

Alberta Waterfowl Crop Damage Prevention Program, 2008

**CONSERVATION
REPORT
SERIES**



*The Alberta Conservation Association is a Delegated Administrative
Organization under Alberta's Wildlife Act.*



25% Post Consumer Fibre

When separated, both the binding and paper in this document are recyclable

Alberta Waterfowl Crop Damage Prevention Program, 2008

Velma Hudson
Alberta Conservation Association
#316, 5025 - 49 Avenue
St. Paul, Alberta, Canada
T0A 3A0



Report Editors

DOUG MANZER
Alberta Conservation Association
Box 1139, Provincial Building
Blairmore, AB T0K 0E0

KELLEY KISSNER
50 Tuscany Meadows Crescent NW
Calgary, AB T3L 2T9

Conservation Report Series Type

Data

ISBN printed: 978-0-7785-8483-4

ISBN online: 978-0-7785-8484-1

Publication No.: I/356

Disclaimer:

This document is an independent report prepared by the Alberta Conservation Association. The authors are solely responsible for the interpretations of data and statements made within this report.

Reproduction and Availability:

This report and its contents may be reproduced in whole, or in part, provided that this title page is included with such reproduction and/or appropriate acknowledgements are provided to the authors and sponsors of this project.

Suggested Citation:

Hudson, V. 2009. Alberta waterfowl crop damage prevention program, 2008. Data Report, D-2009-007, produced by the Alberta Conservation Association, St. Paul, Alberta, Canada. 10 pp + App.

Cover photo credit: David Fairless

Digital copies of conservation reports can be obtained from:

Alberta Conservation Association
101 - 9 Chippewa Road
Sherwood Park, AB T8A 6J7
Toll Free: 1-877-969-9091
Tel: (780) 410-1999
Fax: (780) 464-0990
Email: info@ab-conservation.com
Website: www.ab-conservation.com

EXECUTIVE SUMMARY

The Waterfowl Crop Damage Prevention Program (WCDPP) provides assistance to Alberta grain producers in reducing or preventing damage to cereal crops caused by waterfowl during the fall migration period. Damage prevention is accomplished through provision of alternate feed for waterfowl at feeding stations and lure crops, provision of waterfowl scaring equipment for producers to borrow free-of-charge, and waterfowl scaring advice available through print media, the internet and WCDPP coordinators.

Alberta Conservation Association (ACA), Environment Canada (EC) and Alberta Sustainable Resource Development (ASRD) collaboratively plan the WCDPP; ACA delivers the program, while program funding has been traditionally cost-shared between ACA and EC.

In 2008/09, EC was unable to commit to cost-sharing of the WCDPP prior to implementation of program activities. Consequently, ACA delivered a modified program that provided scare cannons through distribution centres, but did not operate waterfowl feeding stations. One exception was a lure crop planted near Prouty Lake. This crop was planted in April 2008, prior to program modification, and therefore was swathed and used as a lure crop. We estimated 350 bushels of barley were consumed providing 33,600 days of duck feeding.

Scaring equipment was available for producers to borrow at 46 locations throughout the white zone (settled area) of Alberta. Scare cannon distribution centres operated for an average of 82 days. We loaned a total of 144 cannons to 75 landowners for use on at least 128 different quarter sections of land. Thirty-five percent of landowners who borrowed scare cannons agreed to allow their contact information to be provided to waterfowl hunters. We provided scare cannon request information to waterfowl enthusiasts through weekly updates on an ACA waterfowl web page.

Key words: waterfowl, crop damage prevention, Alberta, cereal grain, ducks, geese, cranes.

ACKNOWLEDGEMENTS

The delivery and direction of this program benefited greatly from the efforts of regional program coordinators: Mike Grue, Jim Potter, Amanda Rezanoff and Ken Wright. Thanks to Jim Allen (Alberta Sustainable Resource Development) and Doug Manzer for their efforts in developing and supporting the 2008 Waterfowl Crop Damage Prevention Program. Thanks also to Doug Manzer and Amanda Rezanoff for reviewing this report and providing valuable editorial suggestions.

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	ii
ACKNOWLEDGEMENTS.....	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES.....	v
LIST OF TABLES.....	vi
LIST OF APPENDICES	vii
1.0 INTRODUCTION	1
1.1 General introduction.....	1
1.2 Waterfowl crop damage compensation	1
1.3 Waterfowl crop damage prevention	2
2.0 STUDY AREA.....	2
2.1 Description	2
3.0 MATERIALS AND METHODS	4
3.1 Regional organization.....	4
3.2 Provision of alternate feed.....	4
3.3 Scare cannon distribution centres	5
3.4 Waterfowl web page.....	6
4.0 RESULTS	6
4.1 Provision of alternate feed.....	6
4.2 Scare cannon distribution centres	7
4.3 Waterfowl web page.....	7
4.4 Program expenditures.....	7
5.0 LITERATURE CITED	10
6.0 APPENDICES.....	11

LIST OF FIGURES

Figure 1. Map of Alberta Waterfowl Crop Damage Prevention Program 2008 operational areas showing regions, distribution centres and the location of the lure crop.	3
--	---

LIST OF TABLES

Table 1.	Waterfowl Crop Damage Prevention Program feeding station and lure crop locations.	4
Table 2.	Alberta Waterfowl Crop Damage Prevention Program expenditures for 2008.	9

LIST OF APPENDICES

Appendix 1.	The location of distribution centres and number of scare cannons lent to producers during the 2008 Waterfowl Crop Damage Prevention Program in Alberta.	11
Appendix 2.	2008 Waterfowl Crop Damage Prevention Program distribution centre operation costs.	14

1.0 INTRODUCTION

1.1 General introduction

Alberta is a major nesting and staging area for many species of waterfowl, including ducks, geese and cranes (Salt and Salt 1976; Poston et al. 1990; Federation of Alberta Naturalists 1992). Waterfowl are opportunistic feeders and their fall migration period tends to coincide with the harvest season for cereal grains in Alberta (Federation of Alberta Naturalists 1992), creating the potential for significant waterfowl damage to unharvested grain crops across the province. Most grain producers tolerate a certain amount of waterfowl damage to crops; however, when that damage becomes severe or recurrent, producers may become intolerant of waterfowl and the damage they cause (Renewable Resources Consulting Services 1969). Consequently, producers may become less receptive to programs aimed at enhancing or protecting waterfowl and their habitat. To address producers' concerns over the potential damage from waterfowl, compensation and prevention programs have been functioning in the province since 1961.

1.2 Waterfowl crop damage compensation

In 1961, the Government of Alberta established the Wildlife Damage Fund, funded by sportsmen license fees, to make compensation for crop damage caused by waterfowl available to Alberta grain producers without the payment of crop insurance premiums. Initially, the compensation payable was the lesser of \$15/acre or 50% of the value of the lost crop. In 1973, the rate was increased to the lesser of \$25/acre or 75% of the value of the lost crop. The rate was adjusted once more in 1978 to the lesser of \$50/acre or 75% of the value of the lost crop. From 1983 to 1990, the compensation rate was adjusted annually with a maximum payment of 75% of the value of the lost crop. The signing of the North American Waterfowl Management Plan in the late 1980s increased the need for an improved compensation program. Discussions between various governments, producers and crop insurance agencies culminated in the development of a compensation program that paid a flat rate of 80% of the value of the crops lost to waterfowl damage from 1991 to 1999. In 2000, waterfowl damage compensation was changed again to the present rate of 100% of the commercial value of the crop damaged (Ken Lungle, Alberta Sustainable Resource Development (ASRD), pers. comm.).

1.3 Waterfowl crop damage prevention

In 1970, an experimental waterfowl damage prevention program was initiated by the Alberta Government in the Grande Prairie area (Burgess 1973). The purpose of this program was to determine if a waterfowl scaring program, in combination with the provision of feeding sites, would prevent or minimize crop damage. Ultimately, the goal was to determine whether the prevention program would be economically efficient by preventing crop damage instead of making compensation payments after the damage was done. With the success of the experimental program, a waterfowl damage prevention program was expanded into areas of the province where depredation losses had been both severe and recurrent. Currently, the Waterfowl Crop Damage Prevention Program (WCDPP) delivers damage prevention assistance in all grain producing areas of the province. Mallards (*Anas platyrhynchos*), northern pintails (*Anas acuta*), Canada geese (*Branta canadensis*), white-fronted geese (*Anser albifrons*), snow geese (*Chen caerulescens*) and sandhill cranes (*Grus canadensis*) are the primary waterfowl species targeted by the WCDPP.

Alberta Conservation Association (ACA) has delivered the WCDPP since 1997 and has shared costs with Environment Canada (EC) during this period, with the exception of 2008. In 2008, EC was unable to commit to sharing program costs prior to implementation of activities. Consequently, ACA delivered a modified program that provided scare cannons through distribution centres, but did not operate waterfowl feeding stations. One exception was the provision of a lure crop near Prouty Lake that was planted in April prior to program modification.

2.0 STUDY AREA

2.1 Description

The WCDPP is delivered throughout the white zone (settled area) of Alberta. Damage prevention activities are delivered through provision of alternate feed at feeding stations and lure crops, and loaning of equipment through scare cannon distribution centres (Figure 1).

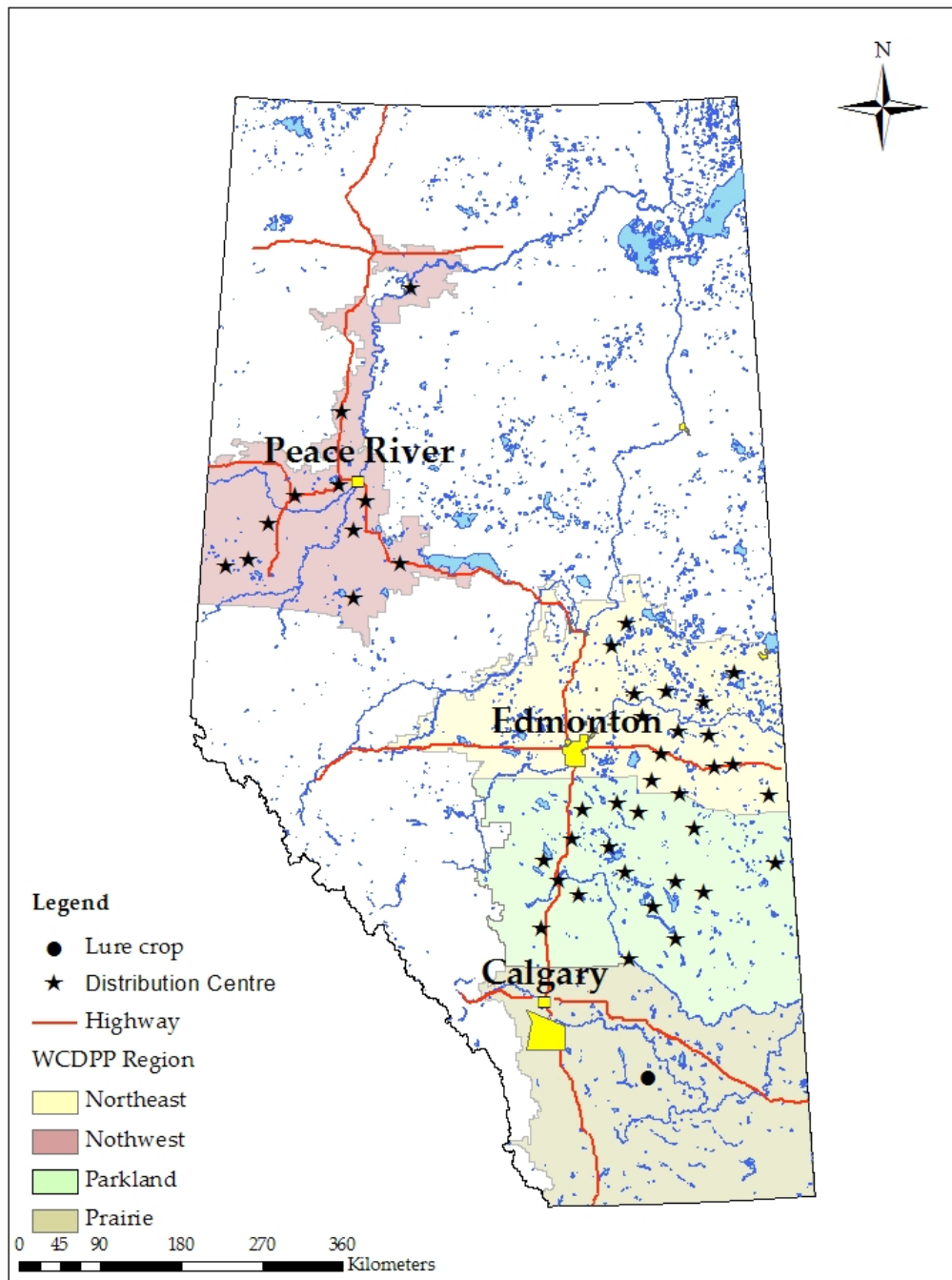


Figure 1. Map of Alberta Waterfowl Crop Damage Prevention Program 2008 operational areas showing regions, distribution centres and the location of the lure crop.

3.0 MATERIALS AND METHODS

3.1 Regional organization

Four regional coordinators (Northwest, Northeast, Parkland, and Prairie regions) deliver the WCDPP under the direction of a provincial coordinator. In the Prairie region, damage prevention activities include the provision of alternate feed for waterfowl. In the Northwest, Northeast, and Parkland regions, WCDPP activities consist of scare cannon distribution centres (Figure 1).

3.2 Provision of alternate feed

Provision of alternate feed for waterfowl consists of either a feeding station where shelled barley is spread along a portion of lakeshore, or a lure crop where a mature barley crop is swathed and left in the field for waterfowl to consume. Feeding stations are used primarily by ducks, whereas both ducks and geese use lure crops. Hunting within 400 m of these sites is prohibited in order to avoid disturbing birds that have adjusted to the area. We have twelve traditional feeding stations and one lure crop location established across the province (Table 1).

Table 1. Waterfowl Crop Damage Prevention Program feeding station and lure crop locations.

Feeding station	Feeding station land location
San Diego Lake	SW 29-15-17 W4
Badger Lake	NE 29-16-18 W4
Lost Lake	E 6-14-17 W4
Grantham Lake	SE 14-13-15 W4
Stirling Lake	NE 6-7-19 W4
Namaka Lake	NE 12-23-24 W4
Bashaw	SE 2-42-21 W4
Lac Brosseau	NE 13-56-12 W4
Flat Lake	NE 22-65-20 W4
La Glace	NW 7-74-8 W6
Buffalo Lake	NE 2-74-7 W6
Lac Cardinal	SW 15-84-24 W5
Prouty Lake (lure crop)	SE 18-15-18 W4

3.2.1 Feeding stations

Environment Canada was unable to commit to cost-sharing expenses by the date necessary for us to initiate the full range of traditional feeding activities. Therefore, we were not able to deliver the feeding station component of the program in 2008.

3.2.2 Lure crop

Lure crop operation consists of a local producer contracted to plant and swath the crop of barley used for luring waterfowl. When the feeding period at the lure crop is completed, the contractor harvests the remaining swaths and either transports the barley to nearby WCDPP granaries or it is sold by ACA. Due to unpredictable use by birds, lure crops have been discontinued in all traditional sites except at Prouty Lake in the Bow River Irrigation District (BRID) (Table 1).

The WCDPP traditionally uses a consumption rate estimate of 0.5 lb of barley per duck per day at a feeding station (Ken Lungle, ASRD, pers. comm.). Days of duck feeding are calculated by multiplying the number of bushels of barley fed by 48 lb (the average weight of a bushel of barley) and dividing by the consumption estimate.

3.3 Scare cannon distribution centres

Scare cannon distribution centres are located in local businesses, ACA offices and ASRD district offices. Cannons may be borrowed free-of-charge by producers with waterfowl damage problems. For each borrowed cannon, the distribution centre operator collects a damage deposit (which is returned to the borrower if the cannon is returned in good condition), location of crop damaged land, crop type, species causing damage, and whether or not the borrower will permit their contact information to be provided to interested waterfowl hunters. Regional WCDPP coordinators collect weekly summaries from distribution centres. In 2008, distribution centre contractors were paid \$300 for storing cannons for the season plus \$10 for each cannon distributed. Alberta Sustainable Resource Development offices that served as distribution centres provided this service to ACA free-of-charge.

3.4 Waterfowl web page

To help prevent crop damage, producers could allow hunting in their fields. Hunters can provide waterfowl scaring assistance to crop producers as hunting typically frightens waterfowl from these fields. Feedback from producers suggests that they often do not know how to contact waterfowl hunters, while hunters desire access to land with waterfowl concentrations.

The WCDPP used a website to assist waterfowl hunters in locating potential areas of waterfowl concentrations and to assist producers with waterfowl crop damage prevention. The web page contained information on the WCDPP, a downloadable fact sheet on waterfowl crop damage prevention strategies, and a link to a provincial map which visually displays the number of requests for waterfowl crop damage prevention assistance received weekly from scare cannon distribution centres. The number of requests for assistance can indicate areas of waterfowl concentration. Each distribution centre was colour-coded according to the number of requests for waterfowl crop damage prevention assistance received. The viewer was able to click on a region of interest and view more detailed information on the number of requests for assistance received in the past week, plus the total number of requests based on individual reporting areas. Contact information for regional coordinators was listed, and viewers were encouraged to contact the appropriate coordinator for contact information of the receptive farmers in areas of crop damage. Information on the web page was updated weekly from 15 August to 31 October in 2008.

4.0 RESULTS

4.1 Provision of alternate feed

We assisted the BRID in developing a newsletter informing BRID clients about the suspension of feeding operations in 2008. We also developed a 'Question and Answer' sheet to address producer concerns regarding suspension of the feeding program, including suggested prevention strategies for dealing with waterfowl crop damage in

traditional feeding areas. This 'Question and Answer' sheet was provided to ASRD district offices to respond to any inquiries about feeding stations.

Program coordinators received six enquiries from the public (producers) regarding suspension of feeding activities in 2008. These producers were provided information on the WCDPP, as well as offered assistance through use of scare cannons and waterfowl hunters to assist with waterfowl crop damage prevention.

The Prouty Lake lure crop was planted in April 2008, prior to program modification, and therefore was swathed and used as a lure crop. We estimated 350 bushels of barley was consumed providing 33,600 days of duck feeding.

4.2 Scare cannon distribution centres

Scare cannons were available at 35 contracted businesses, nine ASRD district offices, and two ACA offices for a total of 46 locations. Detailed information on distribution centre use and cost is contained in Appendices 1 and 2. The distribution centres operated for an average of 82 days, beginning first to mid August and finishing in mid October through November depending on the area. In total, 144 cannons were loaned out to 75 landowners for use on at least 128 different quarter sections of land. Thirty-five percent of the landowners indicated they would allow their contact information to be provided to waterfowl hunters.

4.3 Waterfowl web page

We received 340 visits to our waterfowl web page from 3 August to 30 November. One waterfowl hunter contacted WCDPP coordinators requesting additional information directly through the web page. Two additional requests for information were received from waterfowl hunters, but not as a result of the web page.

4.4 Program expenditures

The 2008 program expenditure represents the total amount of funds spent on the WCDPP between 1 April 2008 and 31 March 2009. Data provided by field personnel indicated that the total WCDPP program expenditure during 2008/09 amounted to

\$92,490 (Table 2). This value was within the amount budgeted from ACA levy funds. Lower than anticipated costs can be attributed to good harvest weather, which allowed producers to harvest their crops quickly and reduced the opportunity for waterfowl damage. Relatively low use of scare cannons from distribution centres reduced the contract amounts for this service. Finally, the program was delivered in a conservative manner to ensure that we did not overspend our revised budget.

Table 2. Alberta Waterfowl Crop Damage Prevention Program expenditures in 2008.

	Proposed budget	Actual expenditure
Feeding operations		
Coordinator salary/benefit		\$1,338
Vehicle operation		\$79
Telephone		\$57
Feed station site rental		\$811
Feed station feeding contracts		
Feed station grain		
Lure crop		\$4,822
Field supplies/equipment		\$25
Subtotal	\$12,236	\$7,132
Scare cannon distribution		
Coordinator salaries/benefits		\$42,019
Advertising		
Vehicle operation		\$13,059
Phone (cell and long distance)		\$787
Office/field supplies		\$69
Travel expenses		\$307
Distribution centre contracts		\$11,783
Cannon shipping		\$623
Field supplies/equipment repair		
Subtotal	\$149,376	\$68,648
Administration		
Provincial coordinator salaries/benefits		\$12,592
Vehicle operation		\$3,845
Phone (cell and long distance)		\$143
Office/field supplies		\$131
Travel expenses		
Miscellaneous		
Subtotal	\$23,373	\$16,710
Total budget	\$184,985	\$92,490

5.0 LITERATURE CITED

Burgess, T.E. 1973. A summary of Alberta crop damage control effort with consideration for a province-wide program. Unpublished report. Alberta Recreation Parks and Wildlife Division, Edmonton, Alberta, Canada. 43 pp.

Federation of Alberta Naturalists. 1992. The atlas of breeding birds of Alberta. Federation of Alberta Naturalists, Edmonton, Alberta, Canada. 391 pp.

Poston, B., D.M. Ealey, P.S. Taylor and G.B. Keating. 1990. Priority migratory bird habitats of Canada's Prairie provinces. Catalogue No. CW66-107/1990E, Canadian Wildlife Service, Environment Canada, Edmonton, Alberta, Canada. 107 pp.

Renewable Resources Consulting Services Ltd. 1969. A Study of Waterfowl Damage to Commercial Grain Crops in Alberta. Report to Alberta Department of Lands and Forests, Edmonton, Alberta, Canada. 166 pp.

Salt, W.R., and J.R. Salt. 1976. The birds of Alberta. Hurtig Publishers, Edmonton, Alberta, Canada. 498 pp.

6.0 APPENDICES

Appendix 1. The location of distribution centres and number of scare cannons lent to producers during the 2008 Waterfowl Crop Damage Prevention Program in Alberta. Distributing agents: C = contracted business, ACA = ACA office, ASRD = Alberta Fish and Wildlife district office.

Distribution centre	Agent	Start date	End Date	Duration (days)	Cannons used	Different quarters	Landowners	Landowners allowed contact information to go to hunters
Andrew	C	9-Aug	14-Nov	95	0	0	0	n/a
Atmore	C	13-Aug	4-Nov	81	2	2	1	0
Bonnyville	C	14-Aug	4-Dec	110	3	3	2	1
Boyle	C	13-Aug	4-Nov	81	4	4	1	0
Holden	C	12-Aug	14-Nov	92	1	1	1	1
Mannville	C	11-Aug	13-Nov	92	1	1	1	1
Myrnam	C	14-Aug	13-Nov	89	11	7	6	1
Paradise Valley	C	12-Aug	4-Dec	112	3	3	3	1
St. Paul	ACA	year round		7	15	4	1	
Smoky Lake	C	15-Aug	14-Nov	89	1	1	1	1
Two Hills	C	15-Aug	14-Nov	89	6	2	2	2
Vegreville	C	15-Aug	14-Nov	89	5	2	2	2
Vermilion	C	11-Aug	13-Nov	92	5	2	2	1
Viking	C	15-Aug	14-Nov	89	1	1	1	1
Vilna	C	15-Aug	14-Nov	89	2	2	1	1
La Crete	C	20-Aug	4-Nov	74	0	0	0	n/a

Appendix 1. Continued.

Distribution centre	Agent	Start date	End Date	Duration (days)	Cannons used	Different quarters	Landowners	Landowners allowed contact information to go to hunters
Manning	C	20-Aug	29-Oct	69	1	1	1	0
Grimshaw	C	14-Aug	30-Oct	76	6	6	4	1
Nampa	C	14-Aug	30-Oct	76	0	0	0	n/a
Fairview	C	22-Aug	31-Oct	69	2	2	1	0
Girouxville	C	14-Aug	30-Oct	76	0	0	0	n/a
High Prairie	C	20-Aug	30-Oct	70	10	7	3	3
Spirit River	C	20-Aug	31-Oct	71	2	2	1	0
Valleyview	C	20-Aug	4-Nov	74	1	1	1	0
Hythe	C	21-Aug	17-Oct	56	0	0	0	n/a
La Glace	C	21-Aug	17-Oct	56	2	1	1	1
Bashaw	C	14-Aug	20-Oct	66	16	9	7	2
Bawlf	C	14-Aug	22-Oct	68	1	1	1	1
Bentley	C	13-Aug	23-Oct	70	1	1	1	1
Byemore	C	11-Aug	24-Oct	73	11	13	4	0
Camrose	C	8-Aug	22-Oct	74	5	6	5	0
Castor	C	11-Aug	24-Oct	73	1	2	1	1
Lougheed	C	12-Aug	22-Oct	70	6	3	3	0
Pine Lake	C	13-Aug	27-Oct	74	4	6	2	1
Provost	C	12-Aug	22-Oct	70	3	3	2	1

Appendix 1. Continued.

Distribution centre	Agent	Start date	End Date	Duration (days)	Cannons used	Different quarters	Landowners	Landowners allowed contact information to go to hunters
Stettler	C	11-Aug	20-Oct	69	7	12	4	0
Camrose	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Coronation	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Drumheller	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Hanna	ASRD	1-Aug	31-Oct	90	3	2	1	0
Olds	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Ponoka	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Provost	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Red Deer	ASRD	1-Aug	31-Oct	90	10	4	4	0
Stettler	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Wetaskiwin	ASRD	1-Aug	31-Oct	90	0	0	0	n/a
Total					144	128	75	26

Appendix 2. 2008 Waterfowl Crop Damage Prevention Program distribution centre operation costs.

Distribution centre	Total cost (\$)
NE amortized costs	6,711
NE distribution centre operation	1,261
Andrew	308
Atmore	328
Bonnyville	338
Boyle	349
Holden	318
Mannville	318
Myrnam	410
Paradise Valley	338
St. Paul	0
Smoky Lake	318
Two Hills	369
Vegreville	359
Vermilion	359
Viking	318
Vilna	328
NW Amortized Cost 2007	5,682
NW distribution centre operation	1,121
La Crete	308
Manning	318
Grimshaw	318
Nampa	308
Fairview	318
Girouxville	308
High Prairie	310
Spirit River	318
Valleyview	310
Hythe	300
La Glace	318

Appendix 2. Continued.

Distribution centre	Total cost \$
Parkland Amortized Costs	2,430
Parkland distribution centre operation	357
Bashaw	472
Bawlf	310
Bentley	310
Byemore	410
Camrose	350
Castor	318
Lougheed	369
Pine Lake	348
Provost	330
Stettler	379
Total	\$29,344

¹Amortized cost = regional scaring equipment purchase price amortized over a 10-year period (1999 - 2008 inclusive).

**The Alberta Conservation Association acknowledges
the following partner for their generous support of
this project**



**Environment
Canada**

**Environnement
Canada**



**Alberta Conservation
Association**