

TREE SQUIRREL MANAGEMENT GUIDELINES

Procedure 1: To determine annual tree squirrel population trend.

- A. Regional and Game Branch personnel may conduct squirrel surveys to determine population trend or to assess effects of land management agency resource management activities.
 - 1. If surveys are deemed necessary tassel eared squirrels should be surveyed using the Spring Combined Feeding Surveys described by Dodd et al. (1998). These surveys should be conducted during the month of April.
 - 2. Other indices of abundance, such as nest counts, feeding sign surveys, track counts, and hunter success may be used as desired to assess population trend for other Arizona tree squirrel species until such time cost-effective survey techniques for these species (particularly *S. arizonensis* and *S. nayaritensis*) are developed.
 - 3. All survey data will be forwarded to the Regional Game Specialist within two weeks of completion of surveys. The Regional Game Specialist will forward a summary of results to the Small Game Biologist in Game Branch within four weeks of the last survey.

Procedure 2: To collect annual data regarding age, sex, hunt success, and condition of harvested squirrels.

- A. Squirrel check stations and/or foot collection barrels may be operated to assess reproduction, body condition (check stations), and hunter success. If conducted, check stations should be operated the first 3 days of the season.
- B. Hunt questionnaires will be sent to a random sample of general hunting license holders by February 1. Unit data will be summarized by Game Branch and sent to the Game Specialists within 60 days of the initial mailing.

Procedure 3: Assess, protect, and enhance squirrel habitat through coordination with land management agencies and private landowners.

- A. Delineate changes in land areas available to squirrels, or squirrel hunters, due to urban expansion, land use change, and timber practices. Evaluate squirrel habitat with GIS-based overlays to document available habitat. Develop a scoring system for evaluating changes in habitat condition for all squirrel species, and implement on a 3-year cycle.
- B. Coordinate with land management agencies and private landowners to manage squirrel habitats at both the stand and landscape scale. Promote and maintain connectivity of occupied habitats.
 - 1. For tassel-eared squirrels, manage tassel-eared squirrel habitat for the conditions described by Dodd et al. (1998).

2. For Chiricahua fox squirrels and Arizona gray squirrels, manage riparian habitats for tall, interlocking canopies and hardwood tree species diversity (Brown 1995), particularly in habitats 5,000-6,500 ft in elevation.
3. For red squirrels manage subalpine forests (above 7,500 ft elevation) for diversity of older age conifers, with interlocking crowns. Species of fir and spruce should be dominant within stands.

Literature Cited

Brown, D. E. 1984. Arizona's Tree Squirrels. Arizona Game and Fish Department, Phoenix. 114pp.

Dodd, N. L., S. S. Rosenstock, C. R. Miller, and R. E. Schweinsburg. 1998. Tassel-eared squirrel population dynamics in Arizona: index techniques and relationships to habitat condition. Arizona Game and Fish Department Technical Report 27, Phoenix. 49pp.