

LARGE RAPTOR ELECTROCUTION AND POWERPOLE UTILIZATION: A STUDY IN SIX WESTERN STATES

To determine the factors influencing the majority of raptor electrocutions in the West, data from 24 five-mile sections of powerline were collected in six states, Idaho, Oregon, Nevada, Utah, New Mexico and Wyoming. Soil and vegetation types, topographic relief, weather patterns, and prey base were all considered to isolate the ecological types where the problem most often occurred. Human disturbance both active and passive was considered, and an attempt was made to eliminate bias due to shooting. Raptor age was determined, when possible, to assess the impacts upon breeding and subadult populations. Configuration and power output of the poles were considered to determine the most hazardous constructions. These data are necessary to allow power companies and state and federal management agencies to determine modification needs and the most practical methods for eliminating raptor electrocutions.

It is concluded that subadult age classes are more affected than adults because of inexperience in flight and different hunting methods. Most eagles were electrocuted in winter when "still" hunting was most used and when precipitation in the form of snow caused greater feather wetting. More eagles were electrocuted in areas where cottontail rabbits were present than where only jackrabbits occurred, and this difference is related to hunting methods. While pole configuration, related to power output, is the most significant factor, most newly constructed powerlines are modified to reduce or eliminate this problem.

Benson, Patrick C. 1981. Large raptor electrocution and powerpole utilization: a study in six western states. Ph.D. dissertation, Brigham Young University, Provo, Utah 84602.