



## 2021 Garden Ridge Deer Survey Results

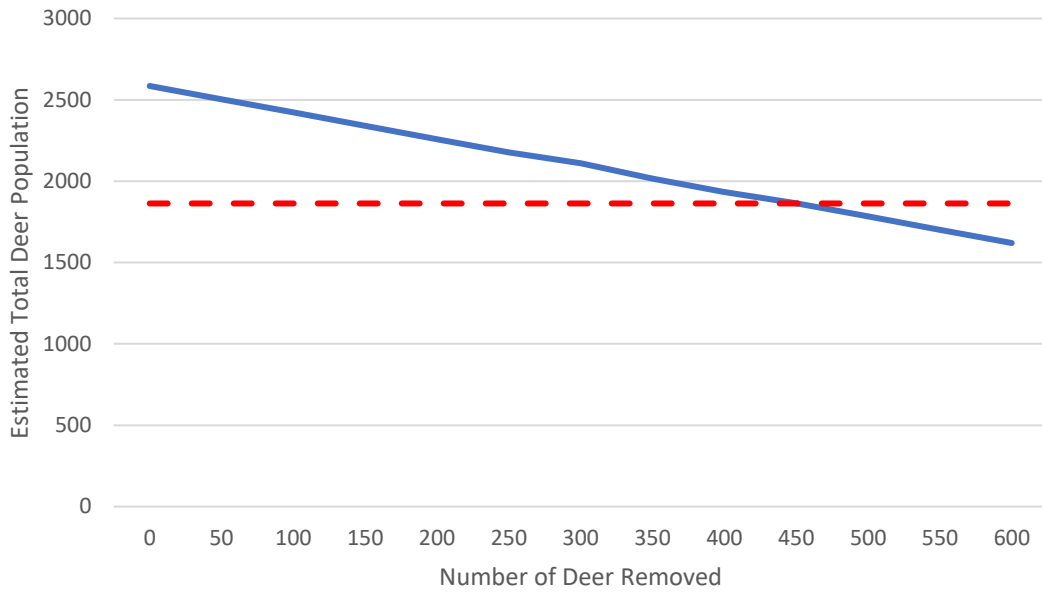
Benjamin Olsen, Wildlife Biologist  
Texas Parks & Wildlife Department

Biologist Comments on number of deer that could be removed:

- Based on data and population analysis, at least 450 deer would need to be removed from the population to avoid any decrease or increase in the estimated deer population going into next fall. **(This is not a recommendation, just additional population information for the committee)**
- Last year, it was projected for at least 300 deer to be removed to maintain the population as is.
- See table and graph below for a breakdown of how any number of deer being removed could alter the estimated deer population.
- Fall 2022 estimates are factoring the average Fawn: Doe ratio (fawn recruitment) over the last 5 years, which is 0.61 or 61%.

WTD Population Estimates Based on Potential Removal of Deer		
Potential Deer Removed	Fall '22 Density Estimate	Fall '22 Est. # Deer
0	1.1	2585
50	1.1	2503
100	1.1	2422
150	1.2	2340
200	1.2	2258
250	1.3	2177
300	1.3	2110
350	1.4	2015
400	1.4	1933
450	1.5	1865
500	1.6	1783
550	1.6	1701
600	1.7	1620

### Deer Population Estimates based on Potential Winter 2021 Deer Removal



— Estimated Fall '21 Deer Population      - - - Current Population Estimate



## 2021 Garden Ridge Deer Survey Results

Benjamin Olsen, Wildlife Biologist  
Texas Parks & Wildlife Department

2021 Survey totals and summary:

2021 City of Garden Ridge Deer Survey Population Summary										
Survey Route/Pasture	Date	Deer Observed					Total	Acres Sampled	Acres Per Deer	Deer Per 1,000 Ac.
		Bucks	Does	Fawns	Undet					
Survey Route Day 1	8/20/21	18	66	52	3	139	198	1.42	704.2	
Survey Route Day 2	8/26/21	24	42	36		102	198	1.94	515.5	
Survey Route Day 3	8/31/21	30	71	56		157	198	1.26	793.7	
<b>Survey Totals</b>		<b>72</b>	<b>179</b>	<b>144</b>	<b>3</b>	<b>398</b>	<b>594</b>	<b>1.49</b>	<b>671.1</b>	

Survey Results				
Estimates		Composition		Estimated Population
<b>Acres/Deer:</b>	<b>1.49</b>	Bucks:	18.2%	Bucks: 340
<b>Does/Buck:</b>	<b>2.49</b>	Does:	45.3%	Does: 844
<b>Fawns/Doe:</b>	<b>0.80</b>	Fawns:	36.5%	Fawns: 679
<b>Total:</b>				<b>1,863</b>

Biologist Comments:

- The population density estimate has increased from 2.5 acres per deer to 1.49 acres per deer over the last year.
- Survey results indicate a high fawn recruitment this year (80% of does have fawns whereas the 5-year average is 60%).
- Survey results estimate 679 fawns in Garden Ridge this year. A high fawn recruitment will result in a larger rate of increase on the population going into next fall.
- White-tail deer have fawns at an approximate 50/50 ratio of males to females, thus we can estimate that there are about 340 doe fawns this year.

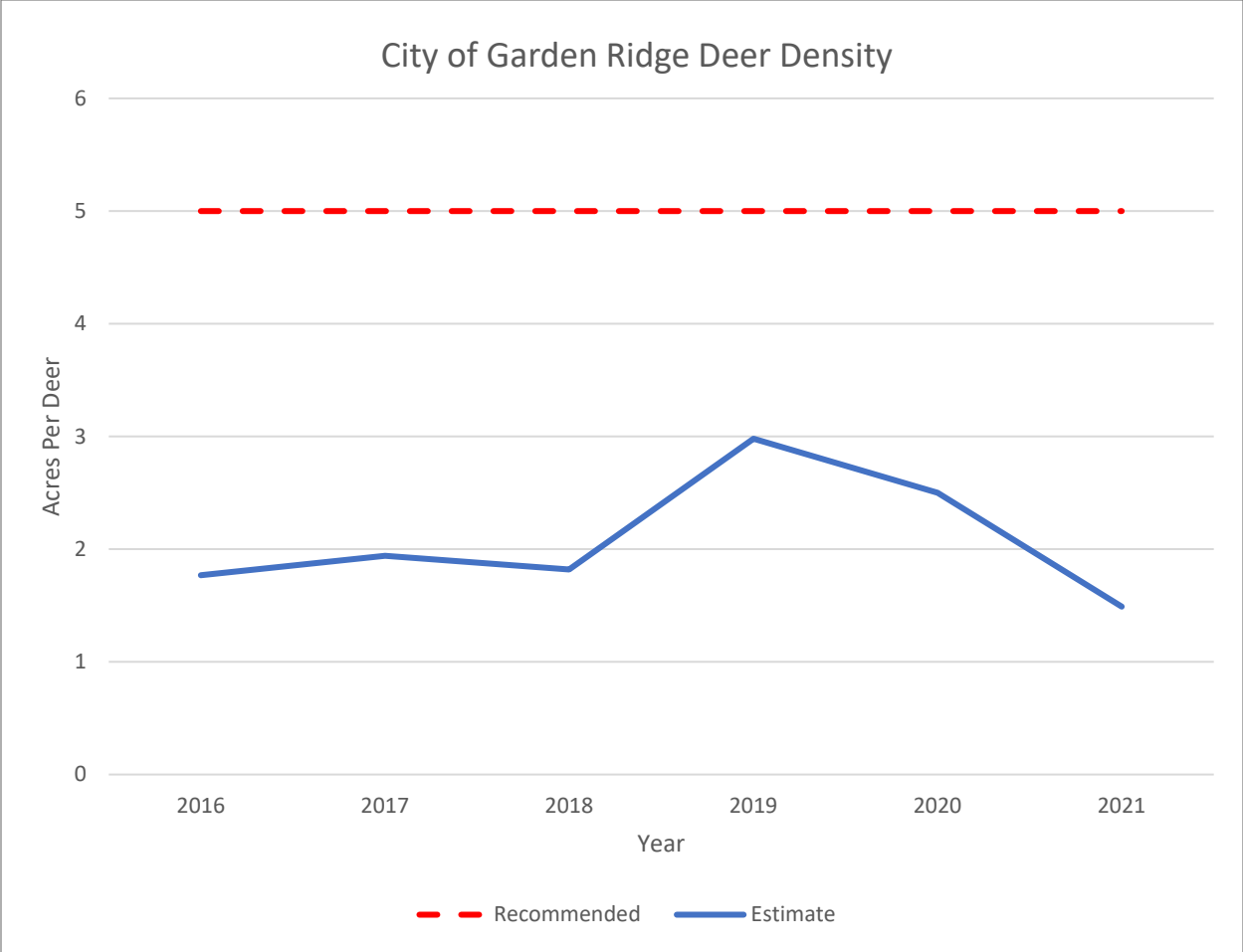


Figure 1. This graph shows the property deer density over time. The blue line represents the estimated deer density based on ranch surveys each year. The dashed red line represents the recommended density for the area based on the overall carrying capacity of the landscape.

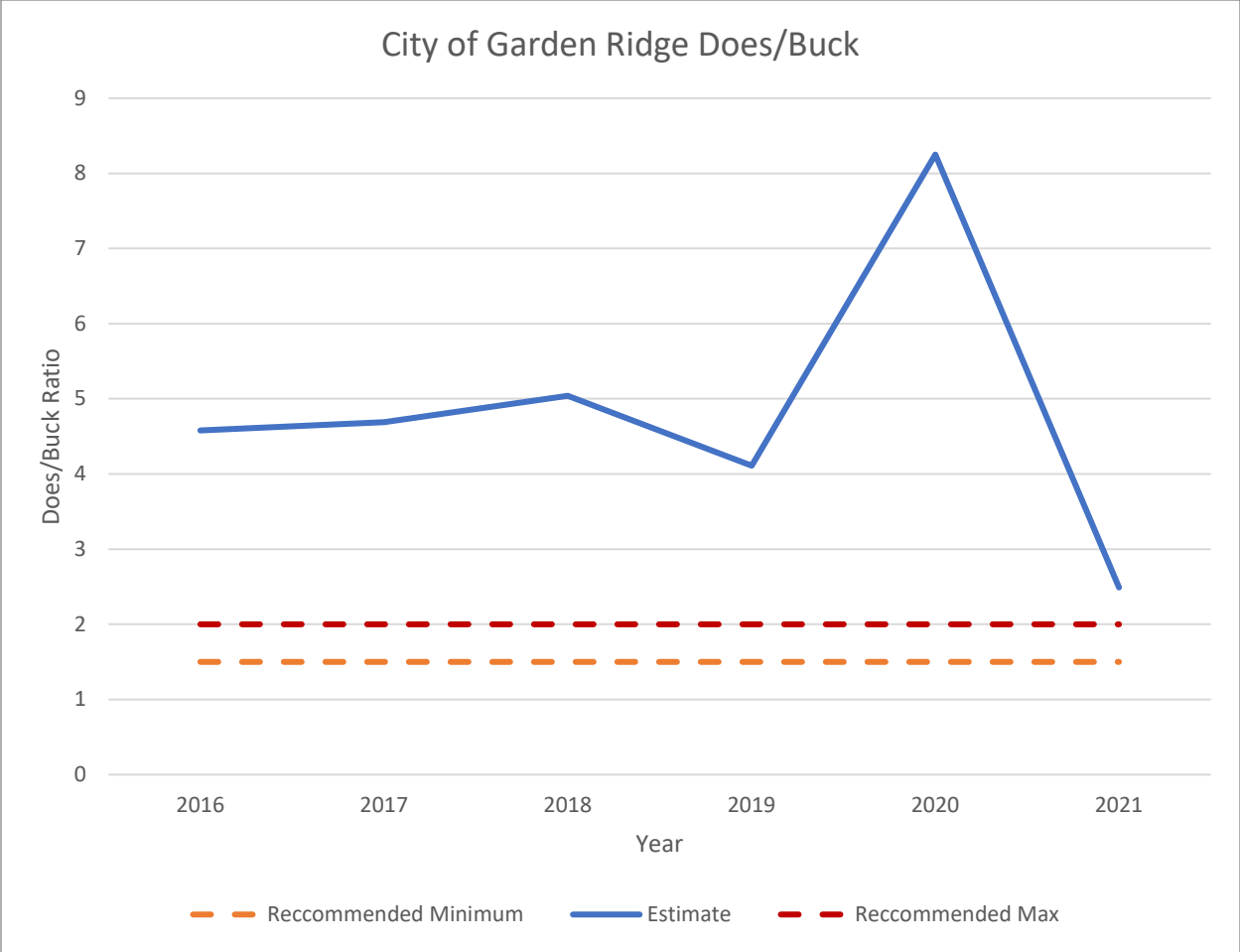


Figure 2. This graph shows the estimated does per buck ratio over time. The blue line represents the does/buck ratio based on annual deer surveys conducted on the ranch. The two dashed lines represents the upper and lower bounds of the recommended doe/buck ratio for our area. The orange dashed line represents the minimum while the red dashed line represents the maximum.

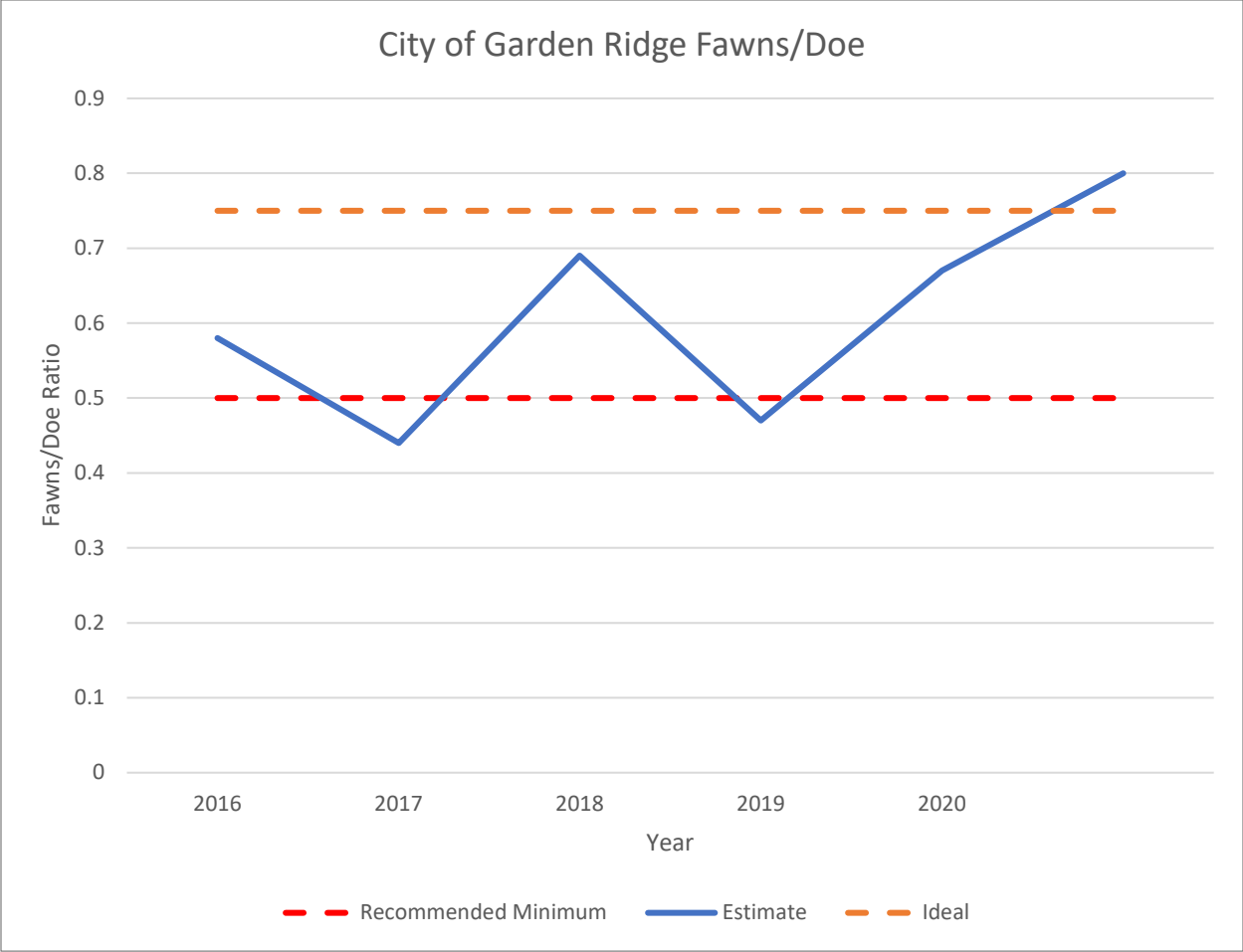


Figure 3. This graph shows the estimated fawn to doe ratio over the years. The blue line represents the fawns per doe ratio based on annual deer surveys conducted on the ranch. The orange dashed line represents the recommended minimum on the average year. While the red dashed line represents the ratio that would occur under ideal conditions.

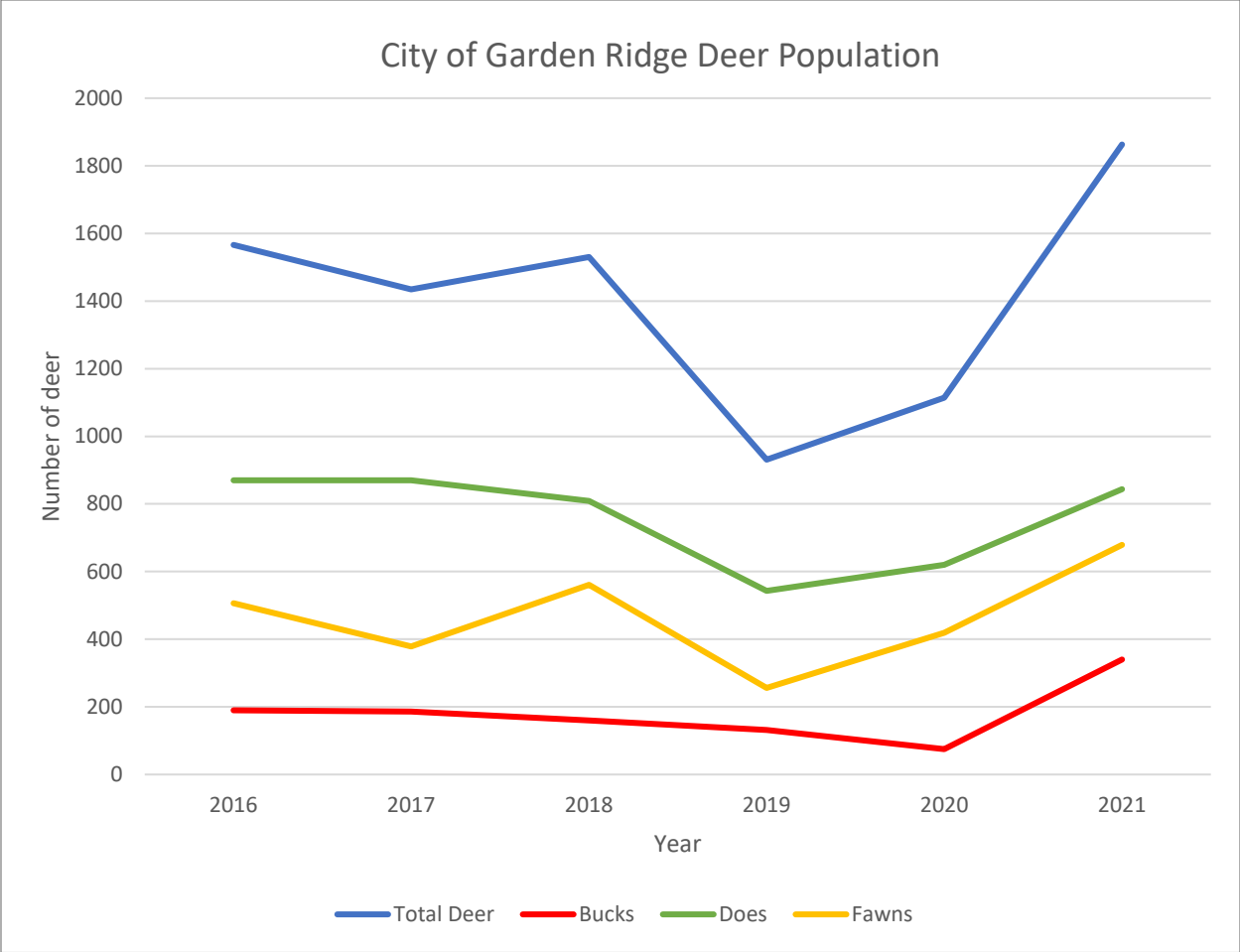


Figure 4. This graph just shows total *estimated* number of deer and their breakdown over time. The blue line represents the estimated total number of deer. The red line represents bucks, green represents does, and yellow represents fawns. Reminder that this is just an estimate of the number of deer and should not be viewed as an absolute number of deer.

## DEER POPULATION SUMMARY

Ranch: Garden Ridge

Survey Technique: Mobile Line

County: Comal

Year: Aug-21

Survey Route/Pasture	Date	Deer Observed					Acres Sampled	Acres Per Deer	Deer Per 1,000 Ac.
		Bucks	Does	Fawns	Undet	Total			
Garden Ridge	8/20/21	18	66	52	3	139	198	1.42	704.2
Garden Ridge	8/26/21	24	42	36		102	198	1.94	515.5
Garden Ridge	8/31/21	30	71	56		157	198	1.26	793.7
Survey Totals		72	179	144	3	398	594	1.49	671.1
Incidental Observations									
Combined Totals		72	179	144		395			

Ranch Size (ac.): 2,780

**Harvest Recommendation**

Acres/Deer: 1.49  
 Does/Buck: 2.49  
 Fawns/Doe: 0.80

**Antlered Bucks:**

---

---

---

---

---

---

Composition -  
 Bucks: 18.2%  
 Does: 45.3%  
 Fawns: 36.5%

**Antlerless Deer:**

---

---

---

---

---

---

Deer/1,000Ac: 670.03  
 Adult/1,000Ac: 425.77  
 Acres/Adult: 2.35

Estimated Population -  
 Bucks: 340  
 Does: 844  
 Fawns: 679  
 Total: 1,863

**Remarks:**

---

---

---

---

---

---



## Texas Parks and Wildlife Department Spotlight Deer Survey

County & Ranch Garden Ridge Name of line 7:22

Date 8/20/2021 Official Sunset 8:09 PM Time Began 7:22 PM Time Ended 8:30 PM

Start: Temp. 94 Cloud Cov. \_\_\_\_\_ Wind Speed \_\_\_\_\_ Wind Dir. \_\_\_\_\_ Odometer Reading \_\_\_\_\_

End: Temp. \_\_\_\_\_ Cloud Cov. \_\_\_\_\_ Wind Speed \_\_\_\_\_ Wind Dir. \_\_\_\_\_ Odometer Reading \_\_\_\_\_

Mile	Bucks	Does	Fawns	Unidentified	Total Observed
1					29
2					26
3					<del>27</del> 25
4					37
5					13
6					11
7					
8					
9					
10					
11					
12					
13					
14					
15					
TOTAL	18	66	52	3	<del>139</del>

Does Per Buck \_\_\_\_\_

Fawns Per Doe \_\_\_\_\_

Observers: Benjamin Olsen  
Lisa Swint  
Shannon Dichter

Comments \_\_\_\_\_

## Texas Parks and Wildlife Department Spotlight Deer Survey

County & Ranch Garden Ridge Name of line Garden Ridge  
 Date 8/26/2021 Official Sunset 8:03 PM Time Began 6:59 PM Time Ended 9:07 PM  
 Start: Temp. 95 Cloud Cov. 36 Wind Speed 6 Wind Dir. NE Odometer Reading \_\_\_\_\_  
 End: Temp. \_\_\_\_\_ Cloud Cov. \_\_\_\_\_ Wind Speed \_\_\_\_\_ Wind Dir. \_\_\_\_\_ Odometer Reading \_\_\_\_\_

Mile	Bucks	Does	Fawns	Unidentified	Total Observed
1	11	1111	111		13
2	11	1111	11111		16
3	1111 1111	111111	1111		27
4	1111 11	111111111111	1111111		36
5	11	11	111		9
6			1		1
7					
TOTAL	24	42	36		102

Does Per Buck \_\_\_\_\_  
 Fawns Per Doe \_\_\_\_\_

Observers: Benjamin Olsen  
Kay Bower  
Dean Lemmings

Comments \_\_\_\_\_

## Texas Parks and Wildlife Department Spotlight Deer Survey

County & Ranch City of Garden Ridge Name of line Main Route  
 Date 8/31/2021 Official Sunset 7:56 PM Time Began 7:00 PM Time Ended 8:15 PM  
 Start: Temp. 97 Cloud Cov. 5% Wind Speed 0 Wind Dir. E Odometer Reading \_\_\_\_\_  
 End: Temp. \_\_\_\_\_ Cloud Cov. \_\_\_\_\_ Wind Speed \_\_\_\_\_ Wind Dir. \_\_\_\_\_ Odometer Reading \_\_\_\_\_

Mile	Bucks	Does	Fawns	Unidentified	Total Observed
1	III	IIII III I	IIII III		24
2	IIII III	IIII III III III II	IIII III III		45
3	IIII IIII	IIII III II	IIII III III		35
4	IIII	IIII III	III		19
5	III	IIII I	III		14
6	II	III	II		7
7	I	IIII II	III		13
TOTAL	30	71	56		157

Does Per Buck \_\_\_\_\_

Fawns Per Doe \_\_\_\_\_

Observers: Benjamin Oben  
Denise Miner-Williams  
Todd Arvidson

Comments \_\_\_\_\_