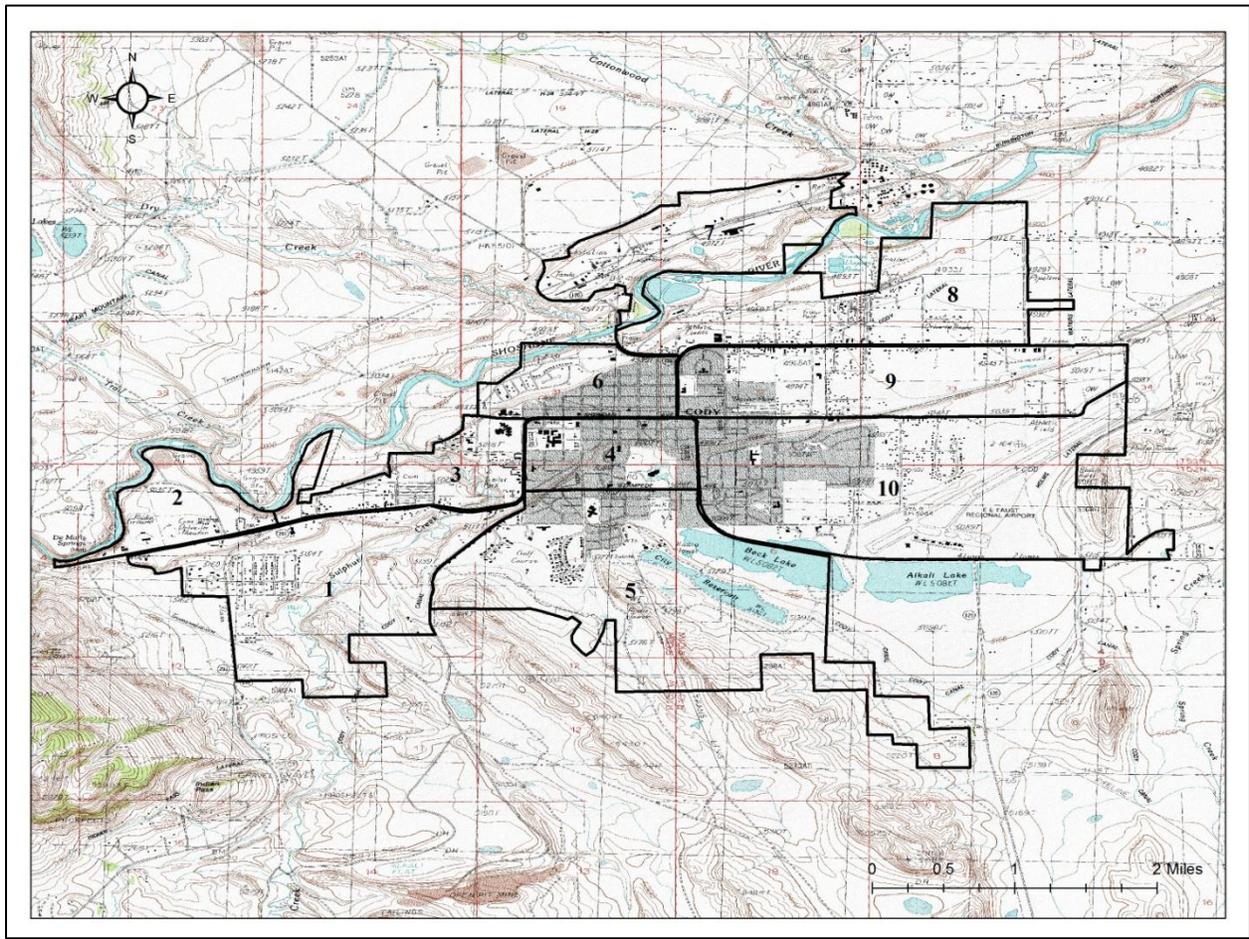


CODY URBAN DEER CLASSIFICATION/TREND SURVEY – 2019

Summary of 2019 Efforts

On 12/09/2019, 15 WGFD personnel and one city police officer (Trap Heydenberg) conducted a classification/trend survey of deer within the city limits of Cody. The city was broken out into 10 Count Blocks (Figure 1), and all deer encountered were classified into sex/age categories (adult buck, yearling buck, doe, fawn). Surveys were initiated at approximately 2:00 pm and continued until dark, approximately 5:00 pm. Areas out of but adjacent to the City Limits of Cody will be surveyed soon, as it is unknown the influence of these areas on the number of deer in town. These areas included the County Road 2ABN area immediately north of Cody, and the Cooper Lane and Sage Creek areas immediately to the east of Cody.

Figure 1. Cody urban deer survey count blocks.



Results of 2019 Survey

Date: 12/10/2019

Observers: Altermatt, J Burckhardt, Class, Cross, Gerrity, Hodges, Herberger, Lassetter, Maichak, Mong, Skorupski, D. Smith, Swanson, Queen, Quick, Heydenberg (Cody PD).

Total Deer Observations (includes white-tailed deer)

Table 1. 2019 observation data for all count blocks.

Location	Ad Bucks	Yrl Bucks	Does	Fawns	Unknown	Total
CB1	1	1	7	3	0	12
CB2	0	0	0	0	0	0
CB3	2	2	12	10	0	26
CB4	1	1	1	0	0	3
CB5	2	0	2	2	0	6
CB6	1	1	10	7	0	19
CB7	0	0	5	1	0	6
CB8	2	1	11	10	0	24
CB9	3	4	12	8	0	27
CB10	10	2	29	16	0	57
TOTAL	22	12	89	57	0	180
38 bucks:100 does, 64 fawns:100 does						

A total of 180 deer were observed within the City Limits of Cody. Deer fawn:doe ratios were 64:100 in the City Limits. Total buck ratios were 38:100 in the city limits with yearling buck ratios of 13:100 in the city limits and 25:100 for adult bucks.

Summary of Historical Data

The total number of deer observed in the city limits from 2011 to 2019 overall has been showing a decreasing trend (Table 2, Figure 2). The 2019 count was lower than the 2018 count by 12 deer and below the nine-year average of 253. Within each count block, there was a decrease in total deer counted in 4 count blocks compared to increases in 5 count blocks and no change in 1 count block (Figure 3). There has been a continual decrease in total number of deer counted in the city limits since 2015. Although there was a decrease in the buck ratio from 2018 by 10:100, the 2019 ratio of 38:100 is still much higher than observed in wild populations. The fawn ratio is considered normal and is similar to ratios found in wild populations. Based on a simple population estimate model that assumes a closed town population, meaning no deer leave town or no new deer come into town, removing no deer out of the population would result in an estimated increase of 20-30 deer. Table 3 shows different removal scenarios with estimated population results based on many assumptions.

Deer Counts

Table 2. Historical total count data (including white-tailed deer) within each Cody count block from 2011 to 2019.

Count Block	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	35	42	59	57	60	19	28	24	12
2	0	0	0	24	9	0	9	0	0
3	68	41	49	0	26	32	14	14	26
4	25	16	12	11	15	5	8	9	3
5	56	46	43	32	43	29	37	31	6
6	10	18	9	22	33	25	8	13	19
7	42	25	27	0	0	49	29	24	6
8	1	8	18	31	34	17	22	13	24
9	20	33	26	7	22	31	30	20	27
10	50	30	49	84	41	51	57	44	57
Total	307	259	292	268	283	258	242	192	180

Figure 2. Total numbers of deer (including white-tailed deer) counted in all Cody city count blocks from 2011 to 2019.

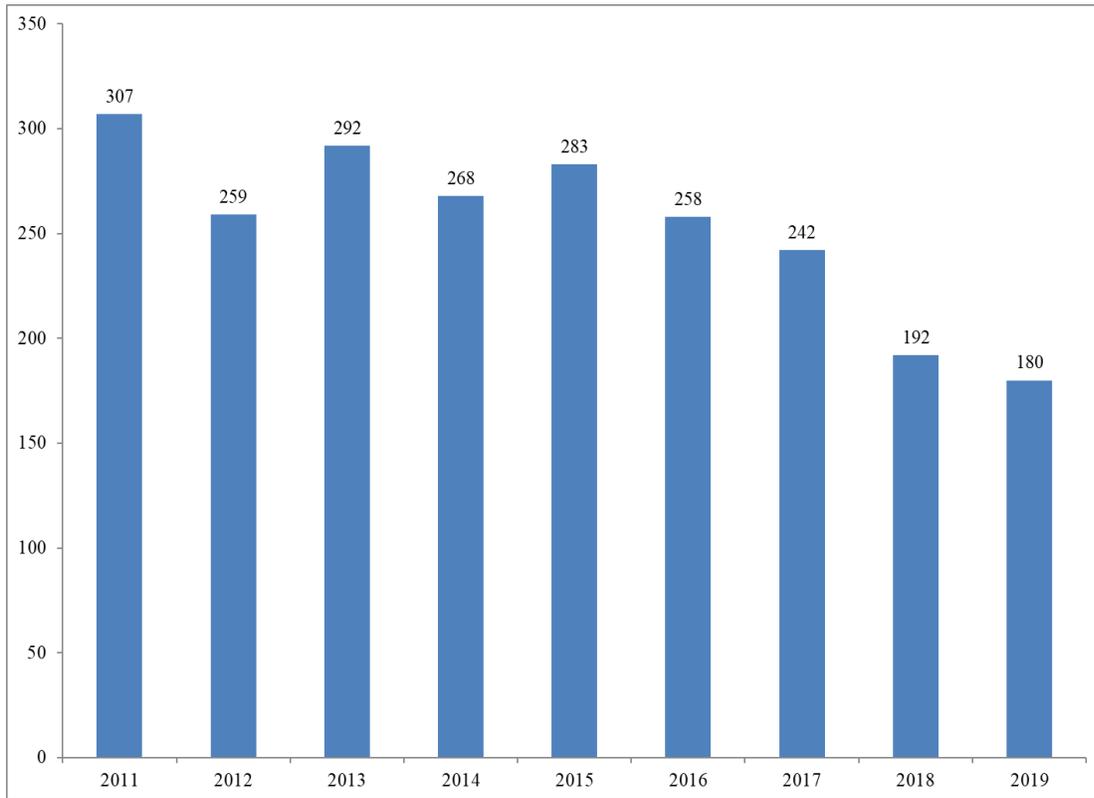


Figure 3. Count block comparison data from 2018 to 2019. This figure shows change in deer numbers within each count block from 2018 to 2019. Shown above each set of bars is the change between years (black = increase or no change in numbers, red = decrease in numbers).

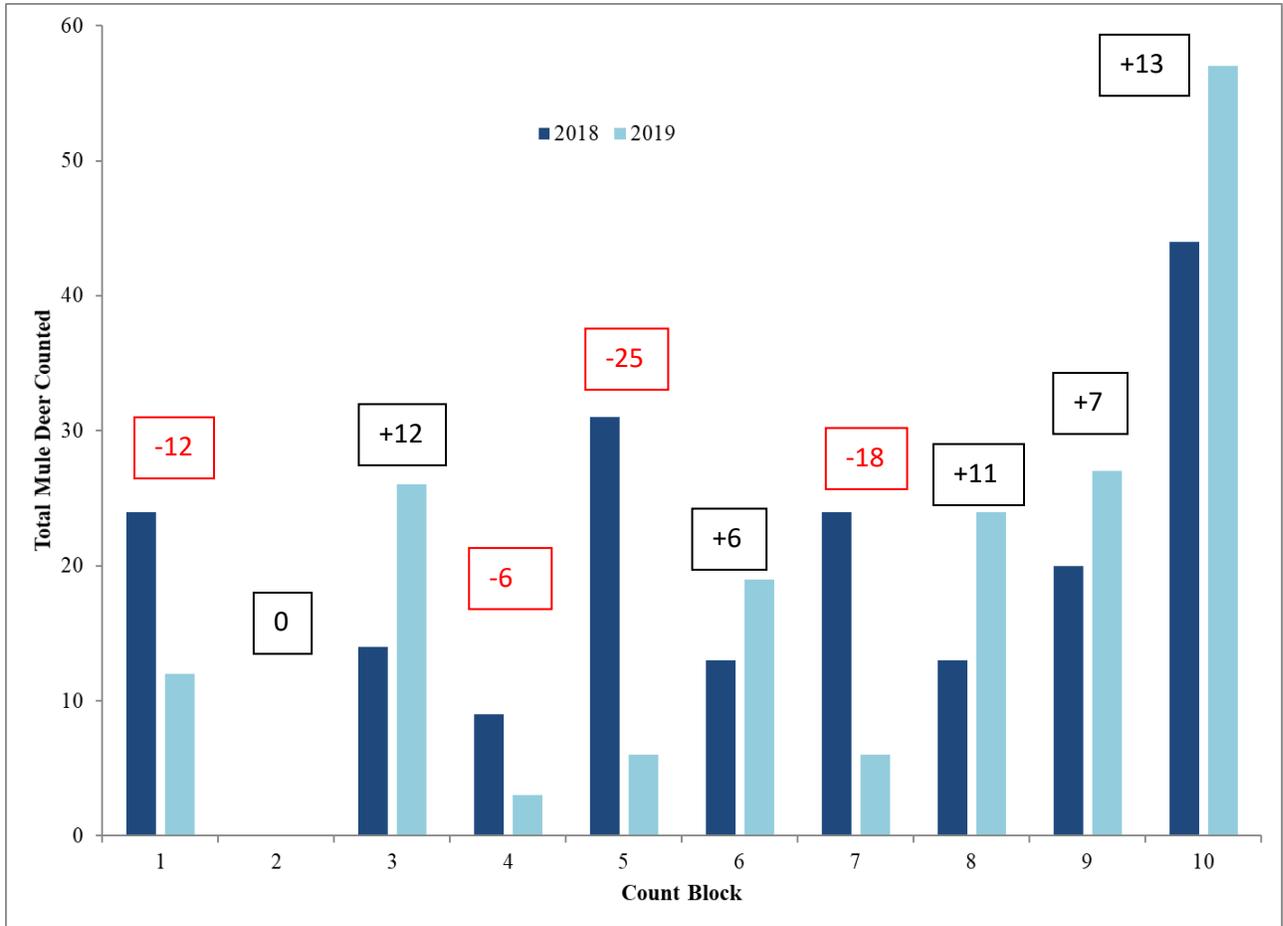


Figure 4. Individual count block data, within each block is a bar graph depicting total number of deer counted in that block from 2011 to 2019 (left to right).

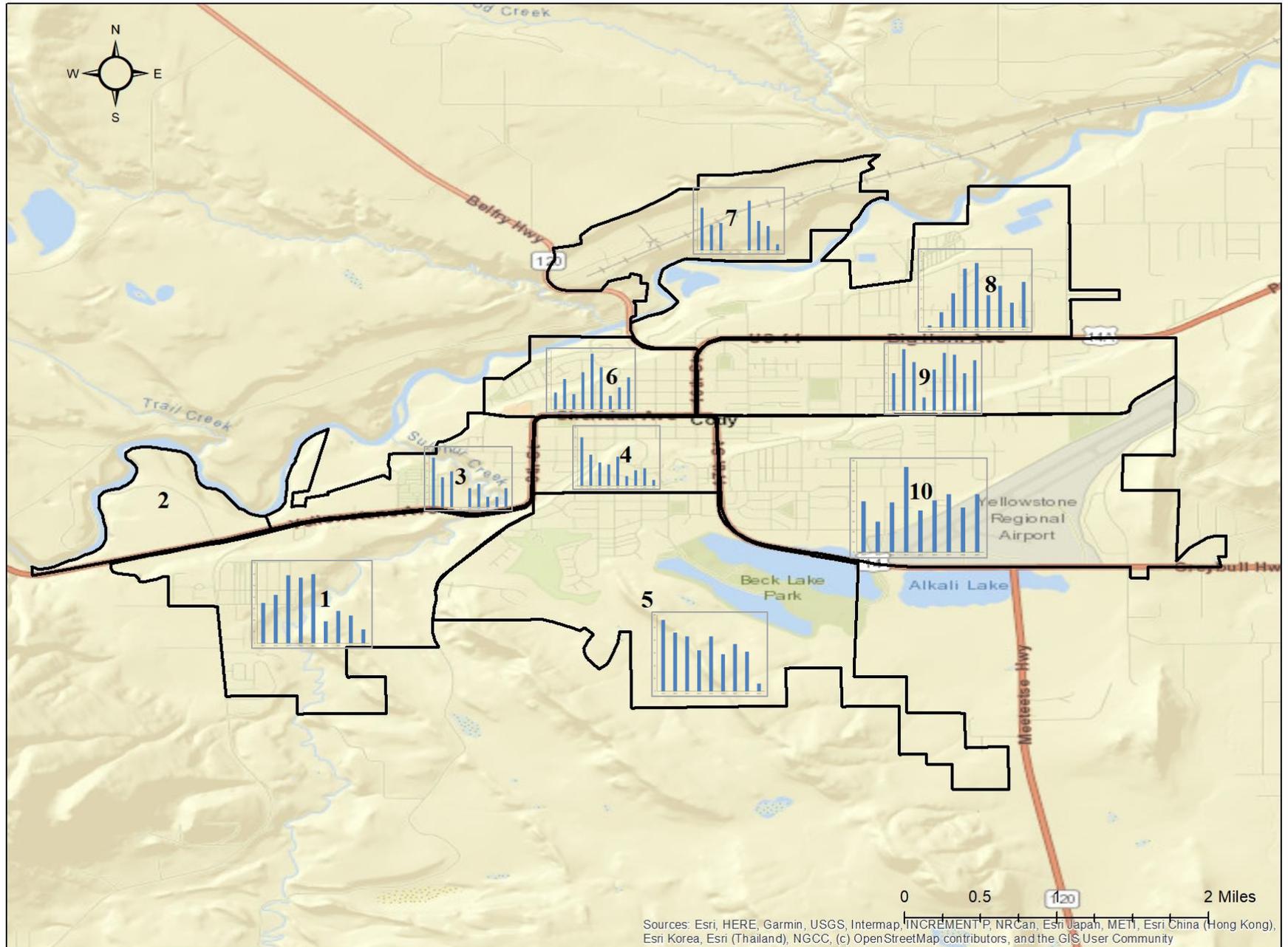


Table 3. Cody town deer estimated influence of different adult doe removal scenarios (0, 25 and 50) on the population. There are many assumptions made in this model that could have influences on the total number estimated for 2020. The estimates do not account for any movement of deer into or out of the town population. The estimates also use the 2019 count data, which should be considered a minimum count because it is impossible to have 100% accuracy with a wildlife survey. Annual survival of deer (both adults and fawns) used in the estimates from one year to the next is lower than what we would see in the wild on a “normal” weather year. This lower survival estimate was used to account for the increased risks from car collisions and poor feed quality found in town. The number of potential fawns added to the population in 2020 is based on the average town fawn ratio of 70:100 adult does (2011-2019). **Overall, this is a very conservative estimate with many unaccounted for variables and will most likely predict a lower number of deer than what will actually be observed in town. Based on estimates from 2018, we could be as many as +30 deer off from our estimates.**

Zero Adult Doe Removals

Removal #						
0						
2019 Count Data					Annual Survival Rate	
	Does	Fawns (bucks and does)	Bucks	Total	Adult Deer	Fawn Deer
	89	57	34	180	90%	75%
# of deer surviving into summer of 2020	80	43	31			
# of potential fawns (doe and bucks) that will add to total numbers in 2020	56					
			2020 Estimated Total	210		

25 Adult Doe Removals

Removal #						
25						
2019 Count Data					Annual Survival Rate	
	Does	Fawns (bucks and does)	Bucks	Total	Adult Deer	Fawn Deer
	89	57	34	180	90%	75%
# of deer surviving into summer of 2020	55	43	31			
# of potential fawns (doe and bucks) that will add to total numbers in 2020	39					
			2020 Estimated Total	167		

50 Adult Doe Removals

Removal #						
50						
2019 Count Data					Annual Survival Rate	
	Does	Fawns (bucks and does)	Bucks	Total	Adult Deer	Fawn Deer
	89	57	34	180	90%	75%
# of deer surviving into summer of 2020	30	43	31			
# of potential fawns (doe and bucks) that will add to total numbers in 2020	21					
			2020 Estimated Total	125		