

3.7.2.4 Management Indicator Species (p. 3-84)

MIS that potentially occur within the project area are shown in Table 3.7-2 of which only the mountain goat is addressed in detail due to the new information that has become available since the 2004 FSEIS (i.e., the recent population decline of this species in the area). Impacts on the other MIS would be minor and would be the same as described in the 2004 FSEIS (see pages 4-63 through 4-77).

Mountain goats (*Oreamnos americanus*) are found throughout southeast Alaska, primarily on rocky terrain above the tree line during summer. In the project area, a small population occurs to the north on Lions Head Mountain, where they spend the majority of the summer months. During winter, they move into forested areas at lower elevation as snow depth increases. The availability and distribution of high-quality winter habitat (i.e., closed-canopy forest with understory forage) is a limiting factor for mountain goats in southeast Alaska (Forest Service 1997b).

Mountain goat monitoring in the Lions Head Mountain area has been conducted intermittently since the late 1980s, in part to help determine potential future mine impacts on this population (Robus and Carney 1995). In conjunction with population monitoring in the Kakuhan Range (east of Lynn Canal), annual monitoring has occurred consistently in the Kensington area since 2005. Population densities declined substantially in most survey areas in the Kakuhan Range since 2005, with an approximately 10 percent decline per year occurring in the Kensington Mine area (White 2019, 2020). Monitoring results indicate the greatest decline occurred between 2006 and 2009; between 2009 and 2019, the population has exhibited relative stability with a slight decline. Winter snowfall can have a negative effect on goat survival (White et al. 2011) and the decline in this population coincided with a succession of severe winters that occurred between 2006 and 2014 (Figures 1, 2; White 2019, 2020). Generally, greater declines have been observed in the Kensington area than in surrounding affected areas, suggesting factors beyond weather conditions (e.g., mine operations, predation, disease, etc.) may be contributing to the decline.

Recent studies have indicated that goat avoidance of winter habitats near the Kensington Mine may have reduced the functional winter ranges' carrying capacity by up to 42 percent in this area (White and Gregovich 2017). As a result, mine-related disturbance may have indirectly exacerbated the effects of severe winters in the local mountain goat population and contributed to the observed population decline (White 2019). While survey results from 2019 suggest the population may have increased compared to levels recorded in 2018, preliminary results from aerial surveys conducted in 2020 indicate a density similar to 2014–2018 (Kensington survey area, minimum count = 16 adults, 0 kids; K. S. White, 2020, unpublished data).

Sec. 3.7.3.2 (p. 3-90)

Mountain Goats

The project would not result in population-level impacts to wildlife species, with the possible exception of the mountain goat. As discussed above (see Section 3.7.2.4), mountain goat populations have declined near the Kensington Mine since 2005, including adjacent areas having no mine influence (White 2019, 2020). This decline coincided with a succession of severe winters that occurred during this time (primarily between 2006 and 2014), which contributed to the decline. Generally, greater declines have been observed in the Kensington area than in surrounding affected areas, suggesting factors beyond weather conditions (e.g., mine operations, predation, disease, etc.) may be contributing to the decline. White and Gregovich (2017) found that mountain goats avoided winter range habitats within 1.8 km of the Kensington Mine and that the mine has subsequently reduced the functional winter range carrying capacity of the area by 42 percent. As a result, mine-related disturbance may have indirectly exacerbated the effects of severe winters in the local mountain goat population and contributed to the observed population decline. Therefore, continuing operation of the mine for an additional 10 years beyond the currently permitted lifespan could result in a continuing decline in local mountain goat populations in the area. While survey results from 2019 suggest the population may have increased compared to levels recorded in 2018, preliminary results from aerial surveys conducted in 2020 indicate a density similar to 2014–2018 (Kensington survey area, minimum count = 16 adults, 0 kids; K. S. White, 2020, unpublished data). Coeur Alaska is required to minimize disturbances to mountain goats per minimization measures (e.g., 1,500-foot buffer between helicopters and goats, and avoiding important overwintering and potential kidding habitats during those critical life stages) outlined by USDA Forest Service Standards and Guidelines (Forest Service, 2016).

Additional References Cited

- Robus, M. H. and B. L. Carney. 1995. Effects of Kensington mine development on black bears and mountain goats. Wildlife baseline studies and monitoring plan. Final report. Alaska Department of Fish and Game, Douglas, AK.
- White, K. S., G. W. Pendleton and J. N. Waite. 2016. Development of an aerial survey population estimation technique for mountain goats in Alaska. Final Wildlife Research Report, Alaska Department of Fish and Game, Division of Wildlife Conservation, Juneau, AK.

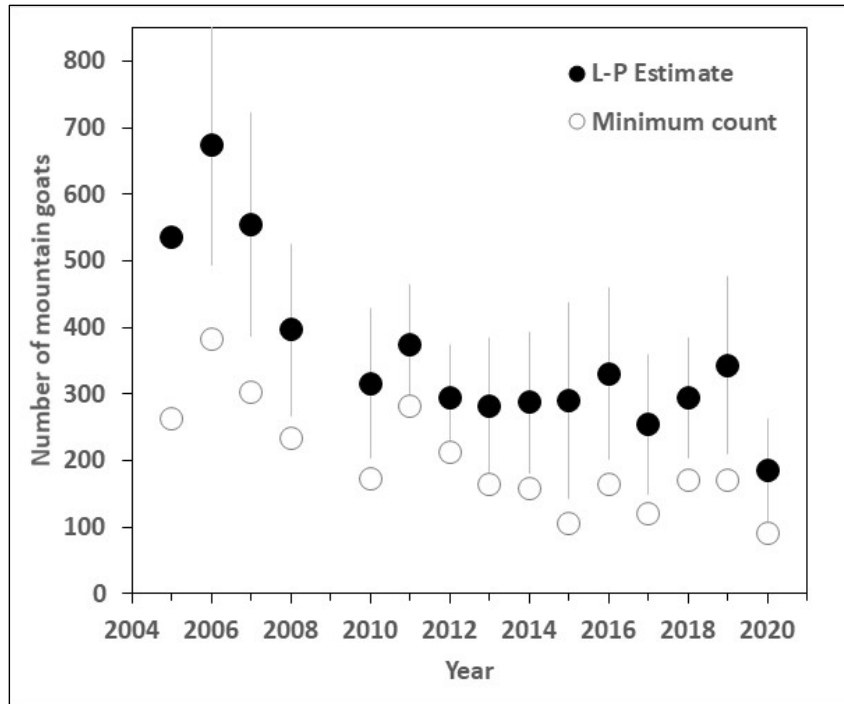


Figure 1.—Number of mountain goats in the Kakuhan Range, Alaska, 2005–2020. Aerial survey mark-resight methods (L-P [Lincoln-Petersen] Estimate) were used to estimate the number of mountain goats and 95% confidence intervals (closed circles; White et al. 2016). The minimum number of animals seen during surveys is also reported (open circles).

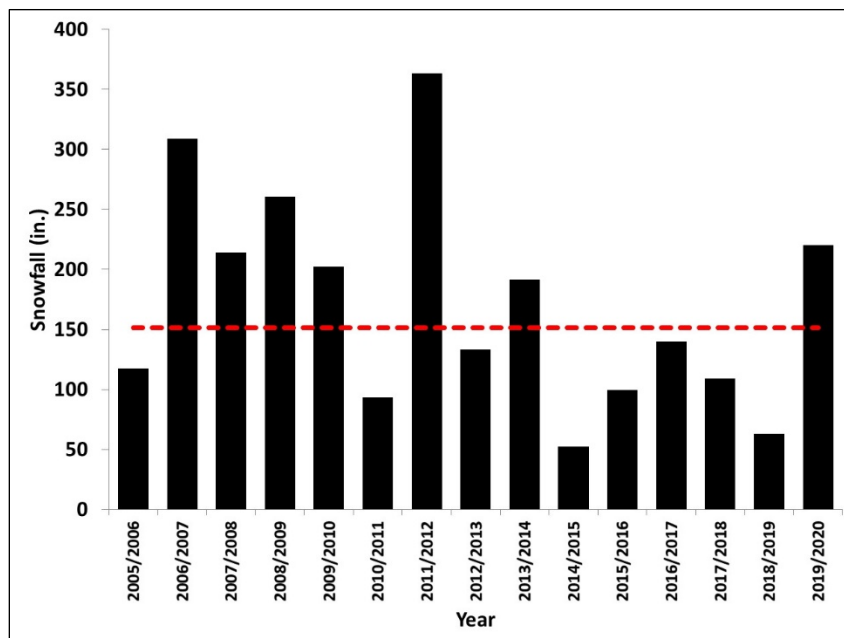


Figure 2.—Total annual snowfall recorded at the Haines #2 Cooperative Observer Program (COOP) National Weather Service (NWS) Station in Haines, AK 2005–2020. The red dashed line designates the long-term average (Haines Airport [1950–1955, 1973–1998] and Haines #2 COOP NWS Station [1999–2020]).