Aerial helicopter surveys of 16,000 km$^2$ of cliff-nesting raptor habitat over a six-year period show trends in occupancy, abundance, and distribution of Golden Eagle *Aquila chrysaetos*, Rough-legged Hawk *Buteo lagopus*, Gyrfalcon *Falco rusticolus*, Peregrine Falcon *Falco peregrinus*, and Common Raven *Corvus corax* nesting on the Seward Peninsula. Of 635 locations, bird occupancy ranged from 36–48% of surveyed sites yielding an average density of 0.2 occupied sites/km$^2$. Gyrfalcons demonstrated stability, averaging 41.6 locations/yr, but showed high variation in site selection when 70% of 155 occupied locations were used only twice (or less) in 6 years. Comparatively, one location was occupied for all six survey years. Occupancy by Golden Eagle (n = 24–46), Peregrine Falcon (n = 6–10), and Common Raven (n = 27–52) varied annually through selection of alternate nest sites in successive years. Rough-legged Hawk numbers were highly variable, ranging from 57–118 occupied locations. Higher occupancy rates across cumulative years are suggested by observations of 150 unoccupied sticknests/yr. Cumulative loss of nearly 60 nest structures/yr through winter wind-scour or snow loads is characteristic of the area and some cliffs retained nest scars of bleached rock indicating no recent rebuilding of structures. Instability or loss of nest structures in response to erosive pressures may contribute to high variability in nest site selection associated with cliff-nesting raptors in this portion of western Alaska.