

2009 WMU 212 Elk

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Local landowner reports suggest that elk began occupying the southwest portion of WMU 212 in the 1960s. Initially, their numbers were quite low and the population seemed relatively stable. In 1974, the WMU was declared an archery-only hunting zone due to safety concerns expressed by some local residents and landowners. A number of landowners petitioned the government to reduce elk numbers in the mid 1980s. Two rifle hunts were conducted in 1986 and 1988 that were considered successful, but were met with some opposition from the anti-hunting community. An additional rifle hunt was conducted in 1996. Again the hunt was considered successful, but there was considerable opposition expressed by the public.

In an attempt to respond to public concerns, a large, permanent live trap was constructed on the Cross Conservation Area (CCA). This live trap achieved considerable success during the first five years of use. A total of 422 elk (mainly cows and calves) were captured and relocated to other suitable elk range along Alberta's East Slopes and away from agricultural areas to avoid landowner conflicts. When the local elk herd was reduced near the CCA, a new trap was constructed further south in the WMU to try to capture additional elk from a separate and growing elk herd. This new trap has not been very successful with only 15 elk relocated in the past five years (2003 to present). The local elk population has steadily increased concurrently with the poor capture success and low hunting harvests. Landowner complaints have also risen as crop depredation, fence damage and concern over vehicle collisions mount.

The WMU 212 elk survey has not been flown on a regular basis, mainly due to poor surveying conditions and lack of funding in some years. In 2007 a survey schedule was established to allow a survey to occur if weather conditions became suitable. These conditions were met in winter 2009 and this survey was conducted to better understand

population numbers to inform the decision process for determining transplant goals, hunter allocations, and options for population control. Future surveys will provide a mechanism to determine the success of management efforts.

Study Area

Elk range in WMU 212 is limited to an area southwest of the City of Calgary (Fig. 5.3.1). Occasional movements of elk from adjacent WMUs into the area, or movements of elk into normally unoccupied range may occur, but the majority of wintering elk occur within an area south of Highway 22X and west of secondary Highway 552 to the WMU boundary. This area consists of considerable tree cover interspersed amongst farmland, rangeland, acreages and subdivision developments. Only those areas offering suitable cover within this landscape were surveyed. As the area is populated and there are many landowners with horses that can be disturbed by low-level aircraft, it was necessary to avoid certain areas while trying to maximize area coverage. Elk are commonly in large groups during the winter months, and thus readily observed. There are smaller groups of bulls that often split off from the main herds and move into more remote and isolated locations. We assumed that most of the smaller bull groups would be located during this survey if all suitable forested cover was surveyed. However, we may have missed smaller groups or single individuals and this may bias our estimates of bull:cow ratios.

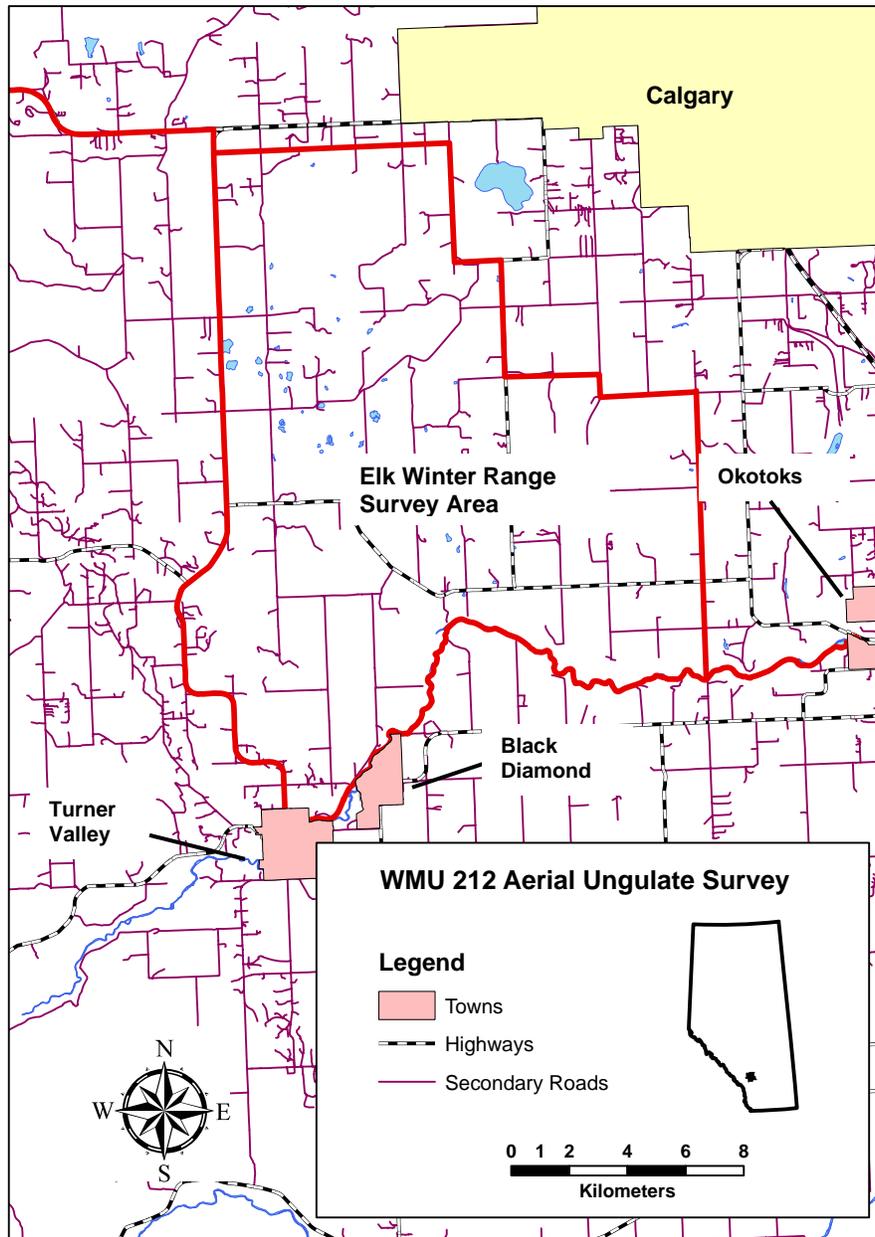


Figure 5.3.1. Location of the WMU 212 Elk Survey Area in Alberta.

Survey Methods

The WMU 212 Elk survey was conducted on February 26, 2009 using a Bell 206 helicopter. The survey proceeded to the west, south, and east from the meeting point at Belvedere House on the CCA. Transects were flown in an appropriate orientation to ensure complete coverage of the area. When a large group of elk was observed, a total count was estimated by breaking the herd into smaller sub-groups by terrain, landscape changes, or natural divisions within the herd. These smaller groups were tallied as the pilot circled the group at an altitude that avoided spooking the elk. One person acted as a navigator to ensure that all the suitable elk range was covered and to provide direction to the pilot as the survey proceeded. The other crew members took photos, tallied the larger groups of elk, and took GPS locations for each of the groups encountered. When possible, elk were classified into sub groups: cows, calves and bulls. Many of the larger groups were tallied as unclassified. Sex ratios and age classes may be inaccurate if antlers were dropped by some elk prior to the survey. We did not correct for sightability; therefore, overall counts should be considered as minimum estimates and direct comparisons of survey results among years may be difficult.

The survey crew also counted the local moose population during the survey. The number of animals observed is not considered to be a complete count of moose within the WMU, but we assume it to represent a high proportion of the population as the same land base that supports the elk also supports most of the moose that are known to occur in the WMU.

Results

The survey day was bright and sunny which created some difficulty with shadows in forested areas. Twenty two separate elk observations were recorded ranging from a single cow to a large group of 187 individuals. Interestingly, we only observed four elk on the ridge that runs to the northwest from the town of Black Diamond towards Millarville. In most winters, this ridge is usually occupied by one or more large groups of elk. This ridge has been the location for a number of complaints regarding elk depredations.

A total of 914 elk were observed during the 2009 survey, suggesting a 234% increase in the total count of elk in this area compared to the 2002 survey when 391 elk were

counted. There were two large groups away from the CCA consisting of 161 and 114 elk, and a number of other moderate groups, small groups, or single elk. We observed elk in smaller groups than commonly found in the 2008 with these groups more widely dispersed through the survey area.

Elk population numbers on the CCA property were of interest because the elk trap has not been active for some time and hunting is not permitted on the property. There were 209 elk observed in five separate groups. One of the groups was quite large (187 elk). As these elk were located in the trees, we were not able to classify young bulls, cows or calves, although we assume the majority were cows and calves. The other four small groups were made up of cows and calves with only a single spike bull elk recorded. During the January 2008 survey we recorded 137 elk within the CCA. It appears that more elk were wintering in this area in February 2009. There were 705 elk observed outside of the CCA.

We recorded 66 bulls during the survey, although we may have missed some small bull groups. There undoubtedly were bulls in the large unclassified groups that were encountered during the survey.

The total moose count was 73 animals, which is similar to the 2008 count of 80 animals.