

2011 Wildlife Management Unit 212 elk



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The elk population in WMU 212 has been increasing over the past two decades as determined by aerial surveys, incidental reports, field counts, and anecdotal landowner observations. This WMU was restricted to archery hunting; however, rifle hunts have been introduced recently in an attempt to reduce the elk population to comply with the social carrying capacity of local landowners. An aerial survey of elk in WMU 212 was conducted in January 1996, just prior to an antlerless elk rifle quota hunt. At 560 elk, counts exceeded desired levels, thus additional measures were taken to reduce the elk population through live trapping and relocation, which was deemed the preferred method for population management by the local community. In

January 2002 another aerial survey was implemented, following several winters of successful elk relocations, which revealed a reduction in the elk count to 391. While the trapping program was successful in the first five years (422 elk relocated), more recently trapping success had been poor and consequently the elk population had again increased.

A third aerial survey was conducted in January 2008, following a second antlerless elk rifle quota hunt held in December 2007. The elk count then totaled 913. In December 2008 a primitive weapons antlerless elk hunt was held and another aerial survey was completed in February 2009. The number of elk observed totaled 914. This represented a 234% increase in the elk count since the 2002 survey. Following the 2009 survey, 169 elk were captured and relocated to an area west of Rocky Mountain House. This successful trapping effort together with an ongoing annual primitive weapon hunt have reduced the population; however, it may be necessary to continue reducing elk numbers in this WMU through a combination of trapping, quota hunts, special license draws, and other methods in order to meet the social carrying capacity.

The results of the 2011 WMU 212 aerial survey will be used by ASRD to determine hunter permit allocations, translocation goals and other potential management options for elk population control.

Study area

Elk range in WMU 212 is limited to an area southwest of the City of Calgary (Figure 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 are located within an area south of Highway 22X and west of secondary Highway 552 towards the WMU western boundary. This area consists of considerable tree cover interspersed amongst farmland, rangeland, acreages and subdivision developments. All areas offering suitable cover were surveyed, however the area is populated with many acreages and landowners that have horses, and it was necessary to avoid these areas. Most of the elk tend to be in large groups during the winter months, and are thus readily observed. There are smaller groups of bulls that often split off from the main herds and disperse into more isolated locations. However, it is expected that most of these smaller groups of bull were observed during this survey as all suitable forested cover was surveyed.

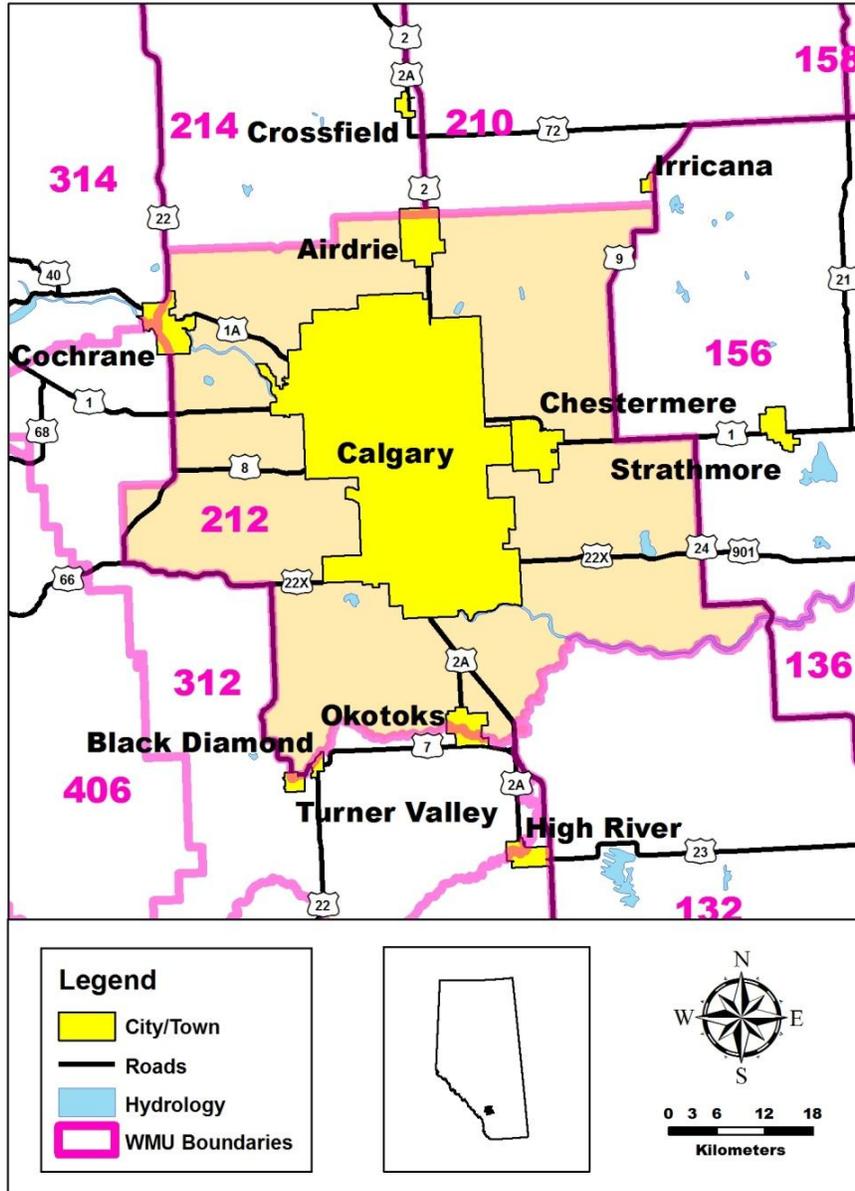


Figure 1. Location of Wildlife Management Unit 212 in Alberta.

Survey methods

The aerial survey was conducted on 3 February 2011 using a Bell 206B helicopter. The crew was based out of the Ann and Sandy Cross Conservation Area (ASCCA) with refueling taking place at the Elbow Ranger Station. The survey proceeded to the west, south, and east of the base on the ASCCA, with transects flown in an appropriate orientation to ensure complete coverage of the area. The crew was comprised of one navigator in the front seat of the helicopter, who ensured that all suitable elk range was covered, and two observers in the back seat on each side of the helicopter. The observers took photos, tallied large groups of elk and took GPS locations for each of the groups encountered. When a large group of elk was observed, a total count was estimated by breaking the group into smaller sub-groups by terrain, landscape changes, or natural divisions within the herd. These smaller groups were then tallied as the pilot circled at an elevation high enough to avoid disturbing the elk. Elk were classified into cows, calves and bulls where possible. The bulls were further classified as small, medium or large, based on antler size (ASRD 2010). Some of the larger groups were tallied as unclassified if they were not clearly visible or were too large to accurately assess.

Survey conditions were very good with overcast but bright skies, which provided excellent visibility through the forested areas. Temperatures ranged from +4 to +6 degrees Celsius. Winds were low to moderate during the survey with the highest wind speeds estimated at about 15 km/h. We did not correct for sightability; therefore, overall counts should be considered as minimum population estimates and direct comparisons of survey results among years may be difficult.

Results

Elk observations were recorded at 20 sites, during the 2011 survey, ranging from a single cow to a large group of 179 individuals. The elk were generally in smaller groups than observed during the 2008 survey, and were more widely dispersed throughout the survey area. The total number of elk observed during the 2011 survey was 710 (Table 1). This represents an approximate 182% increase in the elk count since the 2002 survey (391 elk counted), but a 22% reduction in the count when compared with the 2009 survey.

Table 1. Total elk population counts in Wildlife Management Unit 212 from 1996 - 2011.

Year	Number of elk				Total
	Males	Females	Juveniles	Unclassified	
2011	36	413	60	201	710
2009	66	17	2	829	914
2008	37	355	81	440	913
2002	32	--	--	359	391
1996	94	--	--	466	560

"--" All antlerless elk were recorded as unclassified.

Literature Cited

Alberta Sustainable Resource Development (ASRD). 2010. Aerial ungulate survey protocol manual. Produced by ASRD, Fish and Wildlife Division, Edmonton, Alberta, Canada. 65 pp.