

BIG CHINO VALLEY PRONGHORN PARTNERSHIP



Overview

The Big Chino Pronghorn Partnership is a collaborative effort between The Nature Conservancy (TNC), Arizona Game and Fish Department (AGFD), Arizona Antelope Foundation (AAF), Prescott National Forest (PNF) and private landowners in Big Chino Valley, Arizona. The multi-phased project involves habitat viability analysis (Phase I), movement and behavioral research (Phase II) and on-the-ground management activities with private landowners aimed at improving habitat conditions (Phase III). The ultimate goal of the partnership is to provide information that will enable effective management of the Big Chino Valley pronghorn herd, and to leverage conservation of habitat needed to sustain the herd by encouraging community land-use planning and engaging landowners in voluntary land conservation.

During the first phase of the project, TNC has worked with graduate student intern Lara Davis to conduct habitat viability analysis utilizing Geographic Information Systems (GIS) coupled with landowner input derived from a questionnaire pertaining to pronghorn observations, management activities and planned land use. The GIS analysis has updated the AGFD's 1996 landscape-level pronghorn habitat assessment by overlaying Yavapai county parcel and roads GIS data to analyze existing viable pronghorn habitat. Additionally, GIS modeling was used to identify potential target areas for conservation: those areas where high-quality habitat likely exists and those where management actions might improve or increase habitat. This first phase of the project is nearing completion and Lara will receive her MS in November 2008. Lara has facilitated future efforts to enhance and conserve pronghorn habitat in Big Chino

Valley by establishing positive relationships with several key landowners and increasing their awareness of pronghorn and interest in participation in the partnership. Funding for Lara's graduate student stipend was provided by AGFD, AAF and TNC. Lara has committed to continuing her work with the Big Chino Pronghorn Partnership for an additional year in order to help us accomplish project goals and increase landowner participation. We will continue Lara's work using private funds donated to TNC and funds from AGFD.

The second phase of the project was initiated in November 2007 and is on-going. With funding assistance from AAF (\$20,000 in Special Tag Funds to AGFD through a Habitat Partnership Committee grant), we have assisted AGFD staff in collaring pronghorn using two different Geographic Positioning Systems (GPS) tracking collar types: store-on-board (SOB) GPS collars from which data will be collected at the end of the study period (collars are programmed to release and drop off) and satellite-uploading (SST) GPS collars from which data is collected during monthly flights over the study area. There are currently 15 adult female pronghorn collared in the Big Chino Valley: 5 with SOB collars and 10 with SST collars. We will be collaring 9 additional pronghorn in winter 2008 (2 SOB and 7 SST collars), with a minimum goal of 20 collared animals. Private funds donated to TNC have been used to refurbish these remaining collars. We will use movement and habitat use data from collared animals to refine recommendations derived through the first phase of the project. The second phase of the project will be completed in June 2010.

Implementation of management activities to improve habitat and connectivity is planned following Phase II project completion. These activities will be facilitated by TNC and AGFD's Landowner Incentive Program and may provide volunteer opportunities. Management activities will be on-going based on management needs and landowner participation.

Products from Research

- Conservation recommendations to protect key pronghorn habitat
- Management recommendations for pronghorn habitat improvement
- Land-use planning recommendations for local municipalities
- Summary report and mapping to serve as a blueprint for implementing recommendations
- Presentation for landowners and ranchers on pronghorn habitat use on their lands and opportunities to partner in conservation programs
- GIS database
- Master of Science for student intern
- Management actions implemented with landowners: fence modifications, water improvements and juniper reduction/ grassland restoration treatments