The Effects Of Special Mule Deer Buck Regulations On Mule Deer Populations And Harvest

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We evaluated the effects of 3 restrictive season types on mule deer population and harvest characteristics in 41 Montana hunting districts (HDs). Using a mixed-effects, before-after-control-impact modeling framework, we analyzed 6 harvest and hunter use response variables, and 4 population response variables. Buck:doe ratios increased by 0.42 bucks:100 does and 0.33 bucks :100 does per year, following changes to a shortened season and limited permits, respectively. We found no significant change in buck:doe ratios in unlimited permit HDs. All restrictive season types resulted in declines in hunter numbers and days. HDs with no restrictions, with limited permits and with unlimited permits also showed a downward annual trend in hunter numbers. In shortened season HDs, a significant loss in hunter

numbers was followed by a slow return of hunters back to those HDs. Limited permit HDs had a statistically greater proportion of bucks with ≥4 points on at least one antler, a lower number of bucks harvested annually, and a smaller total number of ≥4 point bucks harvested than in HDs with no buck restrictions. For those same 3 response variables, unlimited and shortened season HDs were not different than HDs without restrictions. In all three restricted regulation HDs there was an annual increase in the observed spring fawn:adult ratios even though the general trend was for a decreasing fawn:adult ratio of 0.83 fawns:100 adults per year in HDs with no restrictions.