

LYNX AND DEVELOPMENT ON THE KENAI PENINSULA, ALASKA^{TWS}

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The influence of development on lynx (*Lynx canadensis*) is likely to become a controversial management issue for certain populations in the future. Because there is little information on this subject, we present findings on the responses of lynx to humans, vehicles, roads, residences, domestic animals, and industrial sites on and adjacent to the Kenai National Wildlife Refuge, Kenai Peninsula, in south-central Alaska. Causes of mortality and recruitment of lynx using developed areas are also discussed. Information was extracted from a 16+year (1983-1998) database of 141 live-captured lynx that were fitted with radio collars and from observations of uncollared lynx. Some monitored lynx used commercial oil gas production and public recreational areas on the refuge while others used residential areas off-refuge.

Lynx displayed little apparent fear of humans and were regularly observed near oil and gas facilities, along roads, and in the off-refuge residential areas. Human-related mortality (88%) exceeded natural mortality (12%) among 26 selected radio-collared lynx that used developed areas. Although there is undoubtedly some threshold of development beyond which the habitat becomes unsuitable for lynx, our observations suggest that lynx can adapt to, or at least tolerate, some level of development as long as the surrounding habitat provides sufficient protective cover with abundant natural prey. However, because most monitored lynx using developed areas succumbed to some form of human-related mortality, developed areas may function as lynx population sinks before this threshold level of habitat suitability is reached. Public outreach programs may help reduce this mortality on lynx.