PRONGHORN MANAGEMENT GUIDELINES

Procedure 1: To determine annual fawn:doe and buck:doe ratios

A. Field Operations personnel will conduct surveys in units having pronghorn populations. Aerial or ground surveys will be conducted annually. Pronghorn classification surveys will be conducted between June l and September 15 each year. Pronghorn should be surveyed with fixed-wing aircraft. If surveyed aerially, ground surveys will be abandoned. Survey data obtained from different methods should be recorded separately, but combined when calculating ratios and confidence intervals.

B. Surveys should be conducted using a standard grid flight plan and simultaneous double-count methodologies. Units should be surveyed annually. In cases where a unit cannot be completely surveyed, each unit will contain at least 3 survey-monitoring blocks that can be surveyed in approximately 30 minutes. These blocks should be placed in areas that are mostly accessible to the hunting public. If a unit contains more than 1 major vegetation association, monitoring blocks should represent all major associations, unless surveying them is infeasible or the area is unoccupied.

C. Pronghorn surveys should be conducted annually within units that routinely achieve ±5% confidence limits on fawn:doe ratios. In those units where ±10% confidence limits on fawn:doe ratios are not achieved 75% of the time, aerial surveys will be pooled with similar units.

D. Each day's survey data will be recorded completely. The number of miles and hours traveled should be recorded. Notes should be taken on abnormal conditions of animals observed, condition of key forage plants, availability and quality of water, evidence of predators, predation, and other mortality. Survey flights should be recorded on a GPS unit. The observer should record the survey route and all pronghorn observations.

E. Survey sample objectives are to obtain fawn:doe ratios of ±5 at the 90% confidence level. Use available computer programs to calculate confidence intervals daily (or more frequently when possible). When confidence intervals are achieved, survey efforts should cease. If confidence intervals are not achieved, data should be pooled with adjacent, similar units. These units will be predetermined and identified in consultation between Regional Game Specialists, Wildlife Managers, and the Game Branch.

Procedure 2: To collect data on the age classes and condition of harvested pronghorn

A. When the need for biological data is justified, hunt check stations should be established to sample selected populations. Station locations will be determined by the Regional Game Specialist and the Big Game Supervisor. Station operation will be the responsibility of the Regional Game Specialist.

B. Age data may be collected on pronghorn checked in the field and at check stations. Initial age determination will be according to the "Wildlife Management Techniques Manual" or "Age and sex criteria for Arizona game species." Weights, horn measurements, and body condition data may be collected if adequate sample sizes can be reached. Data from each animal examined should be recorded on a multiple species check station card or on an electronic copy of a field check form.

C. Hunt questionnaires will be sent to pronghorn hunt permittees within two weeks of the last day of their season. The questionnaire program will be designed to obtain statistically sound hunt success data for all hunt units. The hunt results will be distributed to Field Operations within 60 days after the last day of the hunt. Further data analysis may be done by Game Branch and Regional personnel.

Procedure 3: To use survey and hunt data to formulate annual hunt recommendations designed to harvest a prescribed number of pronghorn in each hunt unit

A. Wildlife Managers will summarize annual survey data by hunt unit into number of herds observed, number of pronghorn observed, buck:doe ratio, and fawn:doe ratios as outlined in the Pronghorn Management Summary Form.

B. Survey data will be forwarded to the Regional Game Specialist within 2 weeks after surveys in a unit are completed. Data can be submitted as attachments to e-mail. It will be the responsibility of the Game Specialist, in conjunction with the respective Wildlife Manager, to analyze survey and hunt data and to:

1. Determine if a huntable pronghorn population exists in each hunt unit.

2. Make recommendations for hunts and permit numbers to harvest a prescribed number of animals. The hunt recommendation may be altered to reflect unhuntable portions of the pronghorn population (e.g., private land closed to public entry), but should document the percentage of the huntable area made unavailable due to such land closures.

C. Hunt Guidelines

1. All pronghorn antelope permits will be for "buck only."

2. Pronghorn antelope hunts may be stratified. Fourteen-day archery seasons will begin on Friday of week 34. If an archery season must be stratified, the second 14-day season will begin on Friday of week 36. If firearm seasons are stratified, there will be a six-day muzzleloader season beginning on Friday of week 36 and a six-day general season beginning on Friday of week 37. If the firearm season is not stratified, a ten-day season will begin on Friday of week 36. To the extent possible, harvest will be allocated to meet first-choice applicant demand among season types.

The Department's Pronghorn Antelope Management Goal is to maintain pronghorn antelope populations at levels that provide diverse recreational opportunities. Management criteria are:

A. Permits should be adjusted according to the following table. Buck:doe ratios should receive greater emphasis than fawn:doe ratios when determining permit levels.

Permits should	Decrease	Stay the Same	Increase
Fawns:100 Does	Below 30	30 to 40	Above 40
Bucks:100 Does	Below 25	25 to 30	Above 30

Procedure 4. To index pronghorn population levels and estimate the size of particular populations

A. Pronghorn population estimates will be derived using simultaneous double-count procedures during routine summer surveys. Summer surveys should primarily be used for estimating ratio data; a minimum population estimate may be derived from the survey. Population models may be used to derive estimates and trend using ratio data.

Winter aerial pronghorn surveys can be used to confirm population estimates. Because they are not routinely needed, the Game Branch Chief and the Regional Supervisor should approve them prior to scheduling. Drought and other data should be evaluated by the Game Branch, Research Branch, and Regional Game Specialists to determine annual variations in pronghorn mortality rates. Typically, a winter survey should not be needed more frequently than once every 5 years and implemented only when specific population size is of concern.

Procedure 5: To determine the need for predator control to increase the proportion of fawns in the population

A. Predator control for the benefit of pronghorn populations may be considered in hunt units where the recruitment rate is less than 20 fawns per l00 does for two consecutive years. An assessment of grazing influences on fawn survival should be made before predator control is recommended. Written landowner permission is needed for private or leased land before planning can proceed. Site specific planning must be done in accordance with the Commission's Predation Management Policy (DOM A2.31).

B. Field Operations personnel will submit their predator control recommendations to Game Branch by November 15 of the year preceding the year for which the initial control is planned. The Game Branch will evaluate recommendations and set priorities on the basis of need, control methods to be used, and funds available. Approved recommendations will be forwarded to the USDA, Wildlife Services, for an action program. Predator control should be conducted for 3 consecutive years.

C. The Regional Game Specialist, in conjunction with the Predator-Furbearer Biologist, will document all data pertaining to recommendations for predator control and for predators removed, both before and after control. These personnel will also be responsible for preparing the environmental compliance documentation required for predator control activities.

Procedure 6: To identify land-use problem areas for pronghorn management

A. When pronghorn depredation of forage occurs, Wildlife Managers will attempt to alleviate the problem with methods at their disposal (e.g., harassment, Stewardship agreements). If not successful, any means not conflicting with Department policy may be used. Transplants and special hunts will be considered as a method to alleviate depredation conflicts.

1. Population management hunts will be used to alleviate depredation problems in areas where standard hunts, harassment, or stewardship agreements fail to solve conflicts.
2. Capture and translocation of pronghorn herds may occur to alleviate depredation problems.

B. Habitat improvement and acquisition is a management objective. Field Operations personnel will identify and recommend strategies for important parcels. The Game Branch will take the necessary steps to initiate land acquisitions or coordinate with other Branches and Divisions to finalize recommendations.

C. When livestock management is a limiting factor on pronghorn populations, the local office of the responsible land management agency will be approached by Regional personnel in an attempt to alleviate the situation. If the problem persists, a written report with full documentation, including pictures and recommendations for correcting the problem, will be submitted to the Regional Habitat Program Manager for further action. The Habitat Branch will then coordinate solutions to the problems identified with the appropriate supervisory level of the land management agency.

D. Should emergency measures be necessary to ensure short-term survival of a pronghorn population, the Game Branch will be notified immediately in an attempt to coordinate these measures.

Procedure 7: To restock former or depleted pronghorn range

A. Potential pronghorn transplant sites will be determined according to Pronghorn Operational Plan. Transplants will be conducted in accordance with the Game Animal Translocation Procedures (DOM I1.2).

B. A priority ranking will be given to potential release sites for approval by Executive Staff.

C. If pronghorn are not available from Arizona, other states will be contacted by the Game Branch to locate and obtain suitable pronghorn for a release. Arrangements will be made to trap and transport acquired pronghorn to Arizona. All pronghorn will be ear-tagged and information recorded on sex and age before release. Blood samples may be taken to test for diseases.