

HPC Project No. 10-601
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 supplemental release occurred in 2007. These sheep, seven ewes, one lamb, and two rams came from the Trigo Mountains. Region VI is planning the second supplemental release during the week of November 15th, 2011 with capture of up to 30 bighorns from Unit 22 and 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.

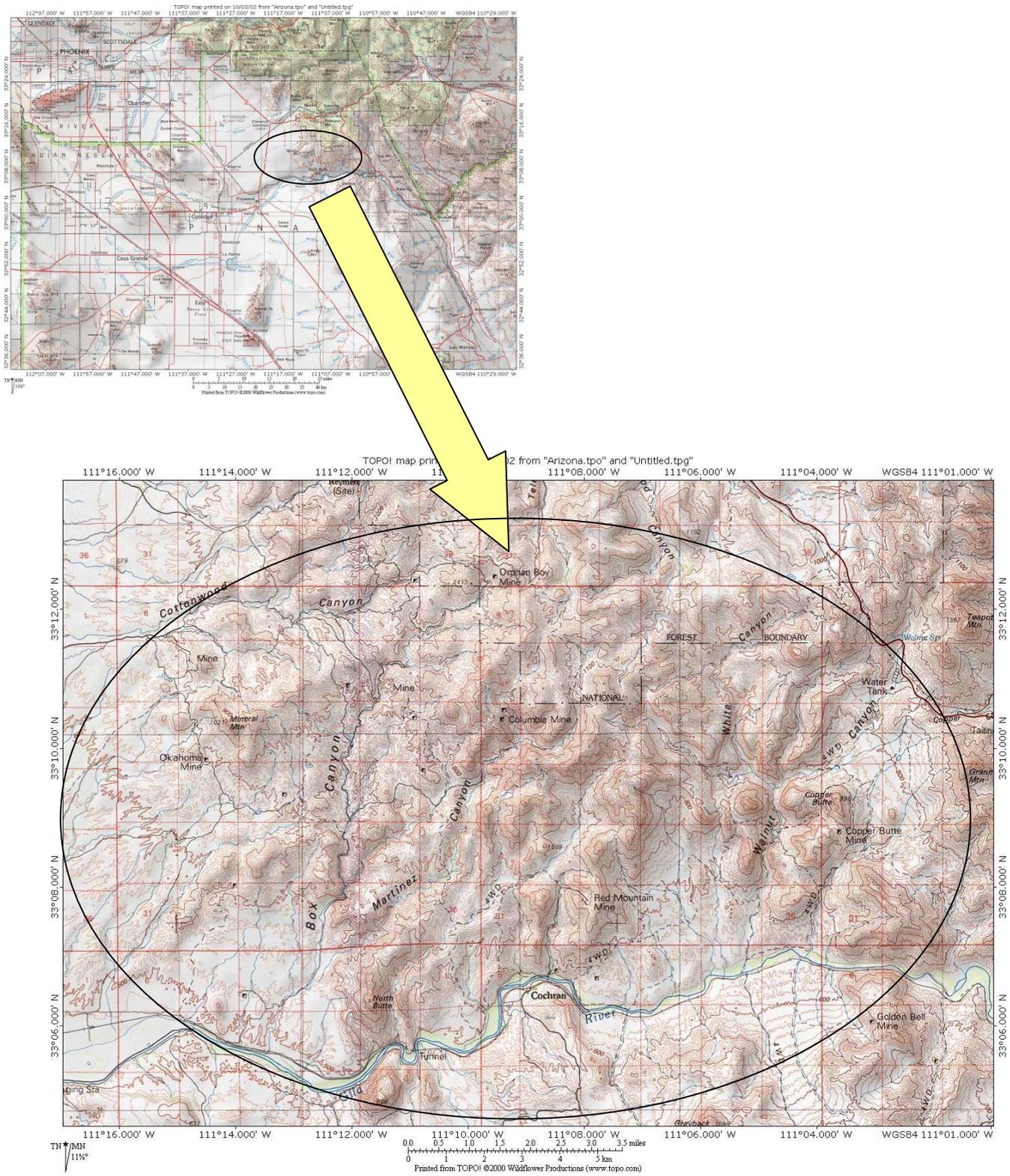


Figure 1. Location of Mineral Mountain Area with sheep release site of Box Canyon.

Mineral Mountains Bighorn Supplementation

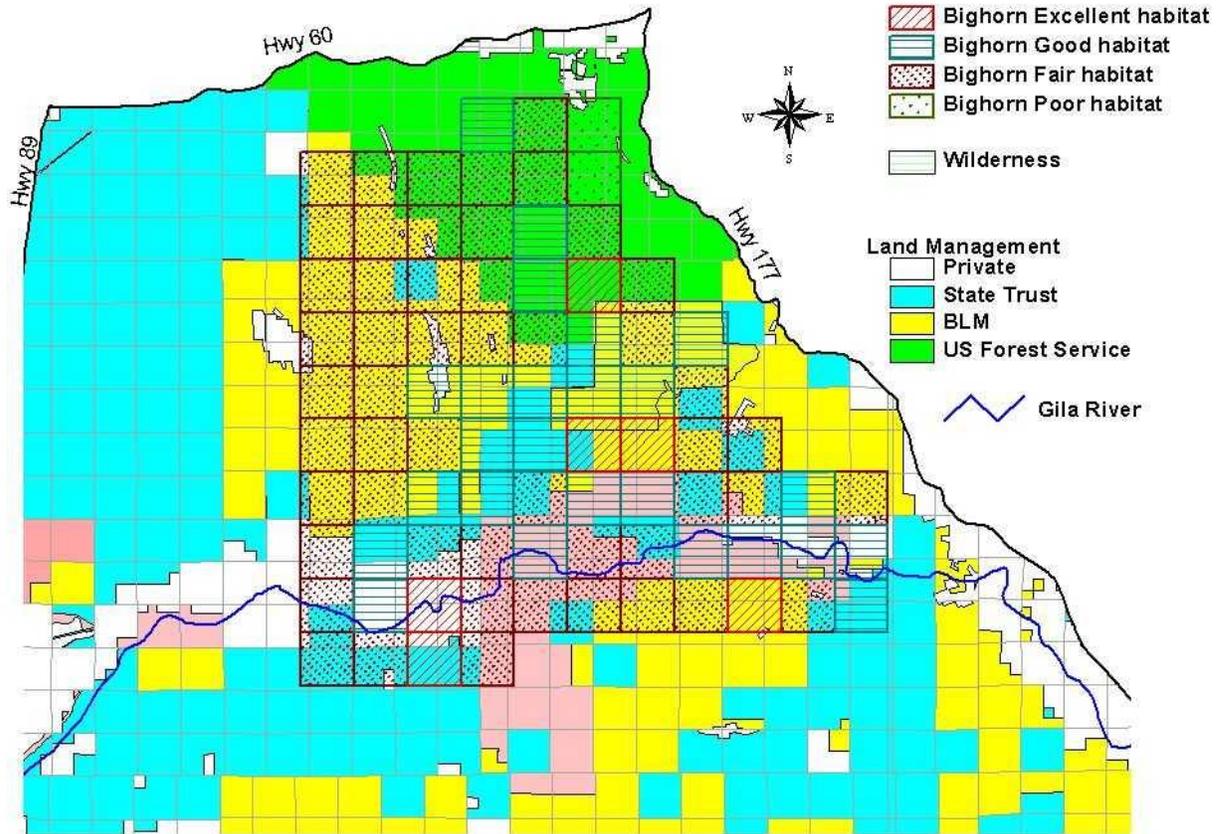


Figure 2. Land status and bighorn sheep habitat quality in the Mineral Mountain area.

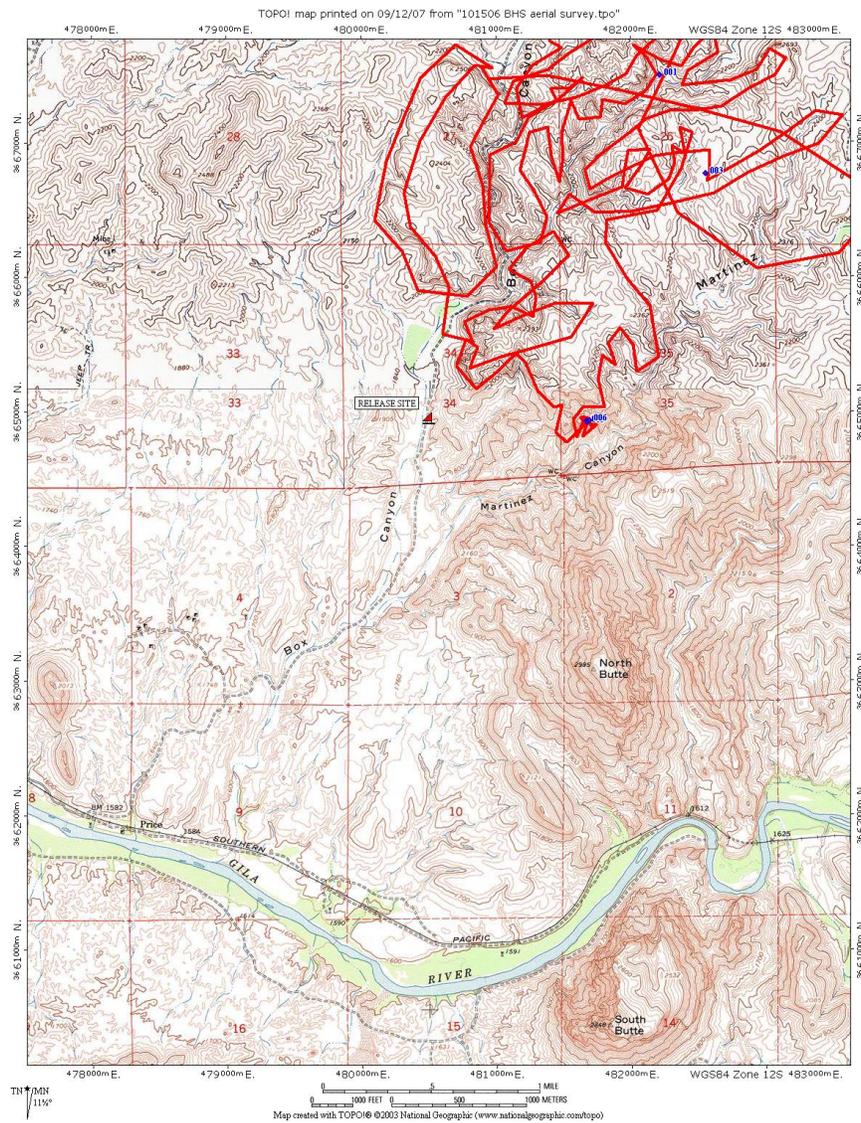


Figure 3. Map of Box Canyon release site and route in red of 2006 bighorn sheep survey helicopter flight path.