

2013
**Evaluation of the Decoy-Only Hunting Unit: Lower
Oahe Waterfowl Hunting Access Area**

HD-1-14.AMS

Cynthia L. Longmire, Ph.D.
Human Dimensions Specialist
South Dakota Game, Fish, and Parks

Tim Withers
Program Assistant, Waterfowl Access
South Dakota Game, Fish, and Parks



Division of Wildlife
Serving People, Managing Wildlife

Longmire, C.L. and T. Withers 2014. 2013 Evaluation of the Decoy-Only Hunting Unit in the Lower Oahe Waterfowl Hunting Access Area. Report ID# HD-1-14.AMS. Pierre, SD: South Dakota Game, Fish, and Parks.

The decoy-only Sheehan waterfowl unit is a special unit within the Lower-Oahe Waterfowl Hunting Access Area where hunters are required to register before hunting. This process provides a means for evaluating the use, harvest, and opinions towards this special unit. This evaluation substitutes for an assessment of the entire Lower Oahe Waterfowl Hunting Access Area. When hunting is good at the decoy-only unit, it is most likely good everywhere else in the area, as geese are present in high numbers. This report evaluates the 2013 decoy-only waterfowl unit and compares the findings with the previous fifteen years (1998-2012).

KEY WORDS: Waterfowl; Lower Oahe; Decoy-Only

Published by:
SD GAME, FISH, & PARKS
PIERRE, SD

April 2014

For Additional Copies:
SD Game, Fish, and Parks
Human Dimensions
523 E. Capitol Ave
Pierre, SD 57501

Visit our homepage at: <http://gfp.sd.gov/>

Executive Summary

2013

Evaluation of the Decoy-Only Hunting Unit: Lower Oahe Waterfowl Hunting Access Area

HD-1-14.AMS

Cynthia L. Longmire, Ph.D.

Tim Withers

- The 2013 waterfowl season saw lower use of the decoy-only waterfowl unit in the Lower Oahe Waterfowl Hunting Access Area than in 2012 with 544 groups (1,644 hunters) using the unit.
- An estimated total of 1,958 Canada geese were harvested at the decoy-only unit. Down from the 3,707 harvested in 2012
- Mean satisfaction has been relatively high for the last ten years. On average, in 2013 hunters' were moderately satisfied with their hunting experience. A majority of hunting groups (55%) were very satisfied with their hunting experience in the decoy-only waterfowl area, and an additional 27% were moderately or slightly satisfied. Overall 82% of hunting groups were satisfied with their hunting experience.
- Hunter satisfaction was statistically related to total number of waterfowl (geese and ducks) harvested. Hunting groups who reported being satisfied with their hunting experience harvested approximately 4 more birds, on average, than groups reporting a neutral level of satisfaction or who reporting being dissatisfied.
- Groups who hunted in early December (12/01 to 12/15) had the highest average harvests with approximately 5 waterfowl (geese and ducks) per group. The majority of groups (60%) were from cities/towns outside the local area.

Table of Contents

Executive Summary	i
List of Figures	iii
List of Tables	iv
Introduction	1
Methods	2
Results.....	2
Use and Harvest Report	2
Field Use	4
Satisfaction and Harvest.....	7
Use Trends.....	8
Discussion	12
Tables.....	14

List of Figures

Figure 1: Use of decoy-only waterfowl unit from 1998 to 2012*	3
Figure 2: Estimated number of Canada geese harvested – decoy-only waterfowl unit (1998 to 2013)	3
Figure 3: Average number of Canada geese harvested - decoy-only waterfowl unit (1998 to 2013)	4
Figure 4: Mean satisfaction of hunters - decoy-only waterfowl unit (1998 to 2013).....	5
Figure 5: Hunter satisfaction - decoy-only waterfowl unit (1998 to 2013).....	5
Figure 6: Lower Oahe waterfowl access area field map ^a	6
Figure 7: Mean total harvest (geese and ducks) and hunter satisfaction - decoy-only waterfowl unit (2013).....	7
Figure 8: Percent of unsuccessful hunting groups (n=140) in the decoy-only waterfowl unit by satisfaction level (2013)	8
Figure 9: Frequency of groups hunting the decoy-only waterfowl unit by days of week.....	9
Figure 10: Hunters traveling to decoy-only waterfowl unit and their respective hometowns.....	10
Figure 11: Photo of decoy loaner trailer	11
Figure 12: Decoy loaner trailer use - percent of available days by month.....	12
Figure 13: Decoy loaner trailer use – percent of available days by days of week	12

List of Tables

Table 1: Use of the decoy-only waterfowl hunting unit, measured by party size (1998 to 2013)	14
Table 2: Harvest by hunters using the decoy-only waterfowl hunting unit (1998 to 2013).....	16
Table 3: Satisfaction with hunting at the decoy-only waterfowl unit (1998 to 2013) ^a	19
Table 4: Field hunted and total harvest (geese & ducks) in the Lower Oahe Waterfowl Access Area - Decoy-Only Unite (2013)	21
Table 5: Hunting group mean total harvest rate (geese and ducks) by satisfaction (2013)	22
Table 6: Decoy-only waterfowl unit use by days of the week (2013).....	22
Table 7: Use and Harvest (geese & ducks) in the decoy-only waterfowl units by time period	22
Table 8: Group leaders' city/town of residence	23
Table 9: Decoy Loaner Trailer Use.....	24

2013 Evaluation of the Decoy-Only Hunting Unit: Lower Oahe Waterfowl Hunting Access Area

HD-1-14.AMS

**Cynthia L. Longmire, Ph.D.
Human Dimensions Specialist
South Dakota Game, Fish, and Parks**

**Tim Withers
Program Assistant, Waterfowl Access
South Dakota Game, Fish, and Parks**

Introduction

The Lower Oahe Waterfowl Hunting Access Area is a package of varied goose hunting opportunities designed to provide quality locations for goose hunting along the Missouri River. This program was first implemented and evaluated in 1998¹ and again evaluated in 1999². Most quality locations for goose hunting along the Missouri River are on private land. The Lower Oahe Waterfowl Hunting Access Area resulted from the cooperative actions between GFP and several landowners. In return for this new public access for waterfowl hunting, the Legislature authorized the GFP Commission to issue up to 2,000 new, restricted nonresident waterfowl licenses. The money from the sale of these licenses was used to pay for the Lower Oahe Waterfowl Hunting Access Area.

The 1998 and 1999 evaluations showed that hunters strongly supported the effort to provide public goose hunting opportunities in this area. Due to the high costs of conducting a valid, scientific evaluation of the Lower Oahe Waterfowl Hunting Access Area a complete evaluation was not conducted for 2000 to 2013. The decoy-only Sheehan waterfowl unit,

¹ Gigliotti, L. M. 1999. 1998 Lower Oahe Waterfowl Hunting Access Survey. HD-2-99.SAM, South Dakota Game, Fish and Parks, Pierre, South Dakota

² Gigliotti, L. M. 2000. 1999 Lower Oahe Waterfowl Hunting Access Survey. HD-2-00.SAM, South Dakota Game, Fish and Parks, Pierre, South Dakota

however, is a special unit within the Lower Oahe Waterfowl Hunting Access Area where hunters are required to register before hunting. This process provides an easy (and inexpensive) method for evaluating the use, harvest, and opinions toward this special unit; therefore an evaluation was continued from 2000 to 2013 for the decoy-only Sheehan waterfowl unit of the Lower Oahe Waterfowl Hunting Access Area. Also, the evaluation of this unit substitutes for an evaluation of the entire Lower Oahe Waterfowl Hunting Access Area. When hunting is good at the decoy-only unit, it is most likely good everywhere else in the area. This report evaluates the 2013 decoy-only waterfowl unit and compares the findings with the previous fifteen years (1998 to 2012).

Methods

The registration trailer was open from November 2, 2013 to February 14, 2014, and was closed on December 25, 2013. Forty-three fields were available to hunt with one field per group. Daily registration was required to hunt, with a random drawing conducted one hour before sunrise each morning to determine the order in which hunting parties would choose a field. Each hunting group was required to designate one person to handle registration and provide information regarding the other hunters in their group, with a limit of no more than six hunters per hunting group. Registration information included: 1) number of people in the hunting group (including the group leader); 2) name, address, and hunting license number of designated group leader; and 3) hunting license number of each hunter in the group. The group leader was also required to complete and return the harvest report card for their group.

Results

Use and Harvest Report

Seventy-three percent of groups returned their harvest report. In all, 548 groups for a total of 1,644 hunters took advantage of this decoy-only hunting opportunity (figure 1). The most frequent party size was two hunters, with an average size of three hunters (table 1).

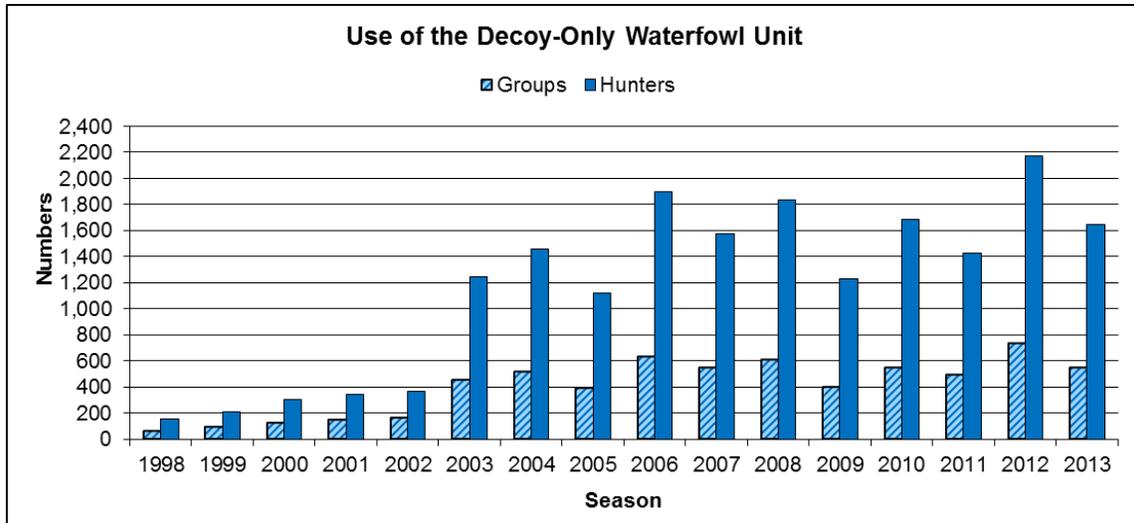


Figure 1: Use of decoy-only waterfowl unit from 1998 to 2012*
 *NOTE: maximum party size increased from 4 to 6 hunters in 2003

An estimated total of 1,958 Canada geese were harvested in 2013 (figure 2). Sixty-four percent of the groups harvested one or more Canada geese in 2013, and the average number harvested per group was 3.6 (1.3 per hunter). The 2013 harvest rate was down from 2012, which was the highest harvest rate during the period from 1998 to 2012 (figure 3 and table 2). Fourteen percent of the groups returning a harvest report card harvested their limit of Canada geese, down from 37 percent in 2012.

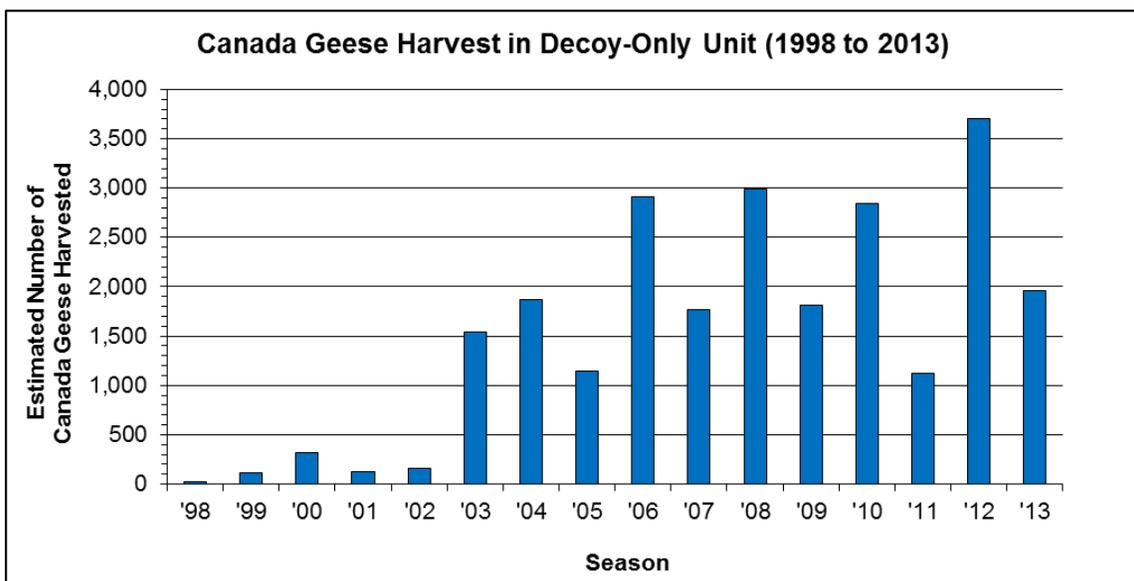


Figure 2: Estimated number of Canada geese harvested – decoy-only waterfowl unit (1998 to 2013)

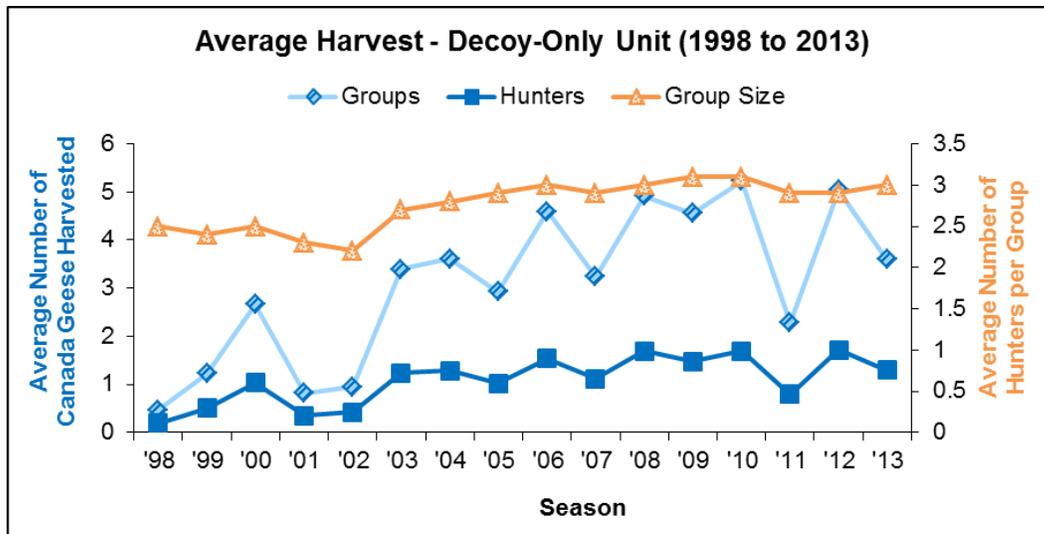


Figure 3: Average number of Canada geese harvested - decoy-only waterfowl unit (1998 to 2013)

Hunting groups' average satisfaction rating in 2013 was lower than the average rating in 2012, however, it was statistically similar to the average satisfaction ratings from 2003 to 2011 (figure 4). Most (82%) of the hunting groups were satisfied with their hunting experiences, with 55 percent being *very satisfied*; only 4 percent reported they were dissatisfied (table 3). Percent satisfied, as reported by the group leader, has been relatively high for the last eleven years (figure 5).

Field Use

The number of fields available for hunting steadily increased from 19 in 2002 to 43 in 2013. Field 69 (figure 6) received the highest use (11%) followed by fields 38 (10%), 16 (9%), and 75 with 7 percent (table 4). The highest reported total harvests (geese and ducks) were in fields 69 (263 geese and ducks), 75 (176 geese and ducks), 38 (123 geese and ducks), and 16 (103 geese and ducks) accounting for 46 percent of the total reported harvest. Groups reported harvesting zero geese or ducks in four fields: fields 25 (1 group; 5 hunters), 26 (4 groups; 10 hunters), 57 (5 groups; 15 hunters), and 91 (1 group; 5 hunters). In the case of fields 26 only two of the four registered groups returned their harvest report card, and four of the five registered groups in field 57 returned a harvest report card.

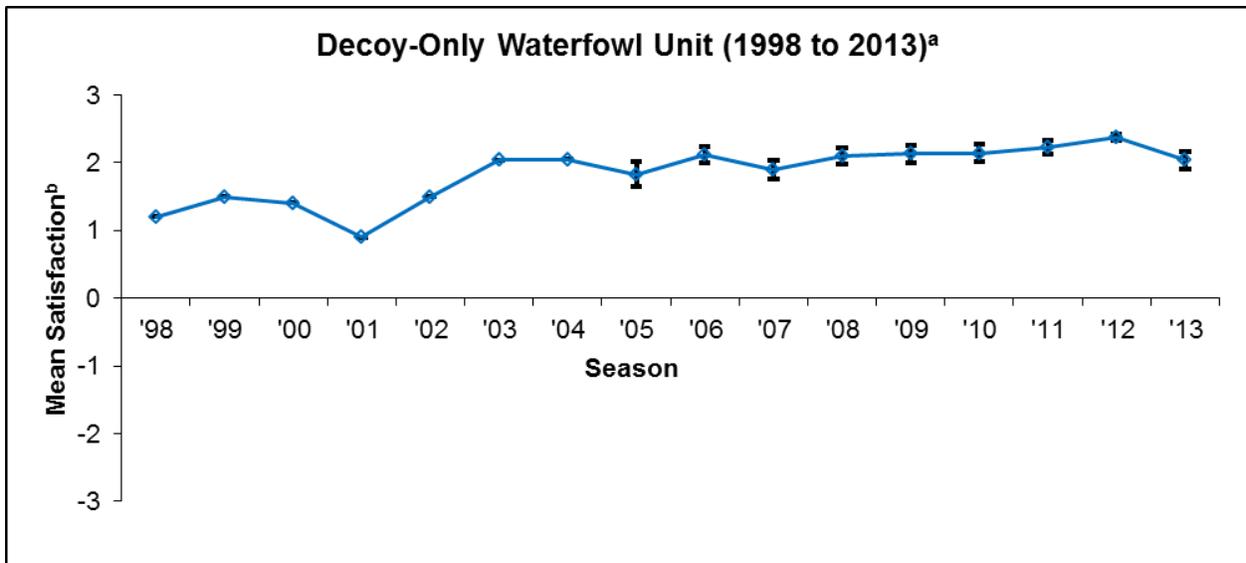


Figure 4: Mean satisfaction of hunters - decoy-only waterfowl unit (1998 to 2013)

^a. Error bars represent 95% confidence intervals

^b. Scale: -3 Very Dissatisfied; -2 Moderately Dissatisfied; -1 Slightly Dissatisfied; 0 Neutral; 1 Slightly Satisfied; 2 Moderately Satisfied; 3 Very Satisfied

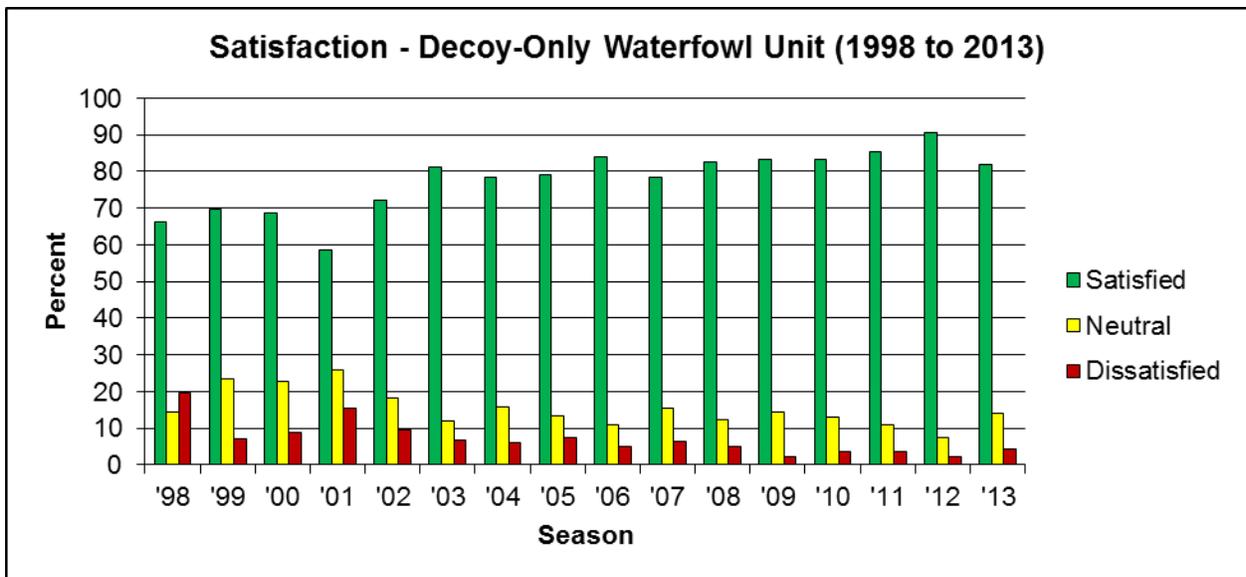


Figure 5: Hunter satisfaction - decoy-only waterfowl unit (1998 to 2013)

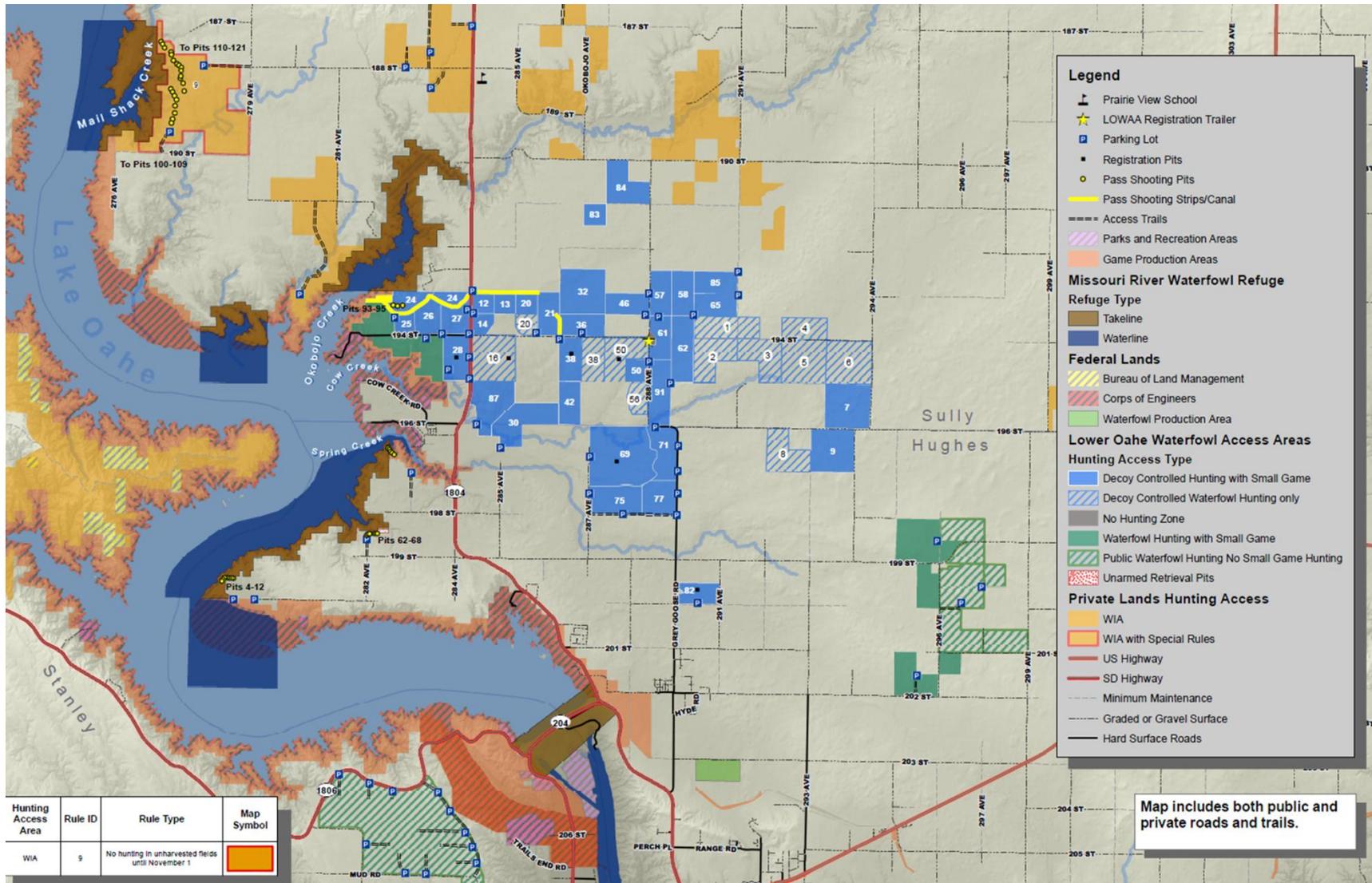


Figure 6: Lower Oahe waterfowl access area field map^a

^a South Dakota 2013 Hunting Atlas: Including Lower Oahe Waterfowl Access Area. South Dakota Game, Fish, and Parks: Pierre, SD

Satisfaction and Harvest

Hunter satisfaction was significantly related to harvest success (figure 7; table 5).

Despite not harvesting any geese or ducks, 65 percent of unsuccessful hunting groups (64% of unsuccessful hunters) reported they were satisfied with their experience (figure 8). The level of satisfaction significantly increased with harvest success; however, caution should be exercised in interpreting this statistic, as the sample size of dissatisfied hunting groups, regardless of harvest success (n=17) was small.

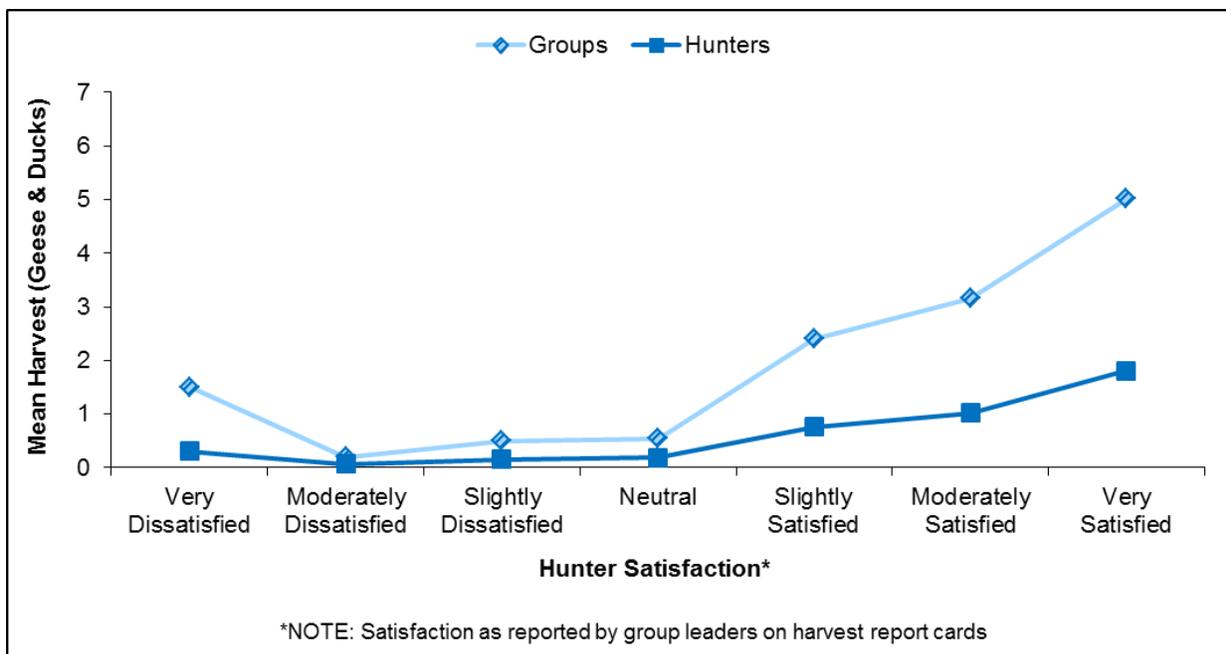


Figure 7: Mean total harvest (geese and ducks) and hunter satisfaction - decoy-only waterfowl unit (2013)

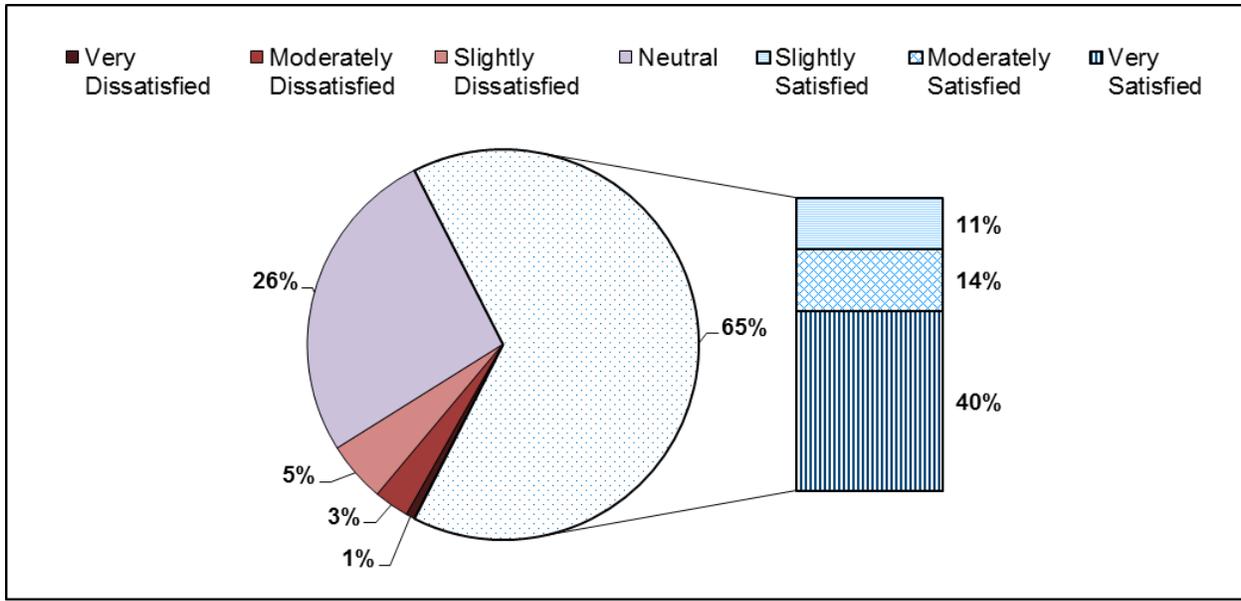


Figure 8: Percent of unsuccessful hunting groups (n=140) in the decoy-only waterfowl unit by satisfaction level (2013)

Use Trends

The decoy-only waterfowl unit was open for 104 days during the 2013 season, 33 percent of which were weekends or holidays. Saturdays had the highest frequency of registered hunting groups (26%), followed by Sundays (20%), and Fridays with 17 percent (figure 9). Wednesdays (8.3%) and Tuesdays (7.9%) had the fewest registered hunting groups. The operation of the decoy-only waterfowl unit was divided into 7 approximately equal length time periods (table 7). In 2013, use was relatively slow during November, accounting for 7 percent of registered hunting groups. Forty percent of registered groups hunted during December, 43 percent in January, and 11 percent during February. The highest total harvest rates (geese and ducks) occurred during early December (12/1 to 12/15), with 5.4 per group and 1.6 per hunter.

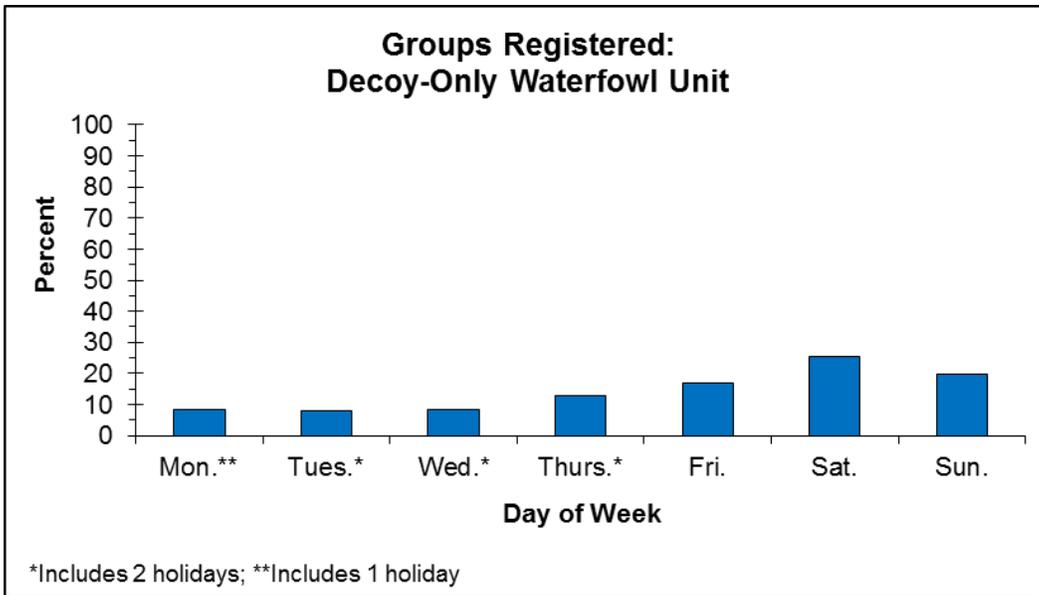


Figure 9: Frequency of groups hunting the decoy-only waterfowl unit by days of week

Group leaders were asked to indicate their place of residence when registering (table 8). Hunting groups indicating residence in Pierre and Fort Pierre were considered to be local hunters in this analysis. The majority of hunting groups (60%) indicated a non-local residence, of which 4 groups were from out of state. Hunting license numbers for each hunter in a group were used to identify unique hunters and their place of residence. Figure 10 shows the number of unique hunters travelling to the decoy-only waterfowl unit from their respective hometowns.

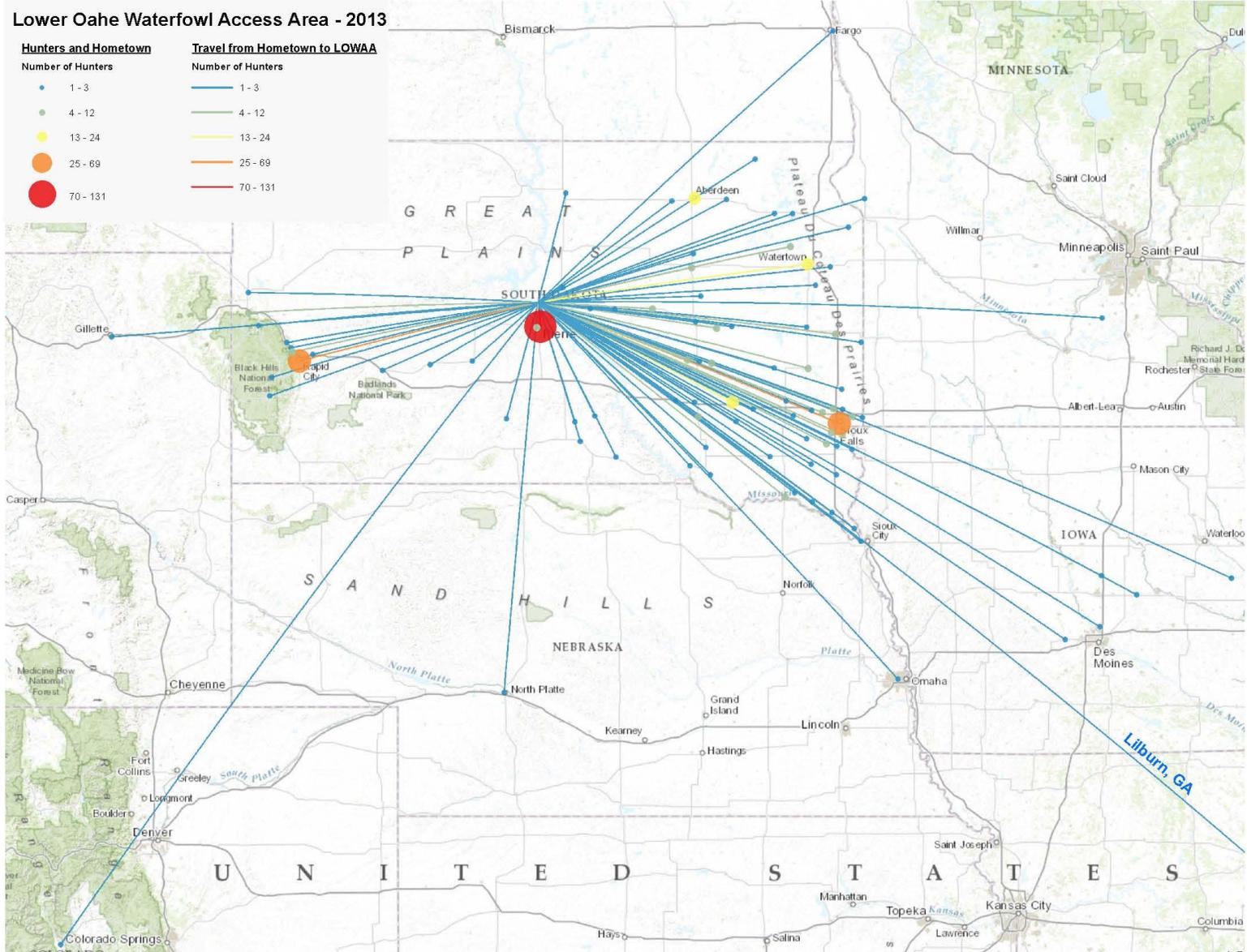


Figure 10: Hunters traveling to decoy-only waterfowl unit and their respective hometowns

A new program was introduced for the Lower Oahe Waterfowl Hunting Area for the 2013-2014 waterfowl season. South Dakota Game, Fish, and Parks, along with several sponsors³, purchased an enclosed trailer and contents, which consisted of five dozen full body decoys, two dozen shell decoys, four layout blinds, two goose flags, a goose call, and hearing and eye protection (figure 11). Hunters were able to reserve this trailer by signing up on the SDGFP-LOWAA Trailer Doodle page, which could be accessed through the Lower Oahe Waterfowl Hunting page on the GFP website. The loaner trailer was reserved for use 60 percent of the total available days during the season; however, due to extreme cold temperatures 26 percent of the days reserved (16% of available days) were cancelled (figure 12, table 9). Across the entire season the loaner trailer was used on 44 percent of the available days. January saw the highest use with 71 percent, followed by December with 51 percent. November had the lowest rate of reservations with 17 percent of available days, while the remaining months had 70 percent or greater. Finally, Thursday and Saturdays had the highest use rate with 60 percent (figure 13).



Figure 11: Photo of decoy loaner trailer

³ Sponsors who helped with this project include: HuntSAFE, TIPS, DOA Decoys, Big Foot Decoys, Cabela's, Banded, Delta Waterfowl-Fowled Up Chapter, Pheasants Forever, and M&R Signs.

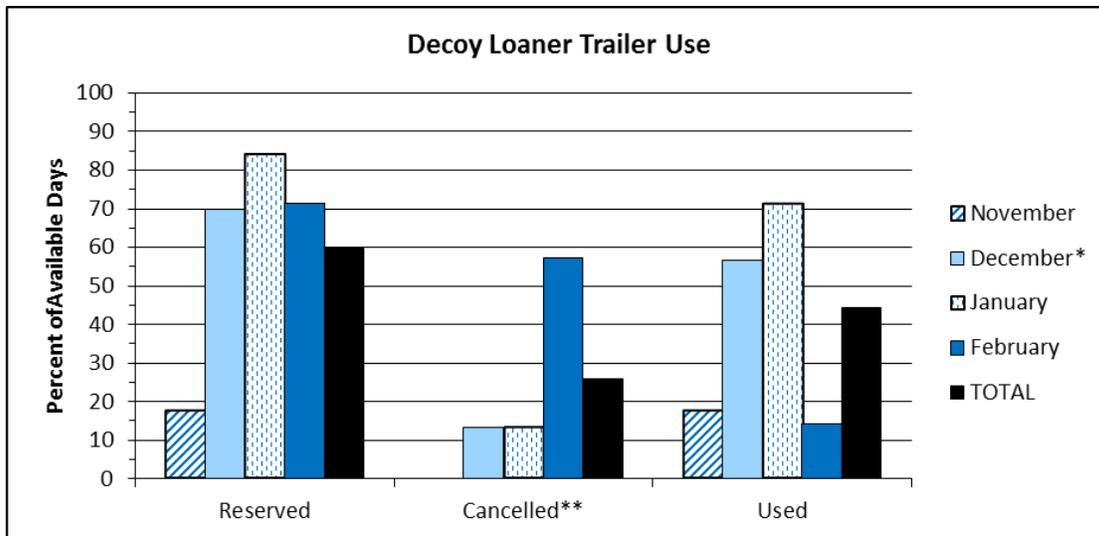


Figure 12: Decoy loaner trailer use - percent of available days by month

*Closed December 25, 2013

**Reservations cancelled due to extreme cold temperatures

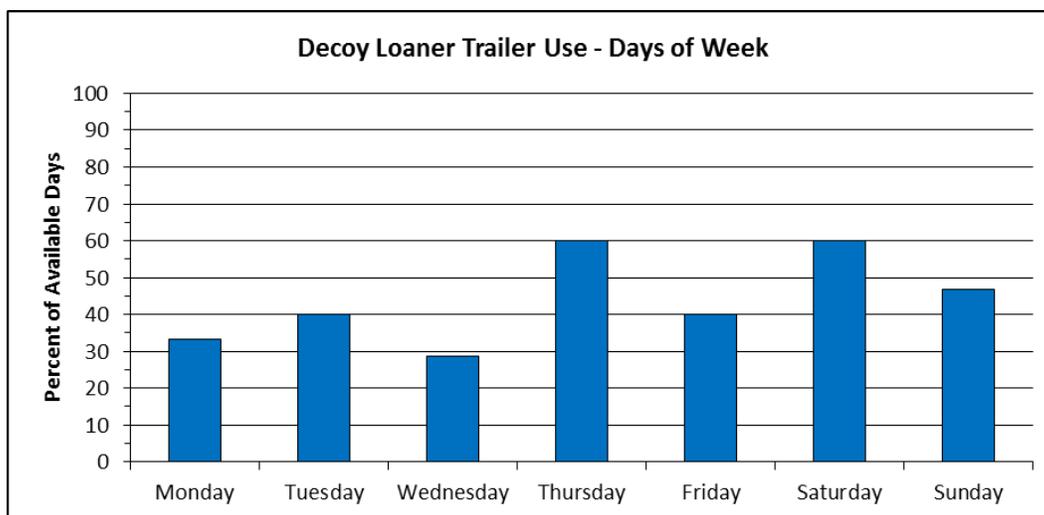


Figure 13: Decoy loaner trailer use – percent of available days by days of week

Discussion

Use and harvest at the decoy-only waterfowl unit in the Lower Oahe Waterfowl Hunting Access Area has been relatively high for the past ten years (2003 to 2013) compared to the first five years of operation (1998 to 2002). Use in 2013 was down from that in 2012 and similar to the levels seen in 2010. The use in recent years represents levels envisioned for this special goose hunting opportunity. The improvements in operations and fields, as well as numbers of

geese using the area provide a significant amount of satisfying recreational opportunity for public decoy-geese hunting in central South Dakota. Satisfaction with the use of this decoy-only waterfowl unit is strongly linked to success in harvesting geese.

Use, harvest, and hunter satisfaction with the decoy-only unit is likely a good measure of these parameters for the entire Lower Oahe Waterfowl Hunting Access Area. The target satisfaction is 80 percent or more satisfied hunters or less than 10 percent dissatisfied hunters. This year (2013) 82 percent of the hunters were satisfied and only 4 percent were dissatisfied. This information is collected during the registration process and from the group harvest report card given to the hunters during registration. While the target return rate for harvest report cards is 90 percent, the 2013 return rate of 73 percent is down from 2012 rate of 82 percent.

Tables

Table 1: Use of the decoy-only waterfowl hunting unit, measured by party size (1998 to 2013)

Party Size	1998		1999		2000		2001		2002	
	Number	Percent								
1	6	10.0	16	18.2	12	10.0	22	15.0	39	23.9
2	30	50.0	32	36.4	48	40.0	69	46.9	63	38.7
3	12	20.0	30	34.1	43	35.8	41	27.9	45	27.6
4	12	20.0	10	11.4	17	14.2	15	10.2	16	9.8
Total	60	100	88	100	120	100	147	100	163	100
Total Hunters	150		210		305		343		364	

Table 1 – continued: Use of the decoy-only waterfowl hunting unit, measured by party size (1998 to 2013)

Party Size	2003 ^a		2004		2005		2006		2007	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	69	15.1	70	13.5	49	12.5	67	10.5	73	13.4
2	172	37.7	188	36.4	139	35.6	202	31.8	183	33.6
3	101	22.2	118	22.8	89	22.8	165	25.9	132	24.2
4	64	14.0	76	14.7	60	15.3	115	18.1	79	14.5
5	28	6.1	34	6.6	36	9.2	54	8.5	44	8.1
6	22	4.8	31	6.0	18	4.6	33	5.2	34	6.2
Total	456	100	517	100%	391	100	636	100	545	100
Total Hunters	1,244		1,460		1,122		1,894		1,575	

a. The maximum number of hunters per group was increased from 4 to 6 in 2003.

Table 1 continued on next page.

Table1 – continued: Use of the decoy-only waterfowl hunting unit, measured by party size (1998 to 2013)

Party Size	2008		2009		2010		2011		2012	
	Number	Percent								
1	65	10.7	43	10.8	67	12.3	84	17.0	102	13.9
2	203	33.4	125	31.5	162	29.7	154	31.2	246	33.4
3	137	22.5	80	20.2	116	21.3	105	21.3	138	18.8
4	102	16.8	77	19.4	101	18.5	63	12.8	132	17.9
5	63	10.4	44	11.1	52	9.5	53	10.8	75	10.2
6	38	6.3	28	7.0	47	8.6	34	6.9	43	5.8
Total	608	100	397	100	545	100	493	100	736	100
Total Hunters	1,833		1,229		1,685		1,428		2,169	

Table1 – continued: Use of the decoy-only waterfowl hunting unit, measured by party size (1998 to 2013)

Party Size	2013	
	Number	Percent
1	83	15.3
2	154	28.3
3	109	20.0
4	95	17.5
5	72	13.2
6	31	5.7
Total	544	100
Total Hunters	1,644	

Table 2: Harvest by hunters using the decoy-only waterfowl hunting unit (1998 to 2013)

Party Harvest	Canada Goose Harvest ^a														
	1998 (95%) ^b			1999 (98%) ^b			2000 (98%) ^b			2001 (92%) ^b			2002 (92%) ^b		
	#	%	Total	#	%	Total	#	%	Total	#	%	Total	#	%	Total
0	45	78.9	0	56	65.1	0	51	44.0	0	93	68.9	0	95	63.3	0
1	2	3.5	2	6	7.0	6	12	10.3	12	15	11.1	15	22	14.7	22
2	6	10.5	12	5	5.8	10	7	6.0	14	10	7.4	20	11	7.3	22
3	3	5.3	9	8	9.3	24	8	6.9	24	5	3.7	15	10	6.7	30
4	1	1.8	4	1	1.2	4	6	5.2	24	4	3.0	16	3	2.0	9
5	0	0.0	0	3	3.5	15	5	4.3	25	3	2.2	15	3	2.0	15
6	0	0.0	0	6	7.0	36	10	8.6	60	5	3.7	30	4	2.7	24
7	0	0.0	0	0	0.0	0	4	3.4	28	0	0.0	0	0	0.0	0
8	0	0.0	0	0	0.0	0	2	1.7	16	0	0.0	0	1	0.7	8
9	0	0.0	0	0	0.0	0	8	6.9	72	0	0.0	0	1	0.7	9
10	0	0.0	0	0	0.0	0	1	0.9	10	0	0.0	0	0	0.0	0
11	0	0.0	0	1	1.2	11	0	0.0	0	0	0.0	0	0	0.0	0
12	0	0.0	0	0	0.0	0	2	1.7	24	0	0.0	0	0	0.0	0
Total	57	100.0	27	86	100.0	106	116	100.0	309	135	100.0	111	150	100.0	142
Estimated Total Harvest			28			108			315			121			154
Avg. Geese/Party			0.47			1.23			2.66			0.82			0.95
Avg. Geese/Hunter			0.19			0.51			1.03			0.35			0.42
Other Harvest (estimated)															
White-fronted geese			0			1			0			1			2
Light geese			1			3			1			0			3
Ducks			2			33			2			2			1

a. Hunters reported no wounding loss in 1998, while wounding 14 geese and 3 ducks in 1999, 25 geese in 2000, 6 geese in 2001, and 11 geese in 2002.

b. Percent return of harvest survey cards.

Table 2 continued on next page

Table 2 – continued: Harvest by hunters using decoy-only waterfowl hunting unit (1998 to 2013)

Party Harvest	Canada Goose Harvest ^a														
	2003 (90%) ^b			2004 (86.5%) ^b			2005 (77.5%) ^b			2006 (84.7%) ^b			2007 (80.4%) ^b		
	#	%	Total	#	%	Total	#	%	Total	#	%	Total	#	%	Total
0	125	30.5	0	158	35.3	0	129	42.6	0	131	24.3	0	171	39.0	0
1	48	11.7	48	48	10.7	48	33	10.9	33	42	7.8	42	42	9.6	42
2	42	10.2	84	32	7.2	64	28	9.2	56	58	10.8	116	40	9.1	80
3	50	12.2	150	36	8.1	108	25	8.3	75	47	8.7	141	35	8.0	105
4	19	4.6	76	16	3.6	64	10	3.3	40	28	5.2	112	17	3.9	68
5	18	4.4	90	20	4.5	100	11	3.6	55	19	3.5	95	23	5.3	115
6	47	11.5	282	53	11.9	318	19	6.3	114	66	12.3	396	36	8.2	216
7	8	2.0	56	9	2.0	63	8	2.6	56	14	2.6	98	9	2.1	63
8	6	1.5	48	7	1.6	56	3	1.0	24	11	2.0	88	9	2.1	72
9	16	3.9	144	25	5.6	225	10	3.3	90	52	9.7	468	21	4.8	189
10	3	0.7	30	4	0.9	40	2	0.7	20	4	0.7	40	6	1.4	60
11 to 12	14	3.4	167	22	4.9	261	18	5.9	212	41	7.6	484	13	3.0	152
13 to 14	3	0.7	40	3	0.7	40	1	0.3	13	4	0.7	56	1	0.2	14
15 to 16	8	2.0	122	8	1.8	120	4	1.3	60	15	2.8	227	9	2.1	136
17 to 18	3	0.7	53	6	1.3	107	2	0.7	36	6	1.1	107	6	1.4	108
Total	410	100.0	1,390	447	100.0	1,614	303	100.0	884	538	100.0	2,470	438	100.0	1,420
Estimated Total Harves			1,546			1,865			1,141			2,916			1,766
Avg. Geese/Party			3.39			3.61			2.92			4.59			3.24
Avg. Geese/Hunter			1.24			1.28			1.02			1.54			1.12
Other Harvest (estimated)															
White-fronted geese			12			1			2			6			0
Light geese			24			1			0			36			0
Ducks			12			0			22			77			4

a. Hunters reported wounding 71 geese in 2003, and 19 geese and 1 duck in 2004; however, wounding loss was not measured after January 18, 2005.

b. Percent return of harvest survey cards.

Table 2 continued on next page

Table 2 – continued: harvest by hunters using the decoy-only waterfowl hunting unit (1998 to 2013)

Party Harvest	Canada Goose Harvest ^a																	
	2008 (81.6%) ^b			2009(76.6%) ^b			2010 (71.4%) ^b			2011 (70.5%) ^b			2012 (82%) ^b			2013 ^c (73%) ^b		
	#	%	Total	#	%	Total	#	%	Total	#	%	Total	#	%	Total	#	%	Total
0	86	17.3	0	74	24.3	0	84	21.6	0	144	41.5	0	120	20.0	0	143	35.8	0
1	35	7.1	35	26	8.6	26	22	5.7	22	45	13.0	45	49	8.2	49	53	13.3	53
2	34	6.9	68	26	8.6	52	34	8.7	68	45	13.0	90	55	9.2	110	36	9.0	72
3	77	15.5	231	35	11.5	105	40	10.3	120	33	9.5	99	76	12.5	228	25	6.3	75
4	29	5.8	116	13	4.3	52	24	6.2	96	18	5.2	72	17	2.8	68	39	9.8	156
5	21	4.2	105	10	3.3	50	27	6.9	135	13	3.7	65	27	4.5	135	12	3.0	60
6	84	16.9	504	43	14.1	258	53	13.6	318	18	5.2	108	82	13.6	492	9	2.3	54
7	14	2.8	98	7	2.3	49	1	0.3	7	5	1.4	35	10	1.7	70	9	2.3	63
8	12	2.4	96	4	1.3	32	8	2.1	64	3	0.9	24	14	2.3	112	22	5.5	176
9	45	9.1	405	26	8.6	234	29	7.5	261	9	2.6	81	52	8.7	468	6	1.5	54
10	6	1.2	60	5	1.6	50	5	1.3	50	6	1.7	60	8	1.3	80	6	1.5	60
11 to 12	32	6.5	381	17	5.6	201	31	8.0	369	3	0.9	35	52	8.7	617	19	4.8	223
13 to 14	0	0.0	0	2	0.7	27	2	0.5	28	1	0.3	14	7	1.1	93	2	0.5	28
15 to 16	12	2.4	180	13	4.3	196	9	2.3	135	2	1.6	30	24	4.0	362	6	1.5	96
17 to 18	9	1.8	162	3	1.0	54	20	5.1	360	2	0.6	36	8	1.4	143	3	0.8	52
19 to 20																6	1.5	120
21 to 22																0	0.0	0
23 to 24																4	1.0	96
Total	496	100	2,441	304	100	1,386	389	100	2,033	347	100	794	601	100	3,027	400	100	1,438
Estimated Total Harvest	2,991			1,809			2,847			1,129			3,707			1,958		
Avg. Geese/Group	4.92			4.56			5.23			2.29			5.04			3.6		
Avg. Geese/Hunter	1.63			1.47			1.69			0.79			1.71			1.3		
Other Harvest (estimated)																		
White-fronted geese	0			0			1			0			0			0		
Light geese	7			0			2			0			2			0		
Ducks	45			49			66			10			61			34		

a. Hunters reported wounding 71 geese in 2003, and 19 geese and 1 duck in 2004; however, wounding loss was not measured after January 18, 2005.

b. Percent return of harvest survey cards.

c. In 2013 the daily limit for Canada geese increased to 4.

Table 3: Satisfaction with hunting at the decoy-only waterfowl unit (1998 to 2013)^a

Satisfaction	1998		1999		2000		2001		2002		2003		2004		2005	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Very Satisfied	20	35.7	25	29.1	42	36.5	33	24.4	53	35.8	218	53.2	251	56.3	153	52.8
Moderately Satisfied	6	10.7	24	27.9	21	18.3	22	16.3	29	19.6	82	20.0	60	13.5	41	14.1
Slightly Satisfied	11	19.6	11	12.8	16	13.9	24	17.8	25	16.3	33	8.0	38	8.5	35	12.1
Neutral	8	14.3	20	23.3	26	22.6	35	25.9	27	18.2	49	12.0	70	15.7	39	13.4
Slightly Dissatisfied	7	12.5	4	4.7	4	3.5	9	6.7	10	6.8	15	3.7	17	3.8	9	3.1
Moderately Dissatisfied	3	5.4	1	1.2	4	3.5	5	3.7	1	0.7	8	2.0	7	1.6	4	1.4
Very Dissatisfied	1	1.8	1	1.2	2	1.7	7	5.2	3	2.0	5	1.2	3	0.7	9	3.1
Total	56	100	86	100	115	100	153	100	148	100	410	100	446	100	290	100
Mean ^b	1.2		1.5		1.4		0.9		1.5		2.04		2.05		1.83 1.65-2.02	
SUMMARIZED RESULTS																
Satisfied	37	66.1	60	69.8	79	68.7	79	58.5	107	72.3	333	81.2	349	78.3	229	79.0
Neutral	8	14.3	20	23.3	26	22.6	35	25.9	27	18.2	49	12.0	70	15.7	39	13.4
Dissatisfied	11	19.6	6	7.0	10	8.7	21	15.6	14	9.5	28	6.8	27	6.1	22	7.6
Satisfaction	2006		2007		2008		2009		2010		2011		2012			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%		
Very Satisfied	317	58.9	228	52.1	298	60.1	179	58.9	241	62.0	231	66.6	422	70.2		
Moderately Satisfied	91	16.9	82	18.7	78	15.7	46	15.1	48	12.3	38	11.0	74	12.3		
Slightly Satisfied	36	6.7	33	7.5	34	6.9	28	9.2	35	9.0	27	7.8	48	8.0		
Neutral	57	10.6	67	15.3	61	12.3	44	14.5	51	13.1	38	11.0	44	7.3		
Slightly Dissatisfied	11	2.1	15	3.4	12	2.4	6	2.0	6	1.5	6	1.7	4	0.7		
Moderately Dissatisfied	10	1.9	6	1.4	4	0.8	1	0.3	7	1.8	6	1.7	2	0.3		
Very Dissatisfied	6	1.1	7	1.6	9	1.8	0	0.0	1	0.3	1	0.3	7	1.2		
Total	528	100	438	100	496	100	304	100	389	100	347	100	601	100		
Mean ^b	2.12 2.00-2.02		1.9 1.76-2.04		2.09 1.97-2.21		2.13 2.00-2.27		2.14 2.01-2.27		2.2 2.10-2.37		2.38 2.29-2.47			
SUMMARIZED RESULTS																
Satisfied	444	84.1	343	78.3	410	82.7	253	83.2	324	83.3	296	85.3	544	90.5		
Neutral	57	10.8	67	15.3	61	12.3	44	14.5	51	13.1	38	11.0	44	7.3		
Dissatisfied	27	5.1	28	6.4	25	5.0	7	2.3	14	3.6	13	3.7	13	2.2		

NOTE: Statistic in shaded boxes represents the 95% confidence interval for the mean satisfaction score.

a. Satisfaction level as measured by the hunt group leader

b. Scale: -3 Very Dissatisfied; -2 Moderately Dissatisfied; -1 Slightly Dissatisfied; 0 Neutral; 1 Slightly Satisfied; 2 Moderately Satisfied; 3 Very Satisfied

Table 3 continued on next page

Table 3 – continued: Satisfaction with hunting at the decoy-only waterfowl unit (1998 to 2013)^a

Satisfaction	2013	
	#	%
Very Satisfied	221	55.3
Moderately Satisfied	71	17.8
Slightly Satisfied	35	8.8
Neutral	56	14
Slightly Dissatisfied	10	2.5
Moderately Dissatisfied	5	1.3
Very Dissatisfied	2	0.5
Total	400	100
Mean ^b	2.04	1.91-2.17

SUMMARIZED RESULTS

Satisfied	327	81.8
Neutral	56	14.0
Dissatisfied	17	4.3

NOTE: Statistic in shaded boxes represents the 95% confidence interval for the mean satisfaction score.

a. Satisfaction level as measured by the hunt group leader

b. Scale: -3 Very Dissatisfied; -2 Moderately Dissatisfied; -1 Slightly Dissatisfied; 0 Neutral; 1 Slightly Satisfied; 2 Moderately Satisfied; 3 Very Satisfied

Table 4: Field hunted and total harvest (geese & ducks) in the Lower Oahe Waterfowl Access Area - Decoy-Only Unite (2013)

Field Number	Times Hunted	Percent	Cards Returned	Reported Harvest	Harvest Percent
1	5	0.9	2	4	0.3
2	8	1.5	5	5	0.3
3	3	0.6	2	8	0.5
4	0	-	-	-	-
5	0	-	-	-	-
6	0	-	-	-	-
7	6	1.1	4	6	0.4
8	5	0.9	4	3	0.2
9	5	0.9	4	52	3.6
12	6	1.1	4	16	1.1
13	0	-	-	-	-
14	3	0.6	2	8	0.5
16	50	9.2	41	103	7.1
20	0	-	-	-	-
21	0	-	-	-	-
24	0	-	-	-	-
25	1	0.2	1	0	-
26	4	0.7	2	0	-
27	0	-	-	-	-
28	25	4.6	23	59	4.1
30	18	3.3	14	57	3.9
32	18	3.3	12	39	2.7
36	0	-	-	-	-
38	54	9.9	42	123	8.4
42	20	3.7	15	45	3.1
46	8	1.5	4	15	1.0
50	33	6.1	19	79	5.4
56	2	0.4	2	14	1.0
57	5	0.9	4	0	-
58	9	1.7	7	14	1.0
61	0	-	-	-	-
62	31	5.7	19	45	3.1
65	2	0.4	2	5	0.3
69	57	10.5	52	263	18.1
71	16	2.9	12	68	4.7
75	38	7.0	22	176	12.1
77	27	5.0	17	71	4.9
82	35	6.4	26	89	6.1
83	0	-	-	-	-
84	1	0.2	1	8	0.5
85	10	1.8	7	16	1.1
87	37	6.8	28	65	4.5
91	1	0.2	1	0	-
Total	543	100	400	1456	100

a. See figure 6 or the 2013 Lower Oahe Waterfowl Hunting Access Guide for maps of location of these fields.
b. The total (includes Canada, White-fronted, light geese, and ducks) is based on the returned harvest report cards, not the total estimated harvest.

Table 5: Hunting group mean total harvest rate (geese and ducks) by satisfaction (2013)

Satisfaction	Mean Harvest	95% C.I.	Number Groups	Total Harvested	Unsuccessful
Very Satisfied	5.0	4.26 to 5.78	221	1,109	25%
Moderately Satisfied	3.2	2.38 to 3.93	71	224	27%
Slightly Satisfied	2.4	1.29 to 3.51	35	84	46%
Neutral	0.5	0.25 to 0.82	56	30	66%
Slightly Dissatisfied	0.5	-0.20 to 1.20	10	5	70%
Moderately Dissatisfied	0.2	-0.36 to 0.76	5	1	80%
Very Dissatisfied	1.5	-17.56 to 20.56	2	3	50%
Mean/Total	3.64	3.16 to 4.12	400	1,456	33%

ANOVA: $f(6, 399) = 9.282; p < 0.001$

Table 6: Decoy-only waterfowl unit use by days of the week (2013)

Day of Week	Groups Hunting		Total Days in Period	
	#	%	#	%
Monday	30	7.5	13	12.5
Tuesday	33	8.3	14	13.5
Wednesday	28	7.0	13	12.5
Thursday	44	11.0	14	13.5
Friday	69	17.3	15	14.4
Saturday	107	26.8	15	14.4
Sunday	75	18.8	15	14.4
Holiday	14	3.5	5	4.8
Total	400	100.0	104	100.0

SUMMARIZED RESULTS

Weekends & Holidays	196	49.0	35	33.7
Weekdays	204	51.0	69	66.3

a. The first use day was November 02, 2013. The registration trailer operated through February 14, 2014 (closed December 25th).

Table 7: Use and Harvest (geese & ducks) in the decoy-only waterfowl units by time period

Time Period	Weekend & Holidays	Weekdays	Total	Groups		Harvest		Rate/Party
				#	Daily	#	Daily	
Nov. 02-15	5	9	14	5	0.4	9	0.6	1.8
Nov. 16-30	6	9	15	21	1.4	79	5.3	3.8
Dec. 01-15	5	10	15	74	4.9	397	26.5	5.4
Dec. 16-31	5	10	15	100	6.7	314	20.9	3.1
Jan. 01-15	5	10	15	81	5.4	274	18.3	3.4
Jan. 16-31	5	11	16	77	4.8	264	16.5	3.4
Feb. 01-14	4	10	14	42	3.0	119	8.5	2.8
Total/Avg.	35	69	104	400	3.8	1456	14.0	3.6

Table 8: Group leaders' city/town of residence

City/Town	Number	City/Town	Number	
Pierre	218			Total Local: 229 (40%)
Ft. Pierre	11			
Rapid City	68	Mission Hill	2	
Sioux Falls	66	Waubay	2	
Mitchell	41	Webster	2	
Watertown	19	Ashton	1	
Arlington	12	Conde	1	
Brandon	11	Goodwin	1	
Aberdeen	10	Hitchcock	1	
Spearfish	9	Humboldt	1	
Crooks	7	Ideal	1	
Madison	7	Plankington	1	
Redfield	7	Valley Springs	1	
Harrisburg	6	White River	1	
Black Hawk	5	Winner	1	
Miller	5	Wolsey	1	Total Non-Local: 344 (60%)
Stickney	5	Out of State	4	
Yankton	5			
Canistota	4			
Gregory	4			
Lennox	4			
Dakota Dunes	3			
Huron	3			
Parker	3			
Piedmont	3			
Tea	3			
Wessington Sp	3			
Brookings	2			
Cavour	2			
Ethan	2			
Lake City	2			
Menno	2			

Table 9: Decoy Loaner Trailer Use

	Days Reserved	Days Available	Days Cancelled	Days Used	% Reserved	% Cancelled	% Used
November	5	29	0	5	17	0	17
December	21	30	4	17	70	13	57
January	26	31	4	22	84	13	71
February	10	14	8	2	71	57	14
Total	62	104	16	46	60	26	44
Monday		15		5			33
Tuesday		15		6			40
Wednesday		14		4			29
Thursday		15		9			60
Friday		15		6			40
Saturday		15		9			60
Sunday		15		7			47

NOTE: Trailer reservations cancelled some days due to extremely cold temperatures.