

## **GREATER YELLOWSTONE AREA ELK MOVEMENTS: BRUCELLOSIS RISK AND HUNTER ACCESS**

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We examined elk movement data from across the Greater Yellowstone Area (GYA) from 1976-2006, comparing and contrasting movement patterns within and between herds. Our objectives were to understand how public hunter access related to elk movements and brucellosis risk in different areas of the GYA. We focused on the Madison Valley, Gallatin Valley and east side Paradise Valley. In the Madison Valley, we compared elk movement dynamics between 27 cow elk monitored 1976-1986 (VHF collars) and 43 cow elk monitored 2005-2006 (GPS collars). Over this time period, land ownership changes resulted in reduced hunter access to private lands for cow elk hunting. We found that, compared to the 1976-1986 movements, 2005-2006 elk migrated earlier to wintering ranges, left later to summer ranges, and used private land areas more extensively. During 2005-2006, cow elk were less available to hunters due to use of private land refuges during the hunting season. In the Northern Yellowstone, we compared elk movements from 1984-1987 (VHF collars) with preliminary data from 2007-2008 (GPS collars). Preliminary analysis suggests that elk migrated to and from winter range generally with expectation given weather conditions. Some individuals were more available to public hunters than others (range = 0-100%) based on behavioral and movement patterns. Flight and GPS data from 2007-2008 elk indicate Northern Yellowstone elk spend summertime further south and west in Yellowstone National Park than had previously been thought, and that Northern Yellowstone elk may be coming into contact with Jackson Hole, WY, elk on these ranges.