



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Lacreek National Wildlife Refuge  
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September 18, 2006

## MEMORANDUM

To: Refuge File P.11z.2006

From: Brandon Jones  
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Biologist

Subject: 2006 Burrowing Owl Survey Summary

Annual burrowing owl surveys were conducted June 19<sup>th</sup> - 22<sup>nd</sup> and July 17<sup>th</sup> - 19<sup>th</sup>, 2006 as part of the Refuges biological monitoring. Protocol for the surveys was followed using the Haug and Didiuk (1993) method, which involved using an audio tape to broadcast burrowing owl calls. The audio tape was played for approximately six minutes and owls were counted during the broadcast.

All prairie dog towns were surveyed from last year (11 towns) with an additional four more towns (Sites 12,13,14,15) in 2006 (Fig 1.) The total number of burrowing owls decreased from 201 in 2005 to 181 in 2006 showing a difference of 20 owls. The highest estimate was located on site 3 for both June and July with the lowest estimate being on sites 4, 9, and 12. The June survey estimate was 100 owls with an average of 1.05 juveniles per pair and an average of 4.3 owls per station (Table 1). The July survey estimate was 181 owls with an average of 3.8 juveniles per pair and an average of 6.0 owls per station (Table 1).

The burrowing owl population on the refuge is directly related to the prairie dog towns on the refuge. The relatively high number of owls is believed to be due to the expansion of existing prairie dog towns as well as the establishment of new towns. Carrying capacity on towns with established pairs may be reached as there were owls observed on towns like 10NW-1, which is a well established town where no owls had been observed the two previous years. Additionally, newly established towns were occupied with burrowing owls almost immediately. Also noteworthy was the observation of one pair located in the sandhills, but it is not known whether they fledged any young.

Table 1. Burrowing Owl 2006 survey results.

## Lacreek Wildlife Refuge Burrowing Owl Surveys 2006

Date	Site #	Sta. #	Time	Pair	M	F	J	U	Comments
6/19/2006	10	1	8:07		1				0% cloud cover, 60's, winds 5-10 SSE
	13	1	8:52			1			
		2	8:58	1	1	1			
	12	1	9:42						
Total				1(2)	2	2			6

Observer: BJ, SC

Avg. Owls/station: 1.5

Avg. Juv./Pair: 0

Date	Site #	Sta. #	Time	Pair	M	F	J	U	Comments
6/20/2006	4	1	5:58						70% cloud cover, 60's, winds 10-15 E Seen 3 owls flying on south side of site 13
	5	1	6:17	1	1	1	1		
		9	1	6:45					
	1	1	6:14	2	1	1	3		30% cloud cover, SE winds 5 -10 mph, 50's
		2	6:36	2					
		3	6:47	1	1				
		4	7:00		1				
		5	7:12	1	1	3			
	11	1	9:30		1				
		6	1	9:45	1	1		4	
	Total				8(16)	7	5	8	

Observer: BJ, SC

Avg. Owls/station: 3.6

Avg. Juv./Pair: 1

Date	Site #	Sta. #	Time	Pair	M	F	J	U	Comments
6/21/2006	2	1	6:16	2	1				85% cloud cover, 50's, 5 mph E
		2	6:30						
		3	6:45	2				1	
		4	7:01						
		5	7:14	1					
	7	1	8:00		2	1			
	8	1	8:27	1	3		1		
	Total				6(12)	6	1	1	1

Avg. Owls/station: 3

Table 1. Burrowing Owl 2006 survey results.

Observer: BJ, SC

Avg. Juv./Pair: 6

Date	Site #	Sta. #	Time	Pair	M	F	J	U	Comments
6/22/2006	3	1	6:45	2	2		4		80% cloud cover, 50's, calm
		2	7:02	1	5		4		
		3	7:17	2	6	2	4		
Total				5(10)	13	2	12		37

Avg. Owls/station: 4.3

Avg. Juv./Pair: 1.05

Observer: BJ

Total Owls for June =100

Date	Site #	Sta. #	Time	Pair	M	F	J	U	Comments
7/17/2006	10	1	6:10	1			2		30% cloud cover, 70's, 5-10mph NE
		1	6:30	2			4		
		2	6:40	1			1		
		3	6:50		1		1		
		4	7:00	2	1		5		
	2	5	7:12	1			2		
		1	7:28						
		2	7:40						
		3	7:50	1			4		
		4	8:00						
	15	1	8:17			2			
		4	8:35						
		13	1	8:50		1			
			2	9:00	2			3	
14	1	9:20	1				1		
Total				11(22)	5		22	2	51

Avg. Owls/station: 3.2

Avg. Juv./Pair: 2

Table 1. Burrowing Owl 2006 survey results.

Date	Site #	Sta. #	Time	Pair	M	F	J	U	Comments
7/19/2006	3	1	6:03	2	2	1	6		10% cloud cover, 70's, 3-5mph E
		2	6:16	3	1		8		
		3	6:28	1		1	7		
		4	6:35	2	1		9		
		5	6:44	2	3	1	8		
		5	7:02	1	2	1	11		
		6	7:12	1	2	1	8		
		7	7:24	1	3	1	6		
			7:35	2	1		5		
		11	7:49		1	1			
		8	8:17	1	2		4		
			8:27		1	1	4		
		9	8:40						
		12	8:52						
		Total				15(30)	19	8	

Observer: BJ

Avg. Owls/station: 6.0

Avg. Juv./Pair: 3.8

Total Owls for July = 181

**Total Owls for year = 181**

Literature Cited:

Haug, E. and A. Didiuk. 1193. Use of recorded calls to detect burrowing owls. Journal of Field Ornithol., 64(2): 188-194.