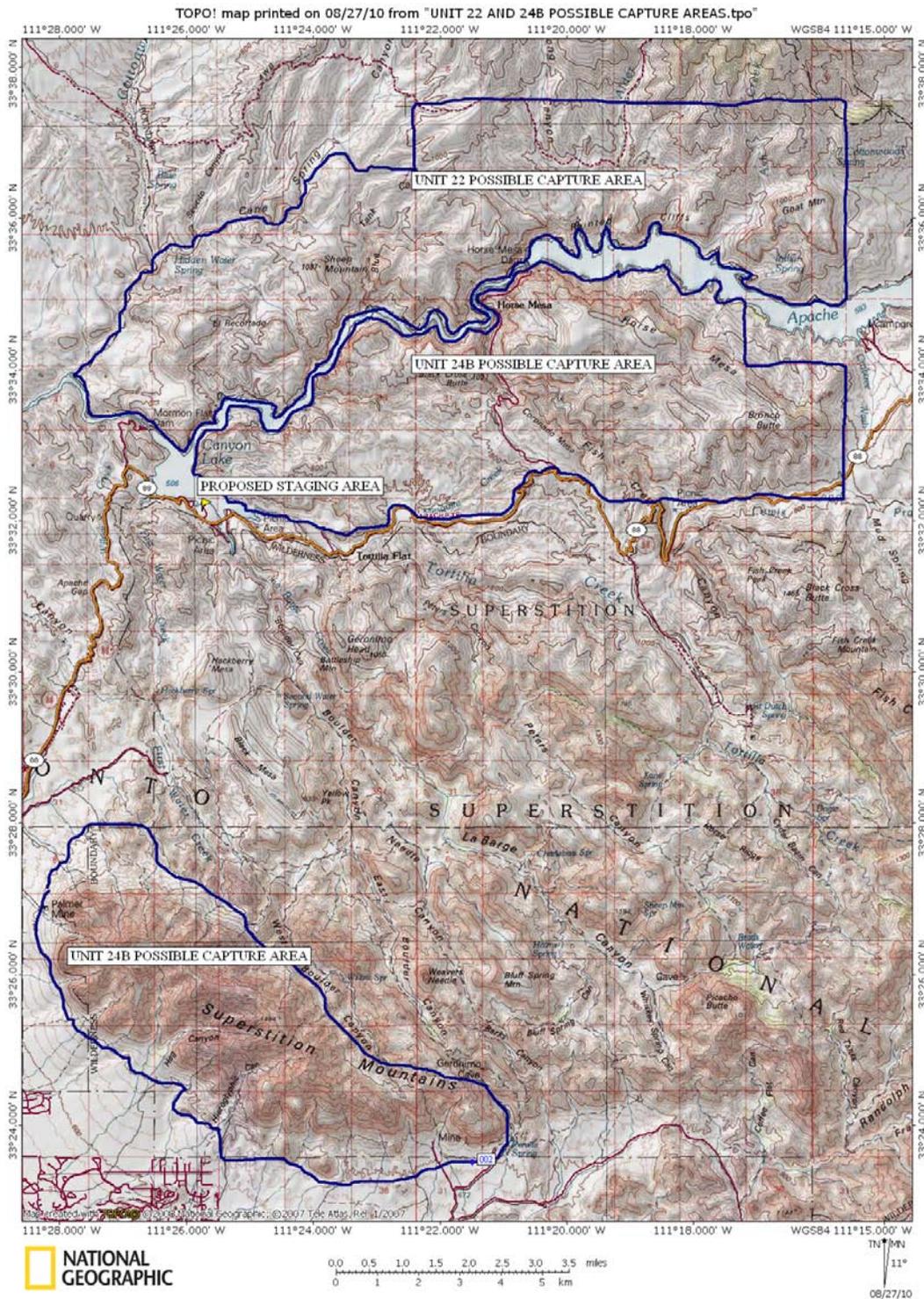
PROJECT STRATEGIES:

The initial release of bighorn sheep into the Mineral Mountains was in 2003 when 30 desert bighorn sheep (8 rams and 22 ewes) were released. The 30 sheep came from several sources; 13 from the Trigo Mountains, 1 from the Chocolates, 5 from the New Waters, and 11 from the Plomosas. A second release occurred in 2007. These sheep, seven ewes, one lamb, and two rams came from the Trigo Mountains. A third release of 30 sheep (8 rams and 22 ewes) occurred in November 2010 from Unit 22 and 24B.

1. Following the currently scheduled survey in October 2012 a determination will be made based on population characteristics whether a capture is warranted in Unit 22 and Unit 24B.
2. Based on this determination, an aerial capture will occur in November 2012. Capture operations will follow established Department procedures. Trained personnel will be on site to address animal health and may include Department contracted veterinarian or Department personnel.
3. Up to 30 desert bighorn sheep will be captured. Young rams will be targeted and attempts will be made to capture adult ewes with lambs.
4. The captured animals will be translocated to Unit 37B (Mineral Mountains) to assist in

- meeting statewide and regional bighorn sheep management objectives.
5. VHF and/or GPS tracking collars may be placed on up to 10 of the bighorn sheep to assist in post-release monitoring.

PROJECT LOCATION: Mazatzal and Superstition Mountains



Areas to be considered for capturing bighorns in Unit 22 and 24B of Region VI.

(revised 7-20-2009)

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):

All capture operations will occur on the Tonto National Forest. The capture area overlays public lands managed by the U.S. Forest Service and will involve the Four Peaks and the Superstition Wilderness.

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?

HABITAT DESCRIPTION:

Capture area is in the Arizona Upland Sonoran Desert scrub.

ITEMIZED USE OF FUNDS:

Two helicopters will be needed for a predicted two day capture effort. Cost for two helicopters should be approximately 15K-18K each day (16 hours/day at approximately \$947.00/hr) for a total of 30K-36K. Additionally, up to 10 VHF radio collars will be placed on released bighorn sheep. Cost for these collars are approximately \$300.00 for a total of \$3,000.00. Total project cost would be \$39,000.00.

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

USFS – land management agency coordination with AGFD to meet project objectives.
BLM – land management agency coordination with AGFD to meet project objectives.
ASLD - land management agency coordination with AGFD to meet project objectives
ADBSS - assist with funding and implementation.

PROJECT MONITORING PLAN:

An operational release plan for a November 2012 Mineral Mountains bighorn sheep translocation is attached.

PROJECT MAINTENANCE:

NA

PROJECT COMPLETION REPORT TO BE FILED BY:

Dustin Darveau, Game Specialist Region VI

**HPC Project No. 12 -
OPERATIONAL RELEASE PLAN FOR NOVEMBER 2011
MINERAL MOUNTAINS
BIGHORN SHEEP TRANSLOCATION**

**Region VI Wildlife Program
Arizona Game and Fish Department**

BACKGROUND

Russo (1956) felt it was probable that the Mineral Mountains historically held bighorn sheep. The Mineral Mountains is a name applied to a northern area of Game Management Unit 37B that includes Picketpost Mountain, Mineral Mountain, White Canyon, Walnut Canyon, Martinez Canyon, Box Canyon, North and South Butte, and the Rincon (Figure 1). The area is bordered on the North by Highway 60, on the east by Highway 177, and on the west by Highway 79. Potential bighorn sheep habitat extends south of the Gila River for about 1.5 miles. It is possible that bighorn sheep occupying land north of the river could cross the river at times to use some of the habitat south of the river. Land management in the Mineral Mountains area includes a mixture of BLM Tucson Field Office, Arizona State Trust Land, Tonto National Forest, and private land (Figure 2). The BLM White Canyon Wilderness is in the heart of the best sheep habitat.

The Mineral Mountains area has been identified in AGFD and BLM documents for the last two decades as a priority area to establish a robust population of desert bighorn sheep. In 2000, AGFD conducted a statewide bighorn sheep habitat analysis using the Cunningham/Hansen Habitat Evaluation Model (Lee et al. 2000), and the Mineral Mountains area rated as the highest currently unoccupied bighorn sheep habitat. Bighorn habitat quality ratings for the Mineral Mountains are shown in Figure 2.

The purpose of initial translocation of bighorn sheep into the Mineral Mountains area was:

- to establish a viable population of bighorn sheep in suitable but mostly unoccupied bighorn habitat,
- to increase and diversify the resource values of public and State Trust land,
- to increase the number of bighorn in AGFD Region VI and in the state (once the population expands to carrying capacity of the new habitat),
- to increase the opportunity for the public to view bighorn sheep, and
- to increase the opportunity to hunt bighorn sheep, if the population expands to harvestable levels.

The initial release of bighorn sheep into the Mineral Mountains was in 2003 when 30 desert bighorn sheep (8 rams and 22 ewes) were released. The 30 sheep came from several sources; 13 from the Trigo Mountain, 1 from the Chocolates, 5 from the New Waters, and 11 from the Plomosas. A second release occurred in 2007. These sheep, seven ewes, one lamb, and two rams came from the Trigo Mountains. A third release of 30 bighorn sheep occurred in November 2010 from Unit 22 and Unit 24B.

Release Site Preparation

There are numerous perennial water sources including, Arnett, Telegraph, Walnut, Wood, White, Martinez canyons, and the Gila River. Other potholes and livestock waters exist in the area. AGFD and the Arizona Desert Bighorn Sheep Society surveyed for waters in the project area on June 23, 2002, during a drought period. Numerous waters were documented. The success of this supplementation is not contingent upon addition of water for bighorn. This area receives 8-20 inches of precipitation per year.

Release Technique

The proposed action is to supplement existing bighorn sheep in the Mineral Mountains area with enough new animals to allow for population expansion and saturation of suitable habitat. Up to 30 bighorn sheep will be captured in Unit 22 and 24B of Region VI and released into the Mineral Mountains area.

The bighorn will be captured by net gun from a helicopter. Captured sheep will be ferried by helicopter from the capture site to a capture staging area, where they will be examined by a veterinarian, given appropriate veterinary treatment, ear tagged, blood tested, sampled for DNA analysis and put into transport boxes on a trailer. Ten sheep will be radio-collared to facilitate monitoring of the released population.

The trailer used to transport bighorn is 20 feet long, plus the gooseneck. It has 8 boxes that hold 3-5 sheep each. The trailer with the captured sheep will be driven to the release site. (Figure 3). All vehicle travel will take place on existing county-maintained roads. Vehicles will not travel off road more than 100 feet and no more than 1 acre of land off-road will be used for parking or turning of vehicles. Bighorn sheep will be released by opening the boxes. Release activities are to include transport to the release site which could take most of the day and personnel should be prepared to camp out if sheep can not be released one hour before darkness.

Personnel and Equipment

Approximately five AGFD personnel will potentially be present at the release site. Department trucks and bighorn transport trailers will be used to transport the sheep to the release site. Capture personnel will have installed telemetry packages at the capture site. Specific instructions regarding the actual release of sheep from the boxes will be given to release personnel on site. The Game Specialist will be responsible for the completion of the Wildlife Handling Forms after the release. Information recorded will include: direction the sheep dispersed, time of release, any injuries, general comments, and last known visual location of the sheep.

Funding

The expenses for this entire translocation are being covered by a Special Tag Fund Proposal that was funded during the last funding cycle. This included capture and release helicopter time, radiocollars, new telemetry equipment, miscellaneous capture supplies, and 2 years of fixed-wing time for post-release monitoring.

Media Coverage

Media representatives will be coordinated through Region VI so as to minimize interference with the release and maximize the quality of documentation.

Post-release Monitoring

To facilitate post-release monitoring, ten sheep will be outfitted with radio collars at the capture staging area. Five of these sheep will be from Unit 22 and five from Unit 24B. Monitoring of radio-collared sheep will provide information on habitat use, causes of mortality, use of travel corridors, and distribution of released sheep. Translocated bighorn will be monitored intensively initially, under the direction of the Regional Game Specialist. Weekly telemetry monitoring flights for the first month and then flights every 2 weeks for the next 2 months will be used to quickly identify sheep mortalities and attempt to determine the cause of death. After the first 3 months, monthly flights will be conducted thereafter for the two years post release. Annual survey flights by helicopter will be conducted annually thereafter to estimate population status and numbers; surveys typically are conducted in October during two days using five hours of flight time.

Literature Cited

- Lee, Raymond M., Amber A. Munig, Scott B. Zalaznik, Daniel J. Godec, Bob D. Broscheid, Shawn E. Wagner, William P. Berger, and Samuel P. Barber. 2000. Evaluation of bighorn sheep habitat in Arizona. Arizona Game and Fish Department and Arizona Desert Bighorn Sheep Society.
- Russo, J.P. 1956. The desert bighorn sheep in Arizona. Arizona Game and Fish Department Wildlife Bulletin 1. Phoenix. 153 pp.

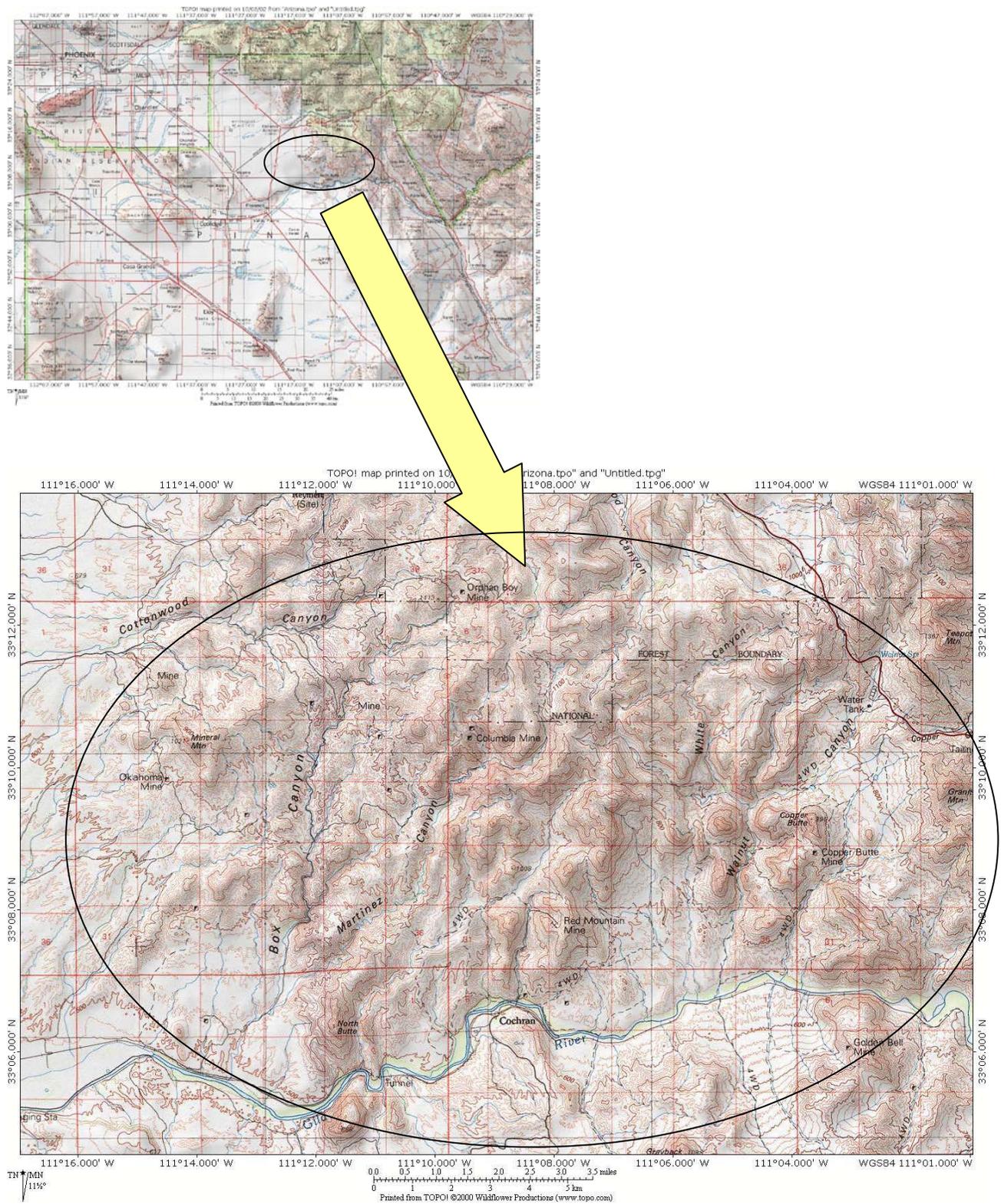


Figure 1. Location of Mineral Mountain Area with sheep release site of Box Canyon.

Mineral Mountains Bighorn Supplementation

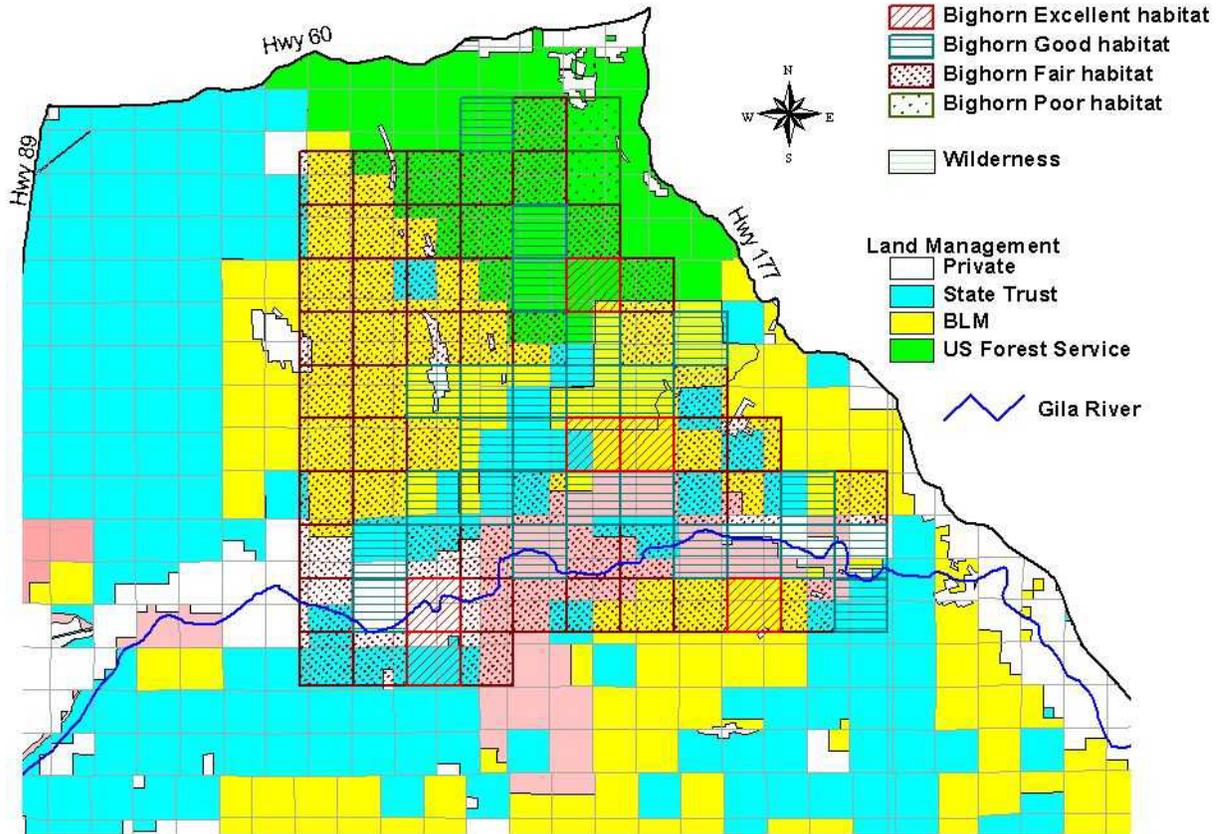


Figure 2. Land status and bighorn sheep habitat quality in the Mineral Mountain area.

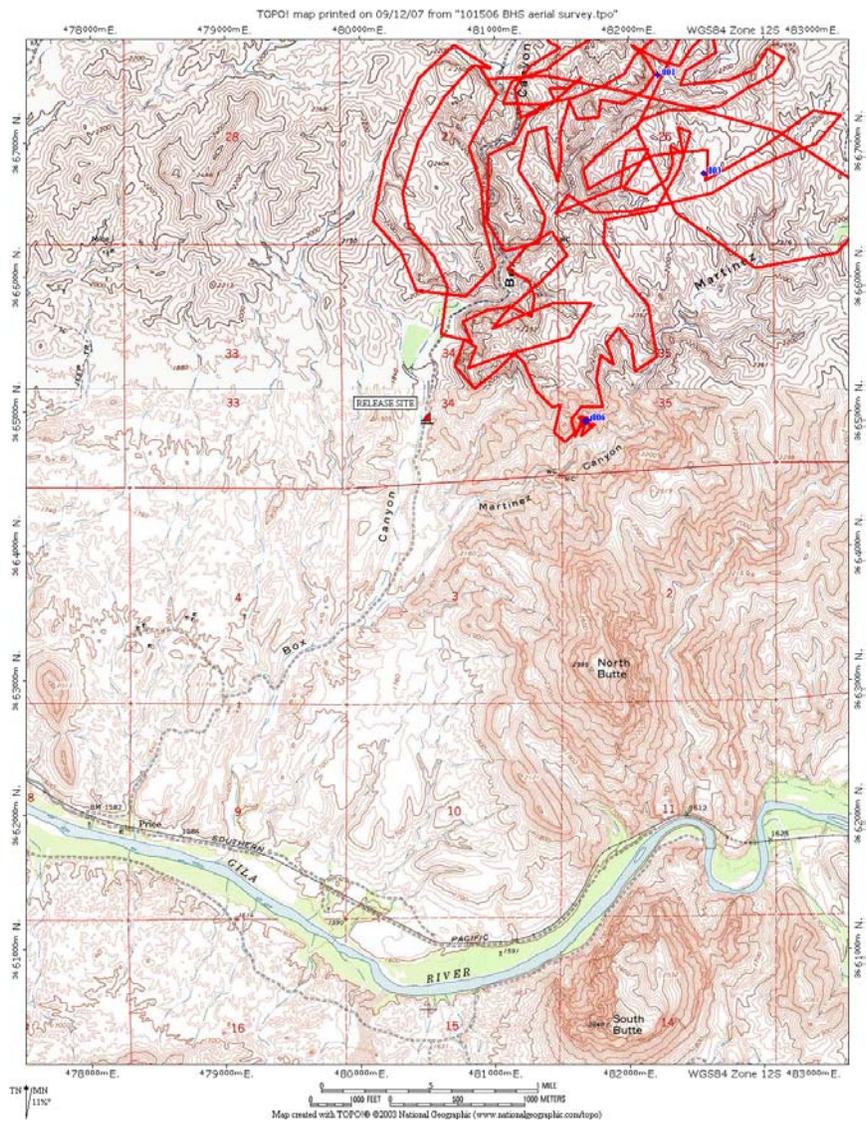


Figure 3. Map of Box Canyon release site and route in red of 2006 bighorn sheep survey helicopter flight path.