2008 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 in 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 over the past five years (2003 to present). As a consequence of the poor capture success, the local elk population has steadily increased. 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. Over the past year, a survey schedule has been established that will allow annual surveys to occur if weather conditions are suitable. The 2008 survey was intended to verify the elk population in

WMU 212 for the winter of 2007/08 and will be used by ASRD to determine transplant goals, hunter allocations, and management 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 (Figure 6). Occasional movements of elk into the area from adjacent WMUs, 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. Because the area is populated and there are many landowners with horses that can be disturbed by low-flying aircraft, it was necessary to avoid certain areas while trying to optimize survey coverage. Most elk are in large groups during the winter months, and thus readily observed. There are smaller groups of bulls that often split 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.

Survey methods

The WMU 212 elk survey was conducted on January 22, 2008 using a Bell 206 helicopter. The survey proceeded to the west, south and east from the meeting point at Belvedere House in 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 of the crew members also took digital photographs of the larger groups for subsequent counting. 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. Elk were classified into sub groups: cows, calves and bulls. Bull groups were further classified into spike bulls, branch antlered bulls (larger than spike,

< 5 point), and trophy bulls (≥ 5 point). 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 are minimum estimates.

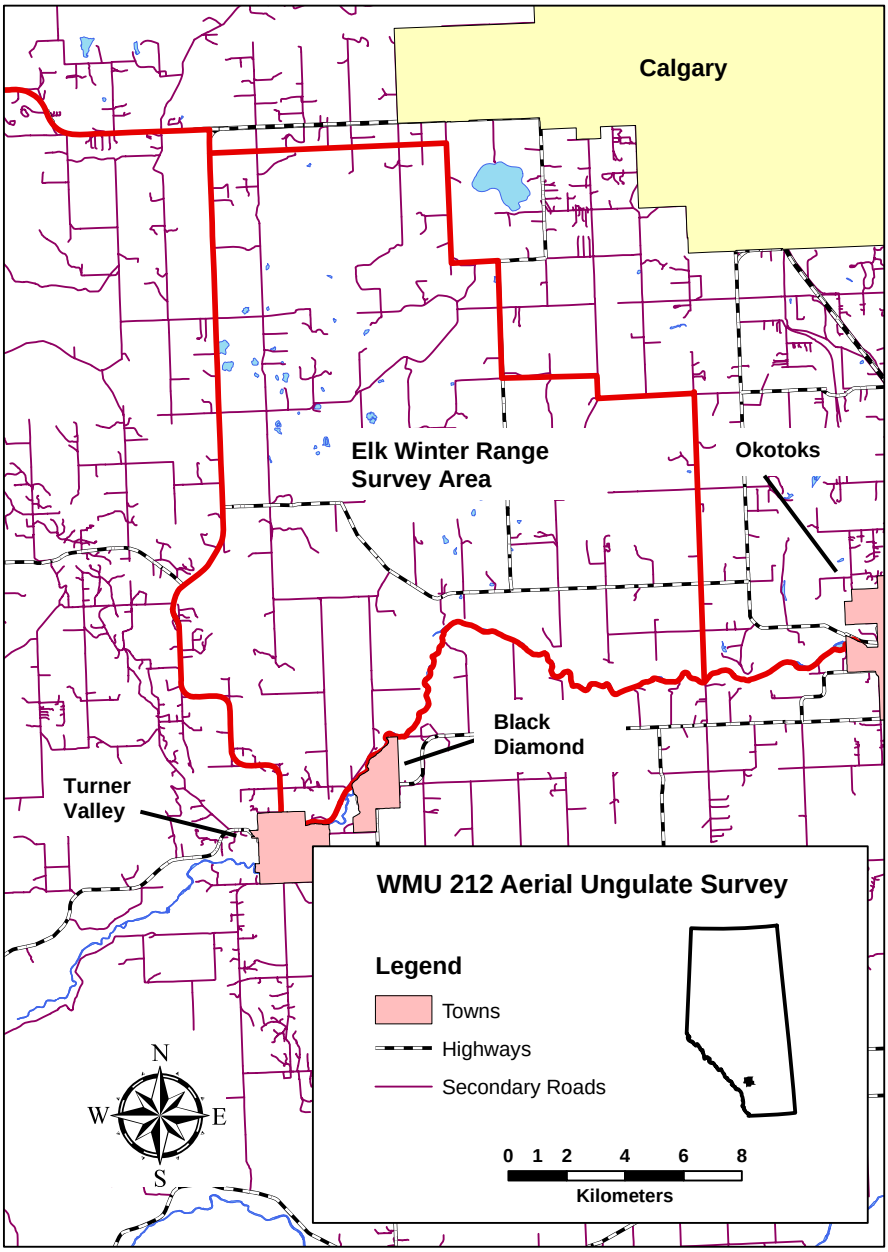

Figure 6. Location of the Wildlife Management Unit 212 elk survey area in Alberta.

The survey crew also counted the local moose population during the survey. The number of animals observed was 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

At the start of the survey the ground was almost completely snow covered and the elk were readily observed against the white background. Winds remained quite light during the entire survey with maximum winds of about 10 - 15 km/h.

Eleven elk groups were encountered ranging from a single bull to a large group of 440 individuals. No elk were observed 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 groups of elk. This ridge has been the location for a number of complaints regarding elk depredations.

The total number of elk counted during the survey was 913. There were 131 elk observed in five separate groups on the CCA, which is unavailable for hunting. Of this total, there were 29 bulls (7 spike, 9 branch, and 13 trophy), 24 calves and 78 cows. As a number of elk were located in tree covered areas, it was difficult to distinguish calves from cows. Calf numbers, therefore, are likely underrepresented. There were 782 elk observed outside of the CCA, with three large groups consisting of 149, 167, and 440 elk. Due to the behaviour of bull elk during the winter, it is possible that some small bull groups were missed during this survey. Also, there were undoubtedly some bulls in the large unclassified group of 440 elk.

The total moose count was 80 animals.