

## **Population Estimates and Scale of Analysis**

Populations of wildlife are extremely difficult to quantify, and in some cases can vary substantially from year to year. Environmental factors can dramatically influence the recruitment of young and survival of adults. A precise figure on the number of animals is very difficult if not impossible to determine, and would only be valid for a short period of time.

Population trend is most appropriately addressed at a scale above the project level. Many of the selected MIS occur and range far beyond a local scale such as a project analysis. Individuals, family groups, or herds such as elk, annually use areas much larger area than a typical analysis area and population trend must be examined on a much larger scale to be meaningful. For National Forest Management Act implementation, this scale is the Fishlake National Forest. At a site-specific project level, there is a great deal of fluctuation in wide ranging populations. For most species, it would be technically, and practically inappropriate to conduct population trend sampling at the scale of individual projects. Individual projects contribute to the total population trend but do not usually make up the entire population and trend, unless they are a locally endemic species. For this reason, it is not appropriate to determine population trend at a local level.

Population trend for threatened, endangered and candidate species is addressed using recovery plans or conservation assessments, strategies and agreements. These broad scale documents are used because they occur and range far beyond the scale of the forest.

Because population trend is best addressed at a much larger scale than the project level, data from organizations such as the Nature Conservancy (NatureServe Explorer), the Division of Wildlife Resources, and the United States Geological Survey, Breeding Bird Survey (BBS) were used in the discussions on trend. For far ranging species such as elk that can range across multiple forest boundaries and land ownerships, broad scale data were obtained from the Division of Wildlife Resources, Southern Region.