

Supplementary Material

Table S1. Complete results of simulated surveys for white-tailed (WTD) and mule deer in Wildlife Management Unit 234 in east-central Alberta, based on data obtained from aerial surveys conducted in 2008 and 2009. “CI” is the population estimate’s 90% confidence interval, expressed as a percentage of the total number of observed deer; “CV” is the coefficient of variation; and “Acc” is the absolute value of the difference between the population estimate and the true number of deer observed, expressed as a percentage of the true number observed.

Stratification Criteria	Strata Binning	Allocation	White-tailed Deer 2008			White-tailed Deer 2009			Mule Deer 2008			Mule Deer 2009		
			CI	CV	Acc	CI	CV	Acc	CI	CV	Acc	CI	CV	Acc
Historical	20:60:20	Equal	54%	31%	21%	61%	34%	31%	73%	41%	31%	81%	46%	32%
Historical	20:60:20	Proportional	52%	30%	21%	61%	35%	29%	73%	41%	33%	81%	46%	38%
Historical	20:60:20	Optimal	49%	28%	20%	58%	33%	26%	67%	38%	27%	74%	42%	29%
Cover	20:60:20	Equal	43%	24%	22%	53%	30%	27%	60%	34%	34%	72%	41%	36%
Cover	20:60:20	Proportional	45%	25%	25%	56%	32%	31%	70%	40%	37%	80%	45%	44%
Cover	20:60:20	Optimal	41%	23%	21%	48%	27%	27%	57%	32%	34%	67%	38%	35%
Cover	Equal	Equal	44%	25%	17%	52%	29%	24%	69%	39%	30%	77%	44%	33%
Cover	Equal	Optimal	39%	22%	18%	44%	25%	18%	54%	30%	20%	61%	34%	26%
Cover	Jenks	Equal	38%	21%	17%	43%	24%	18%	57%	32%	24%	64%	36%	27%
Cover	Jenks	Proportional	42%	24%	16%	50%	28%	23%	67%	38%	29%	74%	42%	34%
Cover	Jenks	Optimal	44%	25%	19%	41%	23%	17%	52%	29%	23%	53%	30%	26%
Combined RSF	20:60:20	Equal	49%	28%	19%	53%	30%	26%	60%	34%	25%	68%	38%	29%
Combined RSF	20:60:20	Proportional	47%	27%	19%	56%	31%	26%	68%	39%	28%	76%	43%	32%
Combined RSF	20:60:20	Optimal	47%	27%	18%	52%	29%	23%	61%	35%	27%	67%	38%	31%
Combined RSF	Equal	Equal	42%	24%	17%	50%	28%	23%	70%	39%	30%	74%	42%	34%
Combined RSF	Equal	Optimal	41%	23%	16%	48%	27%	21%	67%	38%	28%	74%	42%	29%
Combined RSF	Jenks	Equal	39%	22%	19%	40%	22%	16%	50%	28%	19%	51%	29%	20%
Combined RSF	Jenks	Proportional	42%	24%	17%	48%	27%	21%	63%	36%	26%	75%	42%	28%
Combined RSF	Jenks	Optimal	39%	22%	15%	43%	24%	18%	57%	32%	23%	67%	38%	29%
Mule RSF	20:60:20	Equal	50%	28%	21%	53%	30%	26%	62%	35%	25%	69%	39%	28%
Mule RSF	20:60:20	Proportional	47%	26%	19%	55%	31%	27%	69%	39%	31%	79%	44%	37%
Mule RSF	20:60:20	Optimal	43%	24%	16%	48%	27%	21%	62%	35%	26%	68%	38%	31%
Mule RSF	Equal	Equal	41%	23%	16%	50%	29%	25%	69%	39%	30%	77%	43%	32%

Mule RSF	Equal	Optimal	36%	20%	15%	43%	24%	19%	61%	34%	23%	65%	37%	25%
Mule RSF	Jenks	Equal	39%	22%	16%	38%	22%	17%	49%	27%	20%	50%	28%	22%
Mule RSF	Jenks	Proportional	41%	23%	16%	47%	26%	21%	63%	35%	26%	73%	41%	28%
Mule RSF	Jenks	Optimal	36%	20%	14%	41%	23%	18%	55%	31%	22%	66%	37%	26%
WTD RSF	20:60:20	Equal	48%	27%	20%	51%	29%	25%	56%	32%	22%	63%	35%	25%
WTD RSF	20:60:20	Proportional	46%	26%	19%	54%	31%	27%	68%	39%	30%	72%	41%	34%
WTD RSF	20:60:20	Optimal	43%	24%	18%	47%	26%	21%	53%	30%	21%	56%	32%	23%
WTD RSF	Equal	Equal	45%	26%	19%	52%	29%	25%	69%	39%	31%	74%	42%	35%
WTD RSF	Equal	Optimal	40%	22%	16%	44%	25%	18%	58%	33%	23%	62%	35%	25%
WTD RSF	Jenks	Equal	46%	26%	20%	43%	24%	18%	54%	30%	21%	53%	30%	22%
WTD RSF	Jenks	Proportional	44%	25%	18%	49%	28%	20%	67%	38%	28%	74%	42%	30%
WTD RSF	Jenks	Optimal	43%	24%	17%	44%	25%	19%	60%	34%	25%	67%	38%	26%