



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Lacreek National Wildlife Refuge
29746 Bird Road
Martin, South Dakota 57551-9510
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November 20, 2007

MEMORANDUM

To: Refuge File- Burrowing Owls

From: Shilo Comeau
Biologist

Subject: 2007 Burrowing Owl Survey Summary

Annual burrowing owl surveys were conducted July 3rd - 5th, 2007 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.

A total of 15 prairie dog towns were surveyed, but LCN2d was excluded because the unit is a restoration field and was poisoned and farmed this year (Fig 1.) The total number of burrowing owls decreased 67% from 181 in 2006 to 59 in 2007 resulting in a difference of 121 owls. The highest estimated number of owls were located on unit 9NW with the lowest estimate being on sites 10NW-1, 10SE, and Brown Ranch (3 each) and 10SW2 (2 owls). There were no owls observed on three towns, P5, P6, and 10NE-1. Production decreased as well with an average of 1.5 juveniles per pair compared to 3.8 in 2006, and an average of 1.48 total owls per survey station (Table 1).

The perceived decrease in owls observed on the refuge is likely due to the reduction of prairie dog habitat in unit LCN2d. Unit LCN2d was not surveyed this year for logistical reasons, but refuge manager Koerner did observe an estimated 20 owls in this unit during the breeding season. Prior to prairie dog control efforts, as many as 59 owls were observed in this unit. Burrowing owls likely used this site considering this was the first year it was farmed, and it may take up to three years for owls to abandon a site once prairie dog control was initiated (Grant 1965, Butts 1973). This site will be surveyed in 2008 as part of the annual monitoring survey. Overall, the number of owls observed on the refuge remains higher than the number of owls observed in 2003 (31), one year after the beginning of the drought and prairie dog habitat expansion. The acres of prairie dog habitat in 2003 was 368, while the acres in 2007 were 632 (excluding LCN2d).

Literature Cited:

Butts, K. O., and J. C. Lewis. 1982. The importance of prairie dog towns to Burrowing Owls in

Oklahoma. Proceedings of the Oklahoma Academy of Science 62:46-52.

Grant, R. A. 1965. The Burrowing Owl in Minnesota. Loon 37:2-17.

Haug, E. and A. Didiuk. 1993. Used of recorded calls to detect burrowing owls. Journal of Field Ornithol., 64(2):188-194.

Lacreek Wildlife Refuge Burrowing Owl Surveys 2007

Date	Site #	Sta. #	Time	Adult	Young	Comments
7/3/2007	1	1	6:17			100% cloud cover, 70's, winds calm
		2	6:30	2	1	
	3--1	1	7:20			
		2	7:35	1		
		3	7:45	2		
		4	8:06			
		5	8:18			
		6	8:30	1		
		7	8:46			
	pool 5	1	9:20			
	pool 6	1	9:30			
	10 SW-2	1	6:18	4		
	5-S	1	6:55	2	1	
	5-N	1	7:20	4		
	9 NW-3	1	7:30	1		
		2	7:40	3	2	
		3	7:48	2		
	9 NW	1	7:57	2		
		2	8:05	1		
		3	8:12	3		
		4	8:20	3		
		5	8:30	2	2	
		6	8:40	4		
		7	8:50	4		
	10 NW-2	1	9:05	2		
		2	9:15	2		
Total				45	6	

Avg. Owls/station: 1.961538

Observer: BJ, SC

Date	Site #	Sta. #	Time	Adult	Young	Comments
7/5/2007	10 NE-1	1	6:30			10% cloud cover, 70's, winds calm
		2	6:45			
		3	7:00			
	10 SE	1	7:30	3		
	10SW-2	1	7:45	2		
	10 DU	1	8:10			
	10 NW-1	1	8:20			
		2	8:40	3		

Avg. Owls/station: 0.115385

Observer: SC