

## 2008 WMU 200 Mule Deer and White-tailed Deer

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### **Suggested citation:**

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Wildlife Management Unit 200 was identified as a priority survey area in 2008 as part of the ASRD Chronic Wasting Disease (CWD) Program. Accurate deer population estimates in this unit were required to identify areas at high risk for CWD presence and to guide management strategies.

### ***Study area***

Wildlife Management Unit is located within the Prairies Management Area. It is approximately 2,730 square kilometers in size and is located west of the Saskatchewan border, south of Highway 13, north of Highway 12 and east of Highway 41 (Figure 13). The unit is primarily agricultural, crop and range land, with most of the ungulate habitat in the northwest and central portions of the unit.

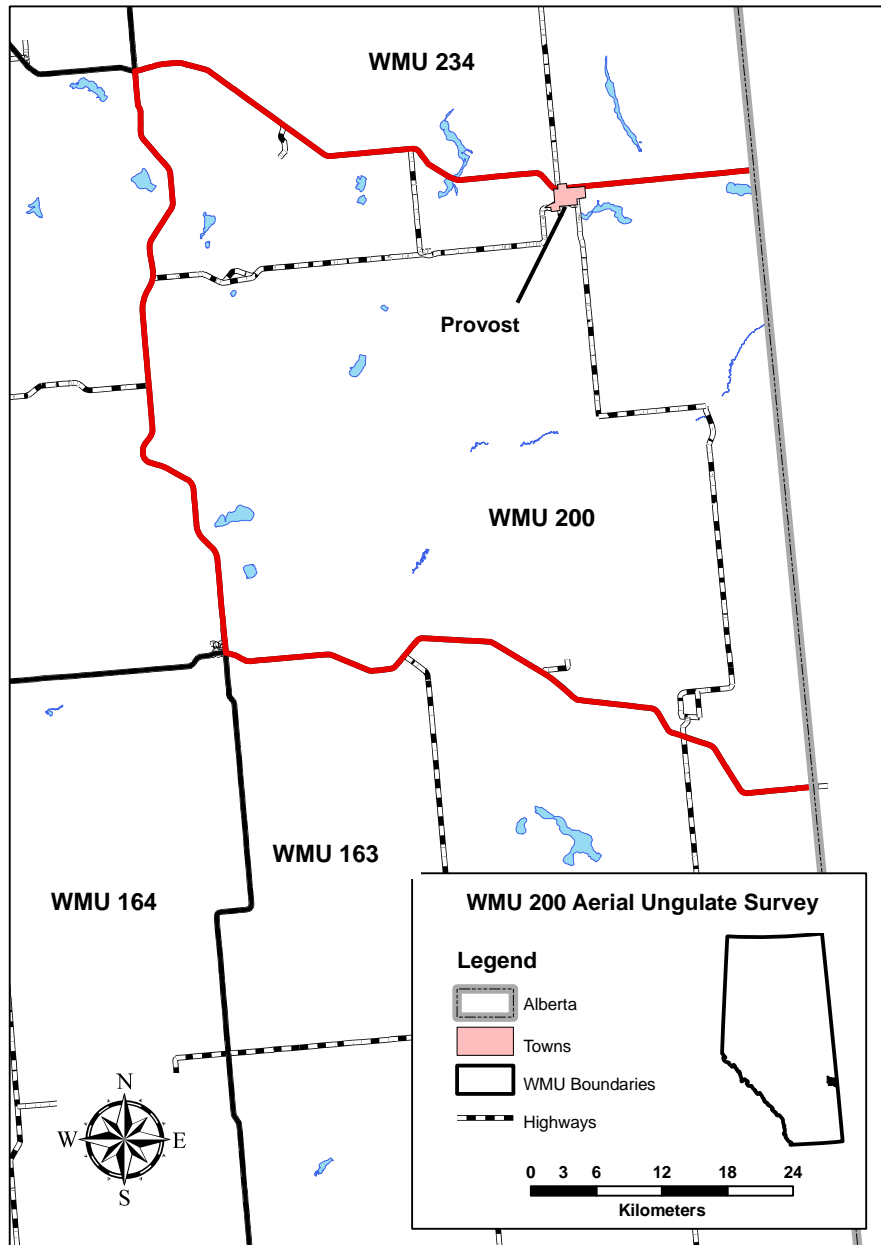


Figure 13. Location of the Wildlife Management Unit 200 aerial ungulate survey in Alberta.

### *Survey methods*

To estimate density across the WMU, I divided the unit into 91 3 min latitude by 5 min longitude subunits, and categorized these into one of three strata based on deer habitat: high, medium and low. I then selected five blocks for each stratum using the same blocks as those used in the survey flown in 1999, for a total of 15 survey blocks. Each of these blocks was surveyed at 100% coverage. Because these blocks were not chosen at random, this survey was not considered to be a true stratified random block design, and results should therefore be interpreted with caution.

The survey was conducted from February 18-20, 2008. The survey aircraft was a Bell 206 helicopter equipped with bubble windows and an on board GPS unit. The aircraft was flown at a height of approximately 100 m, with an airspeed of 60 - 100 km/h varying by the type and amount of ground cover. The crew consisted of pilot, navigator and two observers. All sightings of ungulates and incidental observations of other wildlife species were recorded on survey data forms and plotted on a laptop computer using a hand-held GPS unit.

Most males had dropped antlers by the survey date, so I did not class individuals by gender or age.

### *Results*

Survey conditions varied from fair to excellent. Snow cover was poor to fair. The temperature was fairly consistent. Winds were mild apart from one gusty day on February 19.

Ungulate sightings included 1,389 white-tailed deer, 789 mule deer, 61 moose, and one pronghorn antelope. Also observed during the flight were 121 coyotes, 36 porcupines, four red fox, one white-tailed jackrabbit, 547 sharp-tailed grouse, 60 gray partridge, two great horned owls, 13 snowshoe hare and two goshawks.

The estimated total deer population was 9,426. This yielded  $5,738 \pm 29.0\%$  white-tailed deer and  $3,688 \pm 28.0\%$  mule deer (Table 12). The density was 2.11/km<sup>2</sup> for white-tailed deer and 1.36/km<sup>2</sup> for mule deer. The total deer density was 3.47/km<sup>2</sup>.

Table 12. Population estimates and herd composition of mule deer and white-tailed deer in Wildlife Management Unit 200 in 2008.

<b>Species</b>	<b>Population Estimate (confidence limits)</b>	<b>Density/km<sup>2</sup></b>
Mule deer	3688 (28.0%)	1.36
White-tailed deer	5738 (29.0%)	2.11